# **Model GR-C2**

# Machine Codes: D196/D214/D219/D220/D236

**Field Service Manual** 

# 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 with this machine.

#### Before Installation, Maintenance

#### Shipping and Moving the Machine

# **ACAUTION**

- 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.

#### The Aim of Anti-tip Components and Precautions

# **ACAUTION**

 The anti-tip components are necessary for meeting the requirements of IEC60950-1, the international standard for safety. The aim of these components is to prevent the products, which are heavy in weight, from toppling
as a result of people running into or leaning onto the products, which can lead to serious accidents
such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1)
Therefore, removal of such components must always be with the consent of the customer. Do not
remove them at your own judgment.

#### 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

# **ACAUTION**

- 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**

# **ACAUTION**

- 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

### **ACAUTION**

- 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**

# **ACAUTION**

- 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 prevent 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**

### **MARNING**

- 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.

### **ACAUTION**

- 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.

#### 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.

# **MARNING**

• Do not use a vacuum cleaner to remove spilled toner (including used toner). Vacuumed toner may cause a fire or explosion due to sparks or electrical contact inside the cleaner. However, it is possible to use a cleaner designed to be dust explosion-proof. If toner is spilled over the floor, sweep up spilled toner slowly and clean up any remaining toner with a wet cloth.

#### **Toner Disposal**

# **MARNING**

- 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.
- To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and gerosols.
- 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.
- 9. When using a vacuum cleaner around the machine, keep others away from the cleaner, especially small children.

#### **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 NVRAMs 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.

# **ACAUTION**

- 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.

### **MARNING**

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

### **MARNING**

- 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:

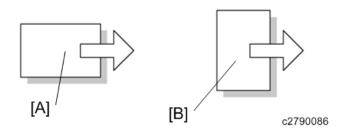


m022i500

# Symbols, Abbreviations and Trademarks

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

Ħ	Clip ring
(I)PP	Screw
<b>F</b>	Connector
Ş	Clamp
C	E-ring
<b>635</b>	Flat Flexible Cable
0	Timing Belt
SEF	Short Edge Feed [A]
LEF	Long Edge Feed [B]
K	Black
С	Cyan
М	Magenta
Y	Yellow
B/W, BW	Black and White
FC	Full color



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#### 1

# 1. Product Information

# **Specifications**

See "Appendices" for the following information:

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

# Differences between MP C306 and C305

The following table describes the differences between MP C306 and C305 series:

	C306/C406	C305	
Operation panel	10.1 inch smart operation panel	4.3 inch conventional operation panel	
Log-storing function	Supported	Not supported	
SFU (Smart Firmware Update)	Supported	Not supported	
Laser Unit	1 laser beam (C306), 2 laser beams (C406)	1 laser beam	
Yield of PCDU CMY (Target Color Ratio)	36k prints (30%)	24k prints (20%)	
Image Transfer	Indirect transfer	Direct transfer	
Paper Transfer	Attraction transfer (Paper transfer bias is applied to the paper transfer roller.)  Constant contact (No release mechanism)	Repulsion transfer (Paper transfer bias is applied to the ITB drive roller.)  Contact/release mechanism	
Main Power Switch	Push switch (DC switch)	Rocker switch	
NFC (Near Field Communication) Reader	Option	N/A	
HDD and VM	Standard	Option	
Anti-condensation heater for mainframe	Service part	N/A	

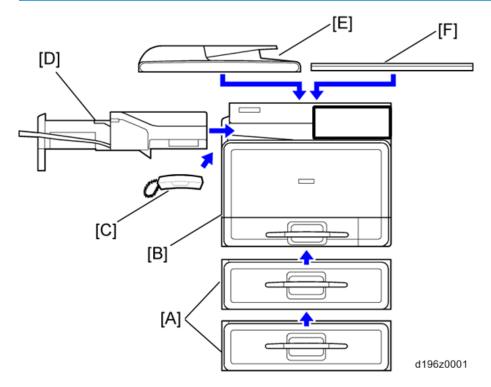
1

#### 1

# **Machine Configuration**

# **Machine Configuration**

#### **Main Unit**

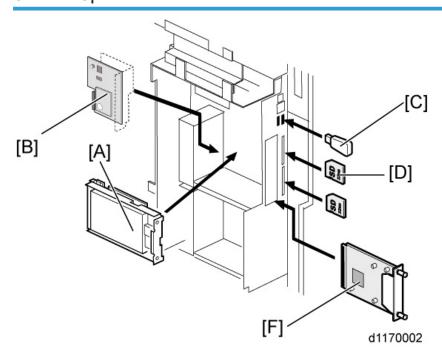




 NA = North America, EU = Europe, AA = Asia-Pacific, CHN = China, TWN = Taiwan, KOR = Korea

ltem	Machine Code	Remarks
	D219	MP C306ZSP for EU/AA
	D220	MP C306ZSPF for NA/EU/AA/TWN
Main machine [B]	D214	MP C406SP for AA /CHN/KOR
	D196	MP C406ZSPF for NA/EU/ AA
	D236	MP C406ZSPF for TWN
Paper Feed Unit PB1080 [A]	D573	Up to 2 can be stacked
1 Bin Tray BN1020 [D]	D574	-
ARDF DF1040 [E]	D3BE	Standard other than EU (SP)
Platen Cover PN1010 [F]	D607	Standard other than EU (SP)
Handset Type C5502 (Only for NA) [C]	D645(NA)	Requires the Fax Option.

# **Controller Options**



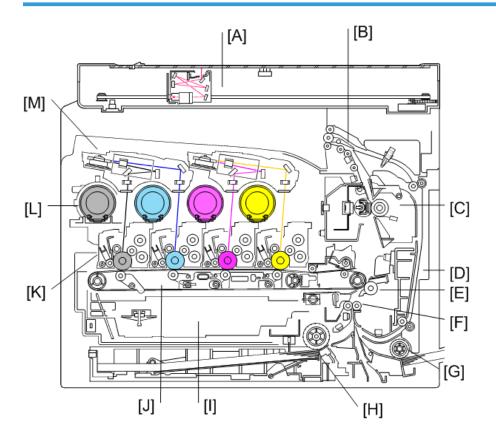
ltem	Machine Code	Remarks	
Fax Option Type M13 [B]	D3A9-01 (EU, AA) D3A9-04 (CHN)	Standard: NA, TWN Option: EU, AA, CHN, KOR	
Fax Connection Unit Type M13	D3AA-00 (NA) D3AA-01 (EU) D3AA-02 (Other)	Only for machines equipped with a fax unit.	
Enhanced Security HDD Option Type M10 [A]	D792-09	NA, EU only	
Bluetooth Interface Unit Type D [C]	D566-01	<ul> <li>NA, EU, AA only</li> <li>One of two USB slots.</li> <li>It cannot be used with IEEE 802.11a/g/n Interface Unit Type M2 simultaneously.</li> </ul>	
IEEE1284 Interface Board Type A [F]	B679-17	<ul><li>NA, EU, AA only</li><li>One from these cards can</li></ul>	
IEEE 802.11a/g/n Interface Unit Type M2 [F]	D164-01	be installed at the same time.	
File Format Converter Type E [F]	D377-04		
USB Device Server Option Type M12 [F]	D3A7-28 (NA) D3A7-29 (Other)		
Copy Data Security Unit Type G	D640-41	-	
Camera Direct Print Card Type M13 [D]	D3AC-00		
XPS Direct Print Option Type M13	D3AC-02	If multiple applications are required, merge all applications in one SD card with the SP mode (page 163 "SD Card	
Data Overwrite Security Unit Type I	D362-12		
OCR Unit Type M13	D3AC-23 (NA)	Appli Move")	
	D3AC-24 (EU)		
	D3AC-25 (Other)		

ltem	Machine Code	Remarks
NFC Card Reader Type M13	D3AC-21	-

#### ٦

# **Machine Overview**

## Overview



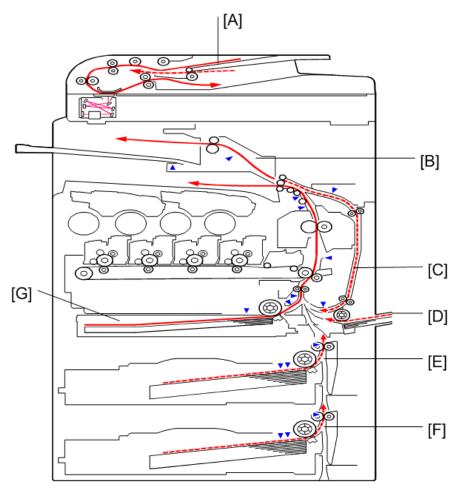
d196z7001

Callout	ltem	Callout	ltem
[A]	Scanner Unit	[H]	Paper Feed Tray
[B]	Paper Exit	[1]	Waste Toner Bottle
[C]	Fusing Unit	[1]	ITB Unit
[D]	Duplex Unit	[K]	PCDU
[E]	Paper Transfer Roller	[L]	Toner Bottle
[F]	Registration Roller	[M]	Laser Unit

1

Callout	ltem	Callout	ltem
[G]	Bypass Feed Tray		

# Paper Path

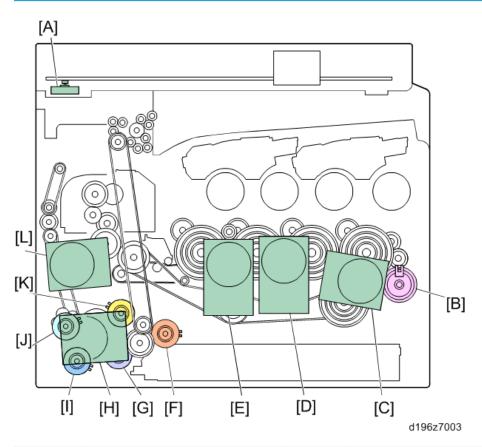


d196z7002

Callout	ltem	Callout	ltem
[A]	ARDF Transport Path	[E]	Optional Paper Feed Unit Path (1st)
[B]	1-Bin Tray Path	[F]	Optional Paper Feed Unit Path (2nd)
[C]	Duplex Paper Transport Path	[G]	Standard Paper Tray Path

Callout	ltem	Callout	ltem
[D]	Bypass Paper Feed Path		

## **Drive Layout**

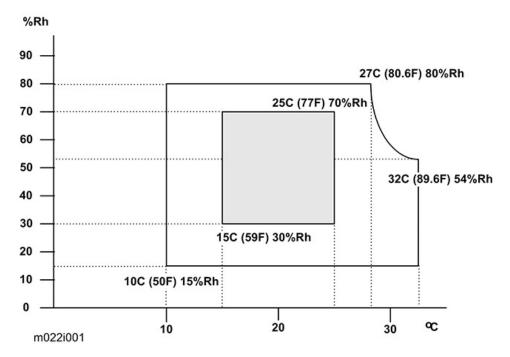


Callout	ltem	Callout	ltem
[A]	Scanner Motor	[G]	Bypass Lift Clutch
[B]	Development Clutch (K)	[H]	Transport Motor
[C]	Drum Motor (K)	[1]	Bypass Feed Clutch
[D]	Drum Motor (CMY)	[1]	Duplex Clutch
[E]	Development Motor (CMY)	[K]	Registration Clutch
[F]	Paper Feed Clutch	[L]	Fusing Motor

# 2. Installation

# **Installation Requirements**

#### **Environment**



- 1. Temperature Range: 10°C to 32°C (50°F to 89.6°F)
- 2. Humidity Range: 15% to 80% RH
- 3. Ambient Illumination: Less than 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. Do not install the machine at any location over 2,000 m (6,500 ft.) above sea level. [NA: Can be installed up to 2,500m (8,202 ft.)]
- 8. Install the machine on a 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.

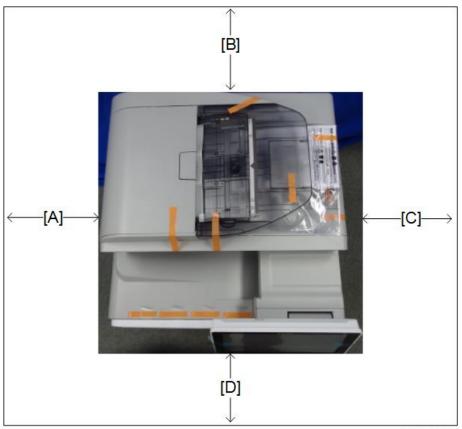
Front to back: Within 5 mm (0.2")

Right to left: Within 5 mm (0.2")

## **Machine Space Requirements**

## **ACAUTION**

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.



d196z2355

A: Over 70 mm (2.8") (Base machine) / 120 mm (4.7") (with 1-Bin tray unit)

B: Over 100 mm (3.9")

C: Over 402 mm (15.8")

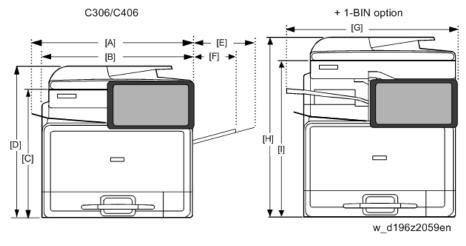
### D: Over 420 mm (16.5")

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

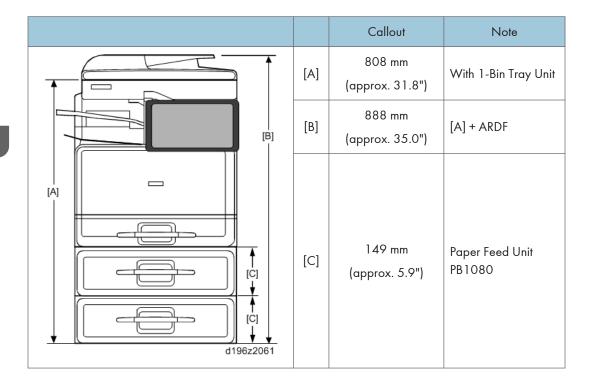
## Machine Dimensions

W×D×H (including ARDF and operation panel):

510 × 588 × 505 mm (20.1" × 23.1" × 19.9")



Callout	mm (inch)	Callout	mm (inch)
[A]	558.2 mm (approx. 21.9")	[F]	203.7 mm (approx. 8.02")
[B]	510 mm (approx. 20.1")	[G]	566 mm (approx. 22.3")
[C]	425 mm (approx. 16.7")	[H]	590 mm (approx. 23.2")
[D]	505 mm (approx. 19.9")	[1]	510 mm (approx. 20.1")
[E]	256.2 mm (approx. 10.1")		



## **Power Requirements**

## **A**CAUTION

- Insert the plug firmly into the outlet.
- Do not use an outlet extension plug or cord.
- Ground the machine.
- 1. Input voltage level:
  - 110 V, 60 Hz More than 11 A
  - 120 to 127 V, 60 Hz: More than 11 A
  - 220 V to 240 V, 50 Hz/60 Hz: More than 5.5 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 %)

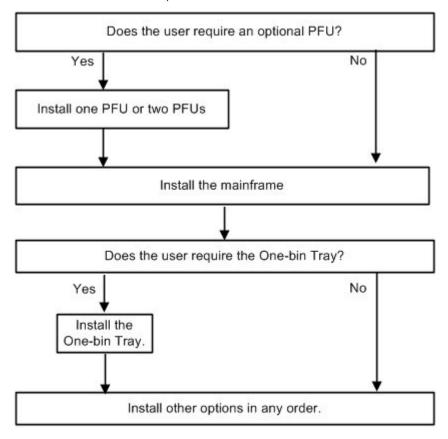
Taiwan: 99 V (110 V -10%) - 121 V (110 V + 10%)

3. Do not put things on the power cord.

## Mainframe Installation

## Installation Flowchart

This flowchart shows the best procedure for installation.



d1180001

## **Accessory Check**

## For D196/D220/D236

Check the quantity and condition of these accessories.



**Component List** 

N			Q'ty			
0.	Description	Remark	NA	EU	AA	TW N
1	NFC Tag	*To be attached to the device.	1	1	1	1
2	Decal – Emblem	For the front cover and operation panel	2	2	2	-
3	Decal – Paper Tray		1	1	1	1
4	EMC Marking Traceability Information	Only for EU	-	1	-	-
5	Power Supply Cord		1	1	1	1
6	Modular Cord with Ferrite Core		1	-	-	-
7	Ferrite Core		-	1	1	1
-	NFC Tag Leaflet	*Regarding the installation of the NFC tag.	1	1	1	1
-	Software License Agreement		1	1	1	1
-	CD-ROM (Printer and Scanner Drivers)		1	1	1	-

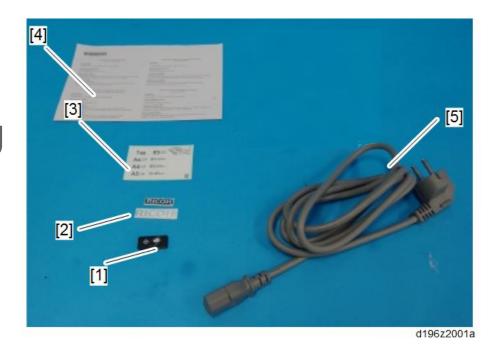
N			Q'ty			
0.	Description	Remark	NA	EU	AA	TW N
-	CD-ROM (Operating Instructions)		-	-	1	-
-	CD-ROM (Printer and Scanner Drivers/ Operating Instructions)		-	-	-	1
-	Safety Information	Only for EU	-	1	-	-
-	Notes to Users		1	1	1	1
-	Note to Using This Machine Safety		1	1	1	1
-	Note to Users in EU Countries		-	1	-	-
-	Note to Users in USA/Canada		1	-	-	-
-	For Users of This Product		1	1	1	-
-	Manual: Read This First		1	-	1	1
-	Manual: Start Guide		1	1	1	1



 An NFC tag is required for connecting this machine to an Android smart device that has the Ricoh Smart Device Connector application installed. Give this NFC tag to the customer so that they can attach it to the machine. Where the tag should be attached and how to set it up for using the smartdevice application are described in the help guide within the application. The setup procedure should be performed by the customer.

#### For D214/D219

Check the quantity and condition of these accessories.



**Component List** 

			Q'ty		
No.	Description	Remark	EU	AA	CH N
1	NFC Tag	*To be attached to the device.	1	1	1
2	Decal – Emblem	For the front cover and operation panel	2	2	-
3	Decal – Paper Tray		1	1	1
4	EMC Marking Traceability Information	For EU only	1	-	-
5	Power Supply Cord		1	1	1
-	NFC Tag Leaflet	*Regarding the installation of the NFC tag.	1	1	1
-	Software License Agreement		1	1	1
-	CD-ROM (Printer and Scanner Drivers)		1	1	-
-	CD-ROM (Operating Instructions)		-	1	-

			Q'ty		
No.	Description	Remark	EU	AA	CH N
	CD-ROM (Printer and Scanner Drivers/ Operating Instructions)		-	-	1
-	Safety Information	For EU only	1	-	-
-	Notes to Users		1	1	1
-	Notes for Using This Machine Safely		1	1	1
-	Note to Users in EU Countries		1	-	-
-	For Users of This Product		1	1	-
-	Manual: Read This First		-	1	1
-	Manual: Start Guide		1	1	1



 An NFC tag is required for connecting this machine to an Android smart device that has the Ricoh Smart Device Connector application installed. Give this NFC tag to the customer so that they can attach it to the machine. Where the tag should be attached and how to set it up for using the smartdevice application are described in the help guide within the application. The setup procedure should be performed by the customer.

#### **Installation Procedure**

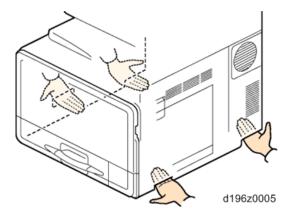
Put the machine on the optional paper tray unit first if you install an optional paper feed unit at the same time. Then install the machine and other options.



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

## **ACAUTION**

• Hold the specified positions as shown below when lifting the machine up or down.



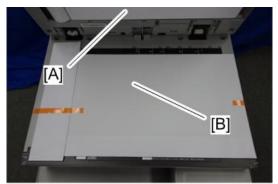
## Tapes, Retainers and Toner Bottles

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



d196z2002

- 2. Do the following steps:
  - Open the ARDF cover [A] or platen cover.
  - Remove all the tapes and the retainer (protective paper) [B] on the exposure glass.



d196z2003

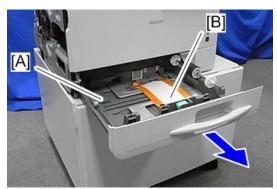
## 3. Remove the sheet [A] inside the ARDF.



d196z2011

## 4. Remove the following items:

- Paper tray [A]
- Retainer [B]



d196z2006a

## 5. Open the front door [A].

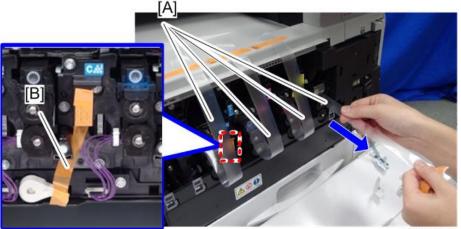


d196z2004

6. Pull out all protection seals [A] on the drums straight out towards the front.



• Do not remove the orange tape [B] at this time.



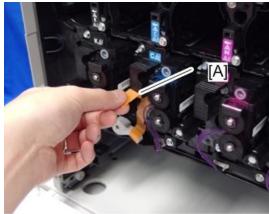
d196z2005

## 7. Remove the waste toner bottle [A].



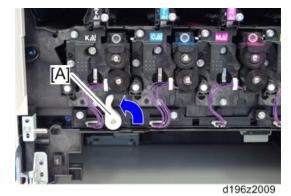
d196z2007

8. Remove the orange tape [A] attached to the lever.



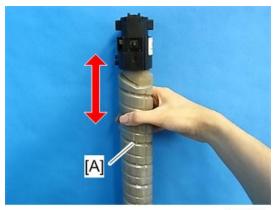
d196z2008

9. Set the lever [A] to the upright position.



10. Attach the waste toner bottle.

#### 11. Shake each toner bottle [A] from eight to ten times.



m022i511

12. Install each toner bottle [A] in the machine.



d196z2010

- 13. Close the front door.
- 14. Connect the power cord to the machine.
- 15. Attach the paper tray.
- 16. Connect the network cable, if the client IP addresses are automatically provided through a system such as DHCP in the network settings. If a static IP address is provided to the client machines, contact the customer (network administrator) to determine the appropriate timing for connecting the network cable.
- 17. Turn ON the main power.
- 18. The machine starts the initial settings automatically.



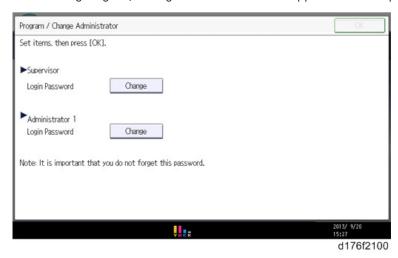
A message "Turn the main power switch off then on" may appear during the initial settings.
 However, DO NOT switch off the main power until the machine finishes the initial settings and emits a beep sound. It takes about five minutes to finish the initial settings.

#### Important Notice on Security Issues

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

#### Overview

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



When the customers set the administrator/supervisor login password, the screen disappears and the home display appears. The customers, however, can erase this screen with the following procedure if they think there is no need to set the password.

- On the Program/Change Administrator screen, press [Change] next to Supervisor and then touch [OK] without entering any password.
- 2. Touch [OK] again when the Confirm password display appears.
- 3. For Administrator 1, do the same procedure as steps 1 and 2.
- 4. Press [OK], then the home display appears.
- 5. Cycle the machine OFF/ON.

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

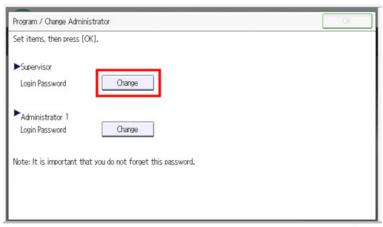
#### Password Setting Procedure



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

## **CAUTION**

- When Supervisor / Administrator 1-4 passwords are configured via network, the "Change Supervisor login password" window will not display.
- The passwords for Supervisor or Administrator 1 to 4 can be set via "System Settings". But the Program/Change Administrator screen appears every time the power switch is turned ON if the passwords are input this way. So we recommend the customers to set the passwords via network or the Program/Change Administrator screen.
- 1. Install the MFP.
- 2. Turn the main power switch ON.
- 3. Change the Supervisor login password.



d176f2101

4. Enter a password.



### 5. Press [OK].



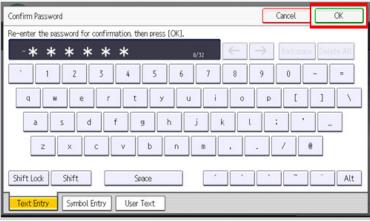
d176f2103

#### 6. Confirm the Password.



d176f2104

### 7. Press [OK].



d176f2105

## 8. Change the Administrator 1 login password.



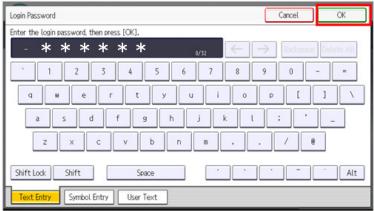
d176f2106

## 9. Enter the password.



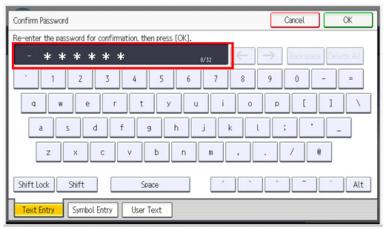
d176f2102

## 10. Press [OK].



d176f2103

#### 11. Confirm the password.



d176f2104

#### 12. Press [OK].



d176f2105

### 13. Turn the main power OFF and ON.

#### **Checking the Image Quality**

#### **Checking Paper Setting**

Do the following procedure after installing all the options.

1. Check that all tapes are removed. Then connect the power plug into the wall socket.

#### 2. Pull out the paper feed tray [A] until it stops.



d196z2006

- 3. Release the side fence.
- 4. Load paper into the paper feed tray.
- 5. Set the side fence according to the paper size while pressing the unlock lever.



- To move the fences, first pull out the tray fully. Then push down the green lock at the rear inside the tray.
- 6. Set SP5-131 to set paper size for the main paper tray.
- 7. Adjust the registration setting for paper trays.

SP1-002-001 (Side-to-Side Registration By-pass Table)

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

SP1-002-005 (Side-to-Side Registration Duplex)



- · Refer to the "Image Adjustment" section in this manual for how to adjust the SP setting.
- If one or more optional paper trays is installed, do the following SPs as well: SP1-002-003 (Side-to-Side Registration Paper Tray 2)
   SP1-002-004 (Side-to-Side Registration Paper Tray 3)

#### Executing the Automatic Color Calibration (ACC)



• Be sure to do this procedure when installing the mainframe.



- Do not open the ADF while ACC is running.
- 1. Login as Administrator.
- 2. Press [User Tools] icon on the operation panel.
- 3. Press [Machine Features].

- 4. Press [Maintenance].
- 5. Press [Auto Color Calibration]
- 6. Press [Start] for the Copier function.
- 7. Press [Start Printing].
- 8. Take the sheet that was just printed, and put it on the exposure glass. Press [Start Scanning].
- 9. Do the same procedure for the Printer function.



• Be sure to check the four resolution-based items for the printer function.

#### Checking the Copy Image with Test chart

Check the copy image quality with a test chart.

For SP models, check that the printer can print out in the customer's environment. For SPF models, check that the fax can output a received image as well.

#### Color Skew Adjustment

The skew adjustment of this machine should be performed manually.

The adjustment flow is as follows:

- 1. Execute 'MUSIC' (SP2-111-002) and check the result for each color with the following SPs.
  - SP2-117-004 (K)
  - SP2-117-002 (C)
  - SP2-117-001 (M)
  - SP2-117-003 (Y)
- The color skew adjustment (page 212 "Color Skew Adjustment") should be executed if one or more of the above SP values is not within ±5. No skew adjustment is required if all SP values are within ±5.

#### Language Selection

- 1. Press [User Tools] on the operation panel.
- 2. Press [Screen Features].
- 3. Press [Language & Input].
- 4. Press [Change Language].

The machine shows the preset language list.

- If the language you want is listed, press the language, and then go to Step 9.
- If there is no language you want in the list, go to the next step.

- 5. Press [Select Switchable Language] and select the language you want.
- 6. Press [Language & Input], and then press [Change Language].
- 7. Select the language you set in Step 6.
- 8. Make sure that the language is changed successfully.
- 9. Exit [User Tools].

#### **Brand Plate**

1. Attach the brand plates to the front door and the operation panel, if the brand plates are not attached.



2. Attach the correct paper tray number and size decals to the paper trays.



• Storing Unnecessary Decals

If the IC card reader option or NFC reader option are not to be installed immediately, store the decals for these options in the specified area as shown below:

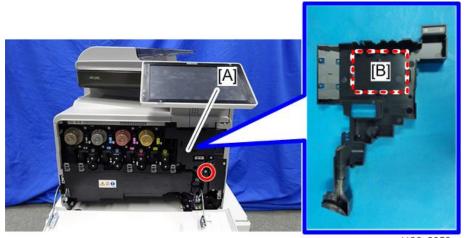
- 1. Pull out the paper feed tray.
- 2. Remove the front lower cover [A]. ( $\mathfrak{M} \times 1$ )



d196z4002

- 3. Open the front cover.
- 4. Remove the inner cover [A]. ( × 1)

  Store the decal in the area [B].



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## Settings Relevant to the Service Contract

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



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

Counting method	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.	"1": Prints				
NOTE: You can set this one time only. You cannot change the setting after you have set it for the first time.						
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



 Prepare and check the following check points before visiting 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 on the machine serial decal pasted at the rear 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.
- 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.

Value	Meaning	Solution/Workaround	
3	Communication error (proxy enabled)	Check the network condition.	
4	Communication error (proxy disabled)	Check the network condition.	
5	Proxy error (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.	
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
	-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".
Operation Error, Incorrect Setting	-12006	A confirmation request was made after the confirmation had been already completed.	Execute registration.
	-12007	The request number used at registration was different from the one used at confirmation.	Check Request No.
	-12008	Update certification failed because mainframe was in use.	Check the mainframe condition. If the mainframe is in use, try again later.
	-12009	The ID2 in the NVRAM does not match the ID2 in the individual certification.	Check ID2 of the mainframe.
	-12010	The certification area is not initialized.	Initialize the certification area.

Cause	Code	Meaning	Solution/Workaround
	-2385	Other error	
	-2387	Not supported at the Service Center	
	-2389	Database out of service	
	-2390	Program out of service	
	-2391	Two registrations for the same mainframe	Check the registration condition of the mainframe
Error Caused by	-2392	Parameter error	
Response from GW URL	-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.

## **Transporting the Machine**

## **ACAUTION**

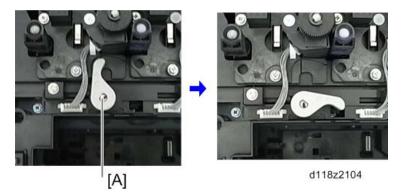
Do not lift the machine together with one or more paper feed unit(s):

If there is already a machine with one or more entired a great feed unit

If there is already a machine with one or more optional paper feed unit(s), be sure to disconnect the machine and paper feed unit(s), and lift them up separately when moving/transporting. Otherwise, the handle of the paper feed unit will break due to the mainframe's weight, and it can cause an injury.

The following should be done before transporting the machine.

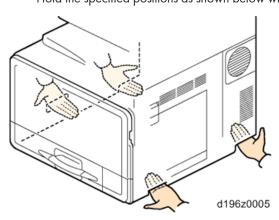
1. Move the ITB lock lever [A] down to the shipping position. This moves the ITB away from the K PCDU.



- 2. Do SP 4806-001 to move the scanner carriage from the home position. This prevents dust from falling into the machine during transportation.
- Remove the toner bottles. This prevents toner flow into the toner supply tube, which is caused by vibration during transport. This can also cause the tube to be clogged with toner.
- 4. Make sure that there is no paper left in the paper trays. Then fix down the bottom plates with a sheet of paper and tape.
- 5. Attach securing tape to stop the waste toner bottle from coming out.
- 6. Do one of the following:
  - Attach shipping tape to the covers and doors.
  - Shrink-wrap the machine tightly.

## **ACAUTION**

• Hold the specified positions as shown below when lifting the machine up or down.



## Instructions for the Customers

The following items should be advised when the machine is installed. These items are explained in more detail in the operating instructions.

- How to add paper to the paper feed unit and the by-pass feed unit.
- How to install a toner bottle
- How to handle paper jams

# **Security Setting**

### **Security Function Installation**



If the "Enhanced Security HDD Option Type M10" is installed at the same time of the main
machine's installation, do not execute these settings described below. When the "Enhanced
Security HDD Option Type M10" and security functions (Data Overwrite Security and HDD
Encryption Unit) are activated in the same machine, the function of the "Enhanced Security HDD
Option" is not guaranteed.

The machine contains the Security functions (Data Overwrite Security and HDD Encryption unit) in the controller board.

If you are installing a new machine, it is recommended to activate the Data Overwrite Security and HDD Encryption by selecting "Format All Data" from "System Settings" on the operation panel.



 This method is recommended because there is no user data on the hard drive yet (Address Book data, image data, etc.).

If the customer wishes to activate the Data Overwrite Security and HDD Encryption unit on a machine that is already running, it is recommended to activate the unit by selecting "All Data" from "System Settings" on the operation panel.

## 

 Selecting "All Data" will preserve the data that has already been saved to the HDD. (If "Format All Data" is selected, all user data saved to the HDD up to that point will be erased).

Immediately after encryption is enabled, the encryption setting process will take several minutes to complete before you can begin using the machine.



• If encryption is enabled after data has been stored on the HDD, or of the encryption key is changed, this process can take up to three and a half hours or more.

The machine cannot be operated while data is being encrypted.

Once the encryption process begins, it cannot be stopped.

Make sure that the machine's main power is not turned OFF while the encryption process is in progress.

If the machine's main power is turned off while the encryption process is in progress, the HDD will be damaged and all data on it will be unusable.

Print the encryption key and keep the encryption key (which is printed as a paper sheet).

Keep the encryption key in a safe place. If the encryption key is lost and is needed, the controller board, HDD and NVRAM must all be replaced at the same time.



- "NVRAM" mentioned in here means the NVRAM on the Controller Board.
- "NVRAM" or EEPROM on the BCU has nothing to do with this.

Please use the following procedures when the Data Overwrite Security and HDD Encryption must be reinstalled.

#### **Data Overwrite Security**

#### Before You Begin the Procedure

- Make sure that the following settings (1) to (3) are not at their factory default values.
  - (1) Supervisor login password
  - (2) Administrator login name
  - (3) Administrator login password

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

2. Make sure that "Admin. Authentication" is on.

[User Tools] -> [Machine Features] -> [System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Admin. Authentication]

If this setting is off, tell the customer this setting must be on before you do the installation procedure.

3. Make sure that "Administrator Tools" is enabled (selected).

[User Tools] -> [Machine Features] -> [System Settings] -> [Administrator Tools] -> [Administrator Authentication Management] -> [Available Settings]

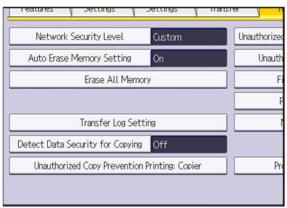
If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before you do the installation procedure.

#### **Using Auto Erase Memory**

The Auto Erase Memory function can be enabled by the following procedure.

- 1. Log in as the machine administrator from the control panel.
- 2. Press [User Tools].
- 3. Press [Machine Features].
- 4. Press [System Settings].
- 5. Press [Administrator Tools].
- 6. Press [Next] three times.

#### 7. Press [Auto Erase Memory Setting].



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- 8. Press [On].
- 9. Select the method of overwriting.

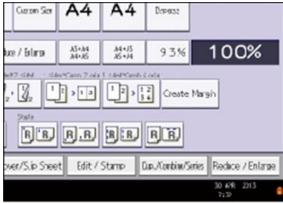
If you select [NSA] or [DoD], proceed to step 10.

If you select [Random Numbers], proceed to step 12.

- 10. Press [Change].
- 11. Enter the number of times that you want to overwrite using the number keys, and then press [#].
- 12. Press [OK]. Auto Erase Memory is set.
- 13. Log out.
- 14. Check the display and make sure that the overwrite erase icon appears.
- 15. Check the overwrite erase icon.

The icon [1] is lit when there is temporary data to be overwritten, and blinks during overwriting.

The icon [2] is lit when there is no temporary data to be overwritten.



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8	Icon [1]	This icon is lit when there is temporary data to be overwritten, and blinks during overwriting.
8	Icon [2]	This icon is lit when there is no temporary data to be overwritten.

#### **HDD Encryption**

#### Before You Begin the Procedure:

- 1. Make sure that the following settings (1) to (3) are not at the factory default settings.
  - (1) Supervisor login password
  - (2) Administrator login name
  - (3) Administrator login password

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

 Confirm that "Admin. Authentication" is on: [User Tools] -> [Machine Features] - [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Admin. Authentication] - [On]

If this setting is off, tell the customer that this setting must be on before you can do the installation procedure.

3. Confirm that "Administrator Tools" is selected and enabled.

[User Tools] -> [Machine Features] - [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Available Settings]

"Available Settings" is not displayed until step 2 is done.

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

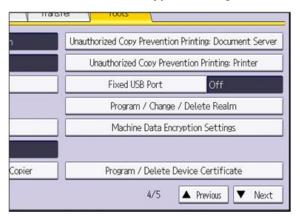
#### **Enable Encryption Setting**

Machine Data Encryption Settings can be enabled by the following procedure.

#### **Setting Up Encryption**

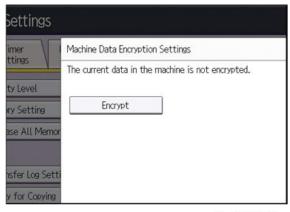
### 

- When setting up encryption, specify whether to start encryption after deleting data (initialize) or encrypt and retain existing data. If data is retained, it may take some time to encrypt it.
- 1. Turn ON the main power.
- 2. Log in as the machine administrator from the control panel.
- 3. Press [User Tools].
- 4. Press [Machine Features].
- 5. Press [System Settings].
- 6. Press [Administrator Tools].
- 7. Press [Next] three times.
- 8. Press [Machine Data Encryption Settings].



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9. Press [Encrypt].



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#### 10. Select the data to be carried over to the HDD and not be reset.

To carry all of the data over to the HDD, select [All Data].

To carry over only the machine settings data, select [File System Data Only].

To reset all of the data, select [Format All Data].

#### 11. Select the backup method.

If you have selected [Save to SD Card], load an SD card into the media slot on the side of the control panel and press [OK] to back up the machine's data encryption key.

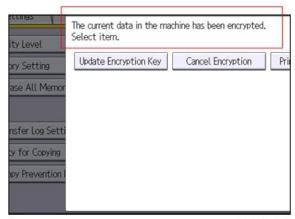
If you have selected [Print on Paper], press the [Start] key. Print out the machine's data encryption key.

- 12. Press [OK].
- 13. Press [Exit].
- 14. Press [Exit].
- 15. Log out.
- 16. Turn OFF the main power, and then turn the main power back ON.

The machine will start to convert the data on the memory after you turn on the machine. Wait until the message "Memory conversion complete. Turn the main power switch off." appears, and then turn the main power OFF again.

#### Check the Encryption Settings

- 1. Press [User Tools].
- 2. Press [Machine Features].
- 3. Press [System Settings].
- 4. Press [Administrator Tools].
- Press [Machine Data Encryption Settings].
- 6. Confirm whether the encryption has been completed or not on this display.



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#### **Backing Up the Encryption Key**

The encryption key can be backed up. Select whether to save it to an SD card or to print it.



- The encryption key is required for data recovery if the machine malfunctions. Be sure to store the
  encryption key safely for retrieving backup data.
- 1. Log in as the machine administrator from the control panel.
- 2. Press [User Tools].
- 3. Press [Machine Features].
- 4. Press [System Settings].
- 5. Press [Administrator Tools].
- 6. Press [Next] three times.
- 7. Press [Machine Data Encryption Settings].
- 8. Press [Print Encryption Key].

tent data in the mathine has been entrypted, item.			
te Enayption Key	Cancel Encryption	Print Excrystion Key	

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9. Select the backup method.

If you have selected [Save to SD Card], load an SD card into the media slot on the side of the control panel and press [OK]. After the machine's data encryption key is backed up, press [Exit]. If you have selected [Print on Paper], press the [Start] key. Print out the machine's data encryption key.

- 10. Press [Exit].
- 11. Log out.

#### **Encryption Key Restoration**

How to restore the old encryption key to the machine

The following message appears after the controller board is replaced. In such a case, it is necessary to restore the encryption key to the new controller board.

SD card for restoration is required.

Turn the main power switch off and set the SD card, then turn the main power switch on.

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To do this, follow the procedure below.

- 1. Prepare an SD card that has been initialized in FAT16 format.
- 2. Using a PC, create a folder in the SD card and name it "restore\_key".
- Create a folder in the "restore\_key" folder and name it the same as machine's serial number, "xxxxxxxxxxxx" (11 digits).
- 4. Create a text file called "key\_xxxxxxxxxxxxxt" and save it in the "xxxxxxxxxx" folder. Write the encryption key in the text file.

/restore\_key/xxxxxxxxxxx/key\_xxxxxxxxxxxxtxt



- Ask an Administrator to enter the encryption key. The key has already been printed out by the
  user and may have been saved in the "key\_xxxxxxxxxxxxt" file.
- 5. Turn ON the machine's main power.
- 6. Confirm that a message is displayed on the LCD telling to insert the SD card that contains the encryption key.
- 7. Turn OFF the main power.
- 8. Insert the SD card that contains the encryption key into SD card slot 2 (the lower slot).
- 9. Turn ON the main power.



- The machine will automatically restore the encryption key to the flash memory on the controller board.
- 10. Turn OFF the main power when the machine has returned to normal status.
- 11. Remove the SD card from SD card slot 2.

How to do a forced start up with no encryption key

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



- The HDD will be formatted after the forced start-up.
- Encrypted data will be deleted.

- User settings will be cleared.
- 1. Prepare an SD card.
- Create a directory named "restore\_key" inside the root directory of the SD card. Then, save the "nvram\_key.txt" file using the following name:

/restore\_key/nvram\_key.txt

3. Create a text file and write "nvclear".

#### € Important

- Write this string at the head of the file.
- Use all lower-case letters.
- Do not use quotation marks or blank spaces.
- It is judged that a forced start has been selected when the content of "nvclear" is executed and
  the machine shifts to the alternate system (forced start).
- 4. Confirm that a message is displayed on the LCD telling to insert the SD card that contains the encryption key.
- 5. Turn OFF the main power.
- 6. Insert the SD card that contains the encryption key into SD card slot 2 (the lower slot).
- 7. Turn ON the main power and the machine automatically clears the HDD encryption.
- 8. Turn OFF the main power when the machine has returned to normal status.
- 9. Remove the SD card from SD card Slot 2.
- 10. Turn ON the main power.
- Memory clear SP5-801-xx (Exclude SP-5-801-001: All Clear and SP-5-801-002: Engine), and clear SP5-846-046: address book.
- 12. Set necessary user settings with the User Tools key.

# Paper Feed Unit PB1080 (D573)

#### **Accessory Check**

Confirm that you have the accessory indicated below.

No.	Description	Q'ty
1	EMC Address	1
2	Name Plate	1
3	Decal Size Indication	1
4	Decal CHN 10mm	1
5	Decal CHN Date 40mm	1

#### Installation Procedure

# **CAUTION**

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

### **ACAUTION**

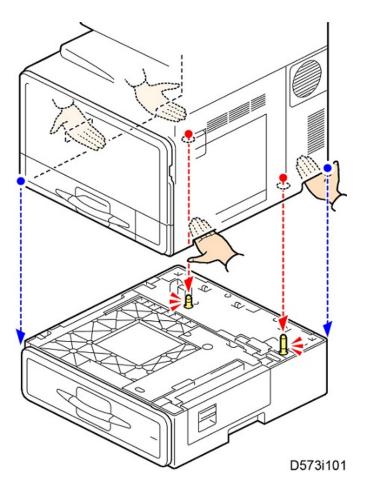
• Do not lift the machine together with one or more paper feed unit(s):

If there is already a machine with one or more optional paper feed unit(s), be sure to disconnect the machine and paper feed unit(s), and lift them up separately when moving/transporting.

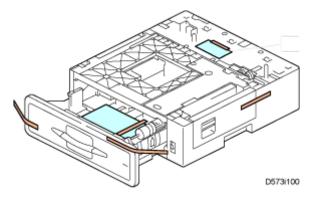
Otherwise, the handle of the paper feed unit will break due to the mainframe's weight, and it can cause an injury.

### **ACAUTION**

- 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 mainframe. The mainframe is highly unstable when lifted by one person, and may cause injury or property damage.
- Do not lift the mainframe that has an optional paper feed unit connected to it. The handle and grips may be damaged.
- Be sure to hold the following positions when lifting the mainframe.



1. Remove the tapes and the paper (EMC address) on the paper feed unit.

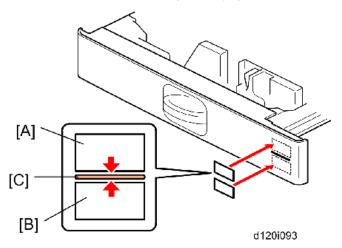


2. Set the copier on the paper feed unit.



• When installing a second paper feed unit, place it on the first paper feed unit. Then place the copier on the pair of paper feed units.

3. Attach the appropriate paper tray number decal [A] and paper size decal [B] above and below the line [C] on each tray of the paper feed unit.



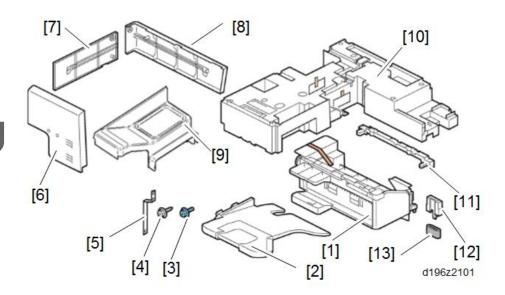
- 4. Load paper into the paper tray(s) and set the side fences and end fence(s).
- 5. Adjust the registration for each tray (page 202 "Image Adjustment").
  - For tray 2, use SP1002-003
  - For tray 3, use SP1002-004
- 6. Check the paper feed unit operation and copy quality.

# 1-Bin Tray BN1020 (D574)

# Accessory Check

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

No.	Description	Q'ty
1	1-Bin Tray Unit	1
2	Tray	1
3	Binding Screw (M3×6)	2
4	Screw (M3×10)	18
5	Grounding plate	1
6	Left Cover	1
7	Rear Upper Cover	1
8	Rear Upper Right Cover	1
9	Front Right Cover	1
10	Mounting Frame	1
11	Mounting Frame Junction	1
12	Ferrite Core Cover	1
13	Ferrite Core	1
-	Ground Wire	1
-	Name Plate	1
-	Decal	1
-	Label	1

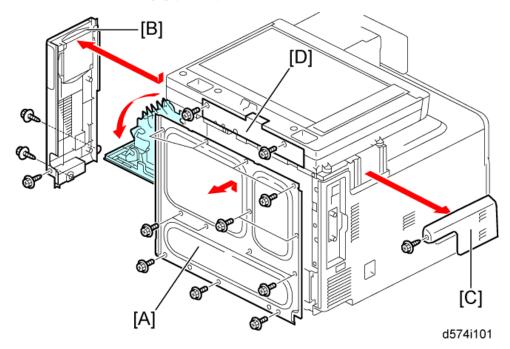


# **Installation Procedure**

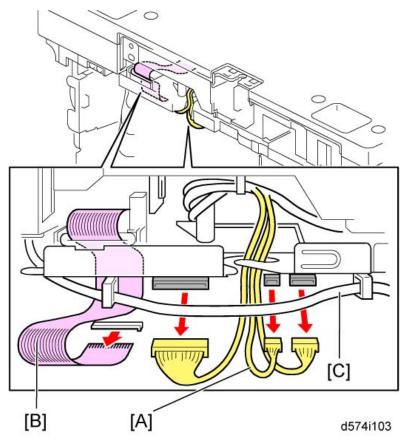
# **ACAUTION**

- Unplug the copier power cord before starting the following procedure.
- 1. If it is installed, remove the ARDF. (page 344 "ARDF Unit")
- 2. Remove all tapes.

3. Remove the rear cover [A] ( \* 13), rear right cover [B] ( \* 3), left cover [C] ( \* 1) and scanner rear cover [D]. ( \* 2)





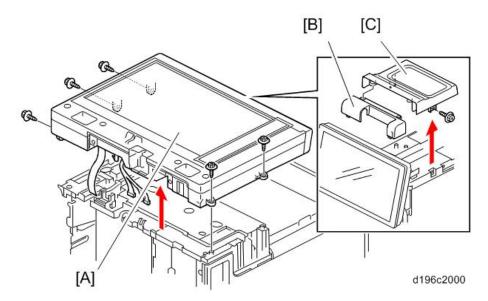




- The harnesses [A] and the flat cable [B] should be routed under the harness [C] when these are reconnected.
- To release the lock of the flat cable connector, lift up the small white tab of the connector, and to lock the flat cable, push down the small white tab.

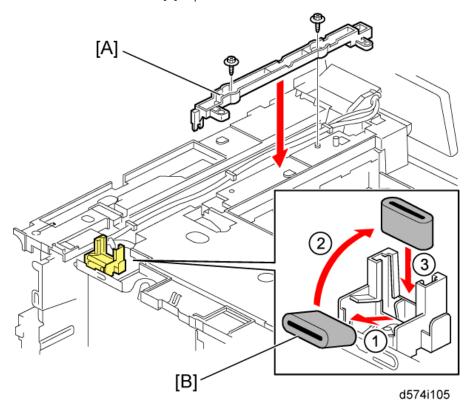
#### 5. Remove the following items:

- Scanner unit [A] ( \$\infty\$ × 5)
- Small cover [B] ( \* 1)
- Front right cover [C] ( × 1)

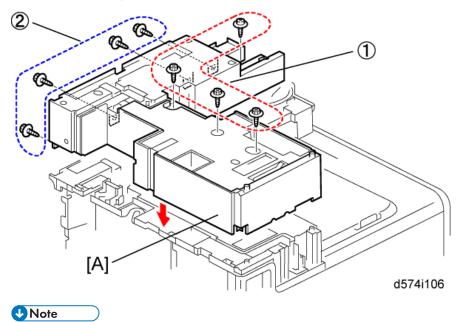


#### 6. Do the following steps:

- Pull out the ferrite core from the mainframe.
- Attach the mounting frame junction [A]. (M3×10:  ${\mathfrak M}^{\circ}$  × 2)
- Reinstall the ferrite core [B] at position<sup>3</sup>.



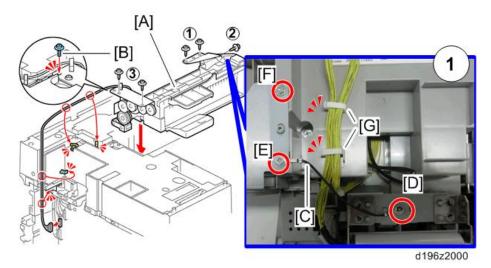
#### 7. Attach the mounting frame [A]. (M3×10: 🖤 × 8)



• Install the screws in this order: ① → ②.

#### 8. Do the following steps:

- Make sure that the operation panel's harnesses [G] are clamped. ( > 1)
- Attach the 1-bin tray unit [A]. Note that there are four tapping screws and one blue screw.
- Connect the connector of the 1-bin tray unit to CN527 and then clamp the harness. ( $\checkmark$  × 1,  $\checkmark$  × 3)
- Secure the screw [B]. (@(blue) × 1)
- Secure the screws (1): To do this, secure the screw [E] (M3×10: 1) and screw [D] together with the ground wire [C]. Then secure the screw [F]. (M3×10: 1)
- Route the yellow harnesses coming from the operation panel with clamps [G]. ( \*× 2)
- Secure the screws (2 and 3). (M3×10: 8 × 3)



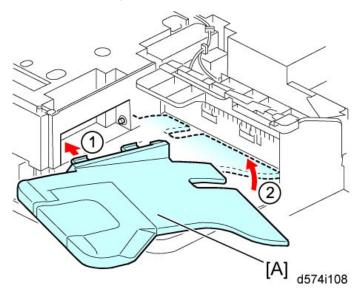
**U** Note

- To secure the screw<sup>2</sup>, make the operation panel flat, set the screw at the lower hole, and tighten the screw with a long driver.
- There are two tapped holes. Use the hole as shown below.



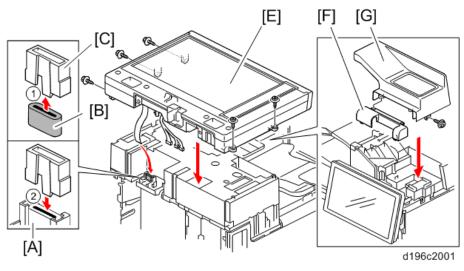
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#### 9. Install the 1-bin tray [A].



#### 10. Do the following steps:

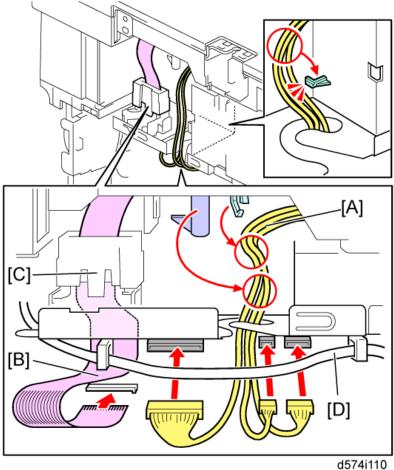
- Attach the small cover [F] and front right cover [G] (from the accessories, not the original cover). (M3×10:  $\mathfrak{M}^2 \times 1$ )
- Install the scanner unit [E]. ( \* 5)
- Insert the ferrite core [B] into the cover [C] (1).
- Attach the ferrite core cover with the ferrite core to the existing ferrite core [A] (2).



**U** Note

• The ferrite core [B] and the ferrite core cover [C] are included in this kit.

11. Connect the connectors of the harnesses [A]. Then route the harnesses [A] and the flat cable [B]. Finally, connect the connector of the flat cable [B]. (% × 1, % × 4)

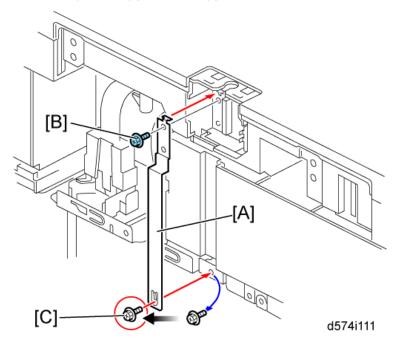




- The flat cable [B] should go through the ferrite cores [C].
- The harnesses [A] and the flat cable [B] should be routed under the harness [D] when these are reconnected.
- Never connect the flat cable [B] at an angle. Otherwise, the scanner unit may be damaged.

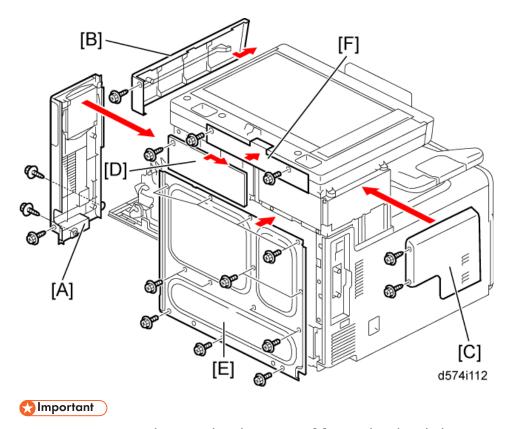
#### 2

# 12. Attach the grounding plate [A]. (Upper: @(blue) [B] × 1, Lower: @ × 1 (existing) [C])



### 13. Attach the following items:

- Rear right cover [A] (@ × 3)
- Rear upper right cover [B] (M3×10: 🖤 × 1)
- Left cover [C] (from the accessories, not the original cover) (M3×10: \$% × 2).
- Rear cover [E] ( \* 13)
- Scanner rear cover [F] ( \$\infty\$ × 2)

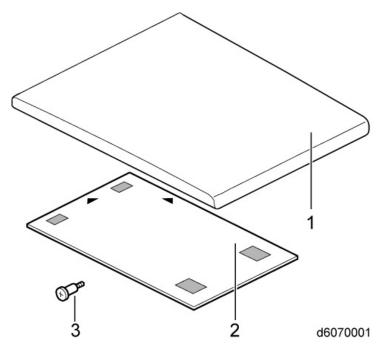


- Pay extra attention when reattaching the rear cover [E] to avoid catching the harnesses.
- 14. Reassemble the machine.
- 15. Turn ON the main power switch and check the 1-bin tray unit operation.

# Platen Cover (D607)

## **Accessory Check**

Installation of this unit requires the following components. Other components included in this kit are not used for installation on this machine.



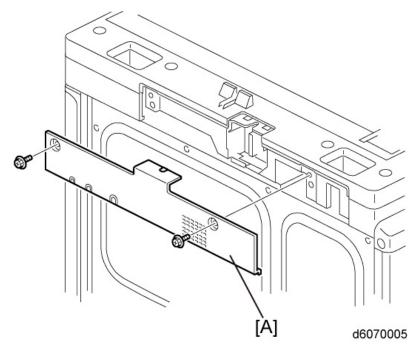
No.	Description	Q'ty
1.	Platen Cover	1
2.	Platen Sheet	1
3.	Stud Screw	1

#### Installation Procedure

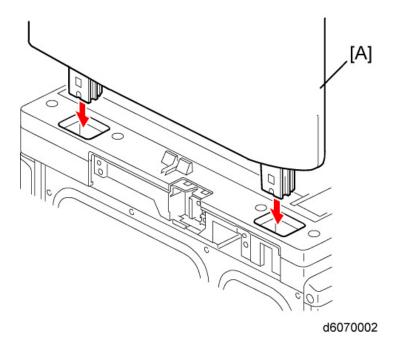
# **ACAUTION**

- Unplug the copier power cord before starting the following procedure.
- 1. Remove the strips of tape on the platen cover.

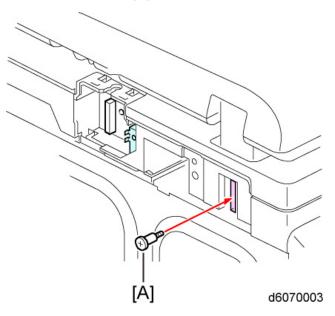
# 



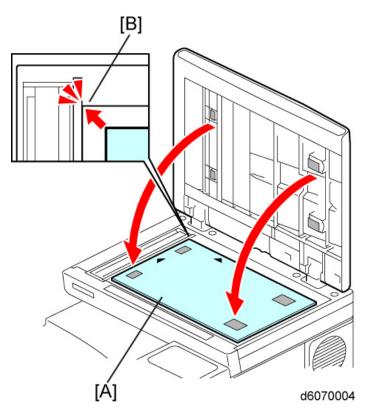
# 3. Mount the platen cover [A] on the copier as shown.



#### 4. Secure the stud screw [A].



- 5. Reinstall the scanner rear cover removed in step 2.
- 6. Open the platen cover.
- 7. Do the following steps:
  - Place the platen sheet [A] on the exposure glass.
  - Line up the rear left corner of the platen sheet flush against corner [B] on the exposure glass.



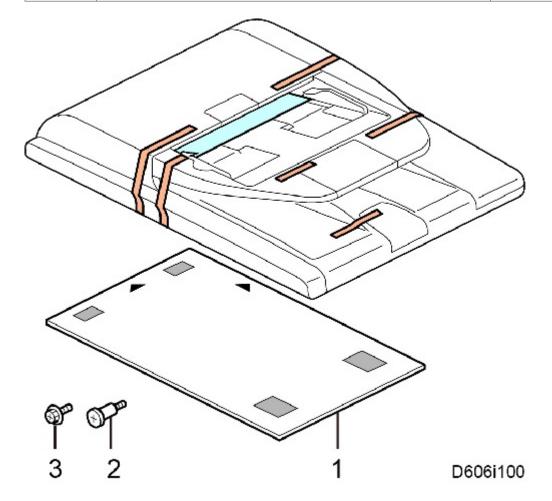
- 8. Close the platen cover.
- 9. Reopen the platen cover.
- 10. Press the surface of the platen sheet gently to attach it securely on the platen cover.

# ARDF (D3BE)

# Accessory Check

Confirm that you have the accessories indicated below.

No.	Description	Q'ty
1	Platen sheet	1
2	Stud screw	1
3	Screw (Unused)	1

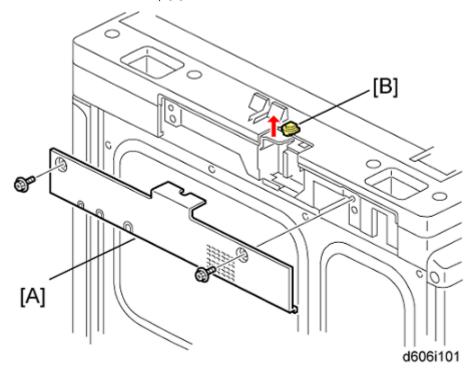


2

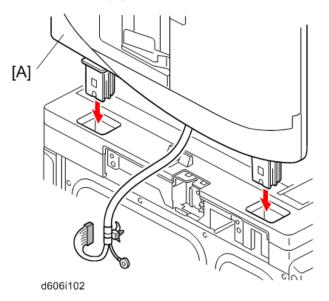
# Installation Procedure

## **ACAUTION**

- Unplug the copier power cord before starting the following procedure.
- 1. Remove the strips of tape on the ARDF.
- 2. Do the following steps:
  - Remove the scanner rear cover [A]. ( $\mathfrak{S}^p \times 2$ )
  - Remove the harness cap [B].

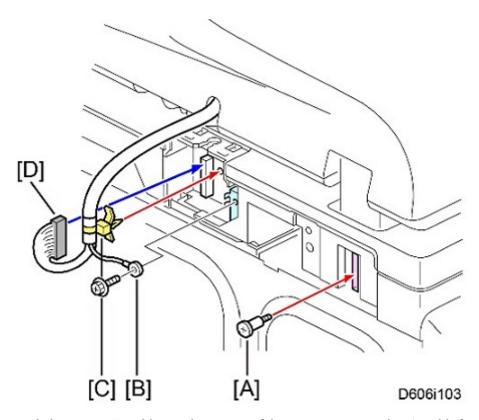


# 3. Mount the ARDF [A].

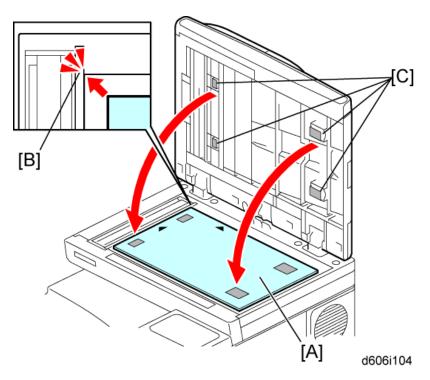


#### 4. Do the following steps:

- Secure the stud screw [A].
- Secure the ground cable [B]. ( $\mathfrak{S}^p \times 1$ )
- Attach the clamp [C].
- Connect the I/F cable [D] to the connector.



- 5. Push the excess I/F cable into the interior of the ARDF to prevent the I/F cable from sagging.
- 6. Reinstall the scanner rear cover removed in step 2.
- 7. Open the ARDF.
- 8. Do the following steps:
  - Place the platen sheet [A] on the exposure glass.
  - Line up the rear left corner of the platen sheet flush against corner [B] on the exposure glass.
  - Remove the protection seals [C].



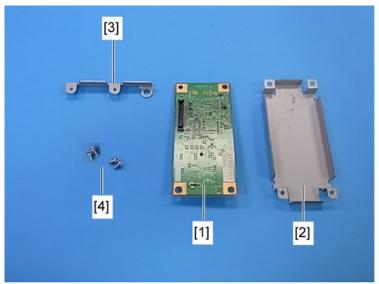
- 9. Close the ARDF.
- 10. Reopen the ARDF.
- 11. Press the surface of the platen sheet gently to attach it securely on the ARDF.
- 12. Adjust the ARDF registration (front / back) (page 203 "ARDF").

#### 2

# Copy Data Security Unit Type G (D640)

# Accessory Check

Installation of this unit requires the following components. Other components included in this kit are not used for installation on this machine.



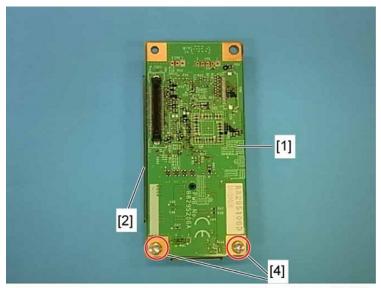
d1170029

Call-outs	Descriptions	Q'ty
1	Copy data security unit board	1
2	Bracket for the board	1
3	Bracket for the machine attachment	1
4	Screws (M3 x 6)	4
-	Screws (M3 x 4)	2
-	Screws (M3 x 8)	2
-	Spacer	1
-	Decal	1
-	Label	1

# Installation Procedure

# **ACAUTION**

- Unplug the main machine power cord before you do the following procedure.
- 1. Attach the copy data security unit board [1] to the bracket [2]. (@:[4] × 2)



d1170030

- 2. Remove the rear cover. (page 217)
- 3. Attach the bracket [3] to the machine using the existing screw [A].



d1170031

B: CN111



- The bracket [3] and the controller board are screwed together.
- 4. Attach the copy data security unit board [A] with bracket to CN111. ( (M3×6) × 2)



d1182083

5. Reassemble the machine.

#### **User Tool Setting**

- 1. Plug in and turn ON the main power switch.
- 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.



- 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.

2

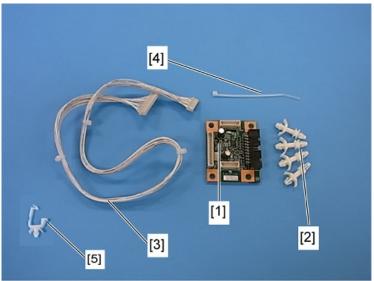
Make sure that the machine can recognize the option (see "page 191 "Check All Connections"").

#### 2

# Optional Counter Interface Unit Type M12 (B870)

# **Accessory Check**

Installation of this unit requires the following components. Other components included in this kit are not used for installation on this machine.



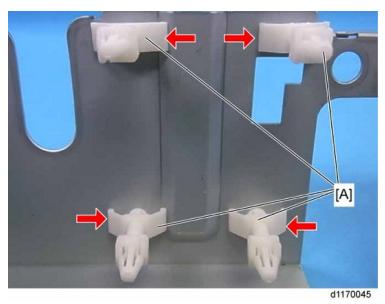
d1170044

No.	Description	Q'ty
1	Counter interface board	1
2	Stud	4
3	Harness	1
4	Harness band	1
5	Clamp	1
-	Screws	4
-	EMC Address	1
-	Caution Chart	1

# Installation Procedure

# **ACAUTION**

- Unplug the copier power cord before starting the following procedure.
- 1. Remove the rear cover. (page 217)
- 2. Remove the controller box cover. (page 367)
- 3. Install the four studs [A] in the controller box.



4. Install the key counter interface board [A] shown below on the four studs.

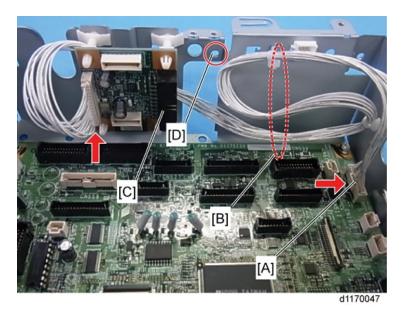




d1170046

#### 6. Do the following steps:

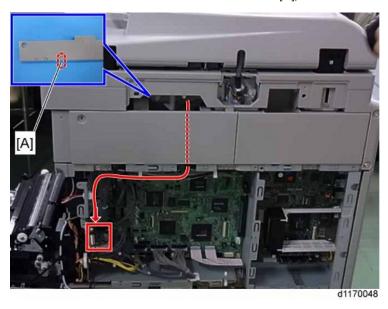
- Route the harness through the rear of the interface board, and then connect it to CN570 [A]. ( × 2)
- Bind the harness at the point [B] with the harness band included in this kit to prevent interference with other harnesses.
- Insert the clamp included in this kit at [D], and clamp the harness with the clamp to prevent interference with other harnesses.
- Connect the harness from the counter device to CN4 [C] on the key counter interface board.



7. Route the harness.



• Remove the cutout from the scanner rear cover [A], and route the harness as shown below.



8. Reassemble the machine.



• Remove the optional counter interface unit before removing the controller box.

## Mechanical Counter Installation (only for NA)

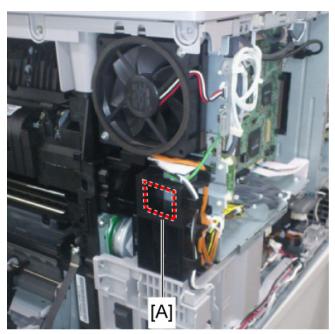
Installation of this unit requires the following components. Other components included in this kit are not used for installation on this machine.

No.	Description	Q'ty
1	Mechanical Counter	1
2	Harness	1

#### **Installation Procedure**

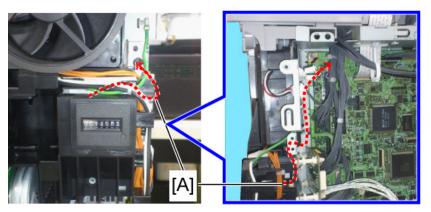
## **ACAUTION**

- Unplug the copier power cord before starting the following procedure.
- 1. Remove the rear right cover. (page 218)
- 2. Remove the rear cover. (page 217)
- 3. Connect the harness to the mechanical counter.
- 4. Insert the mechanical counter into the place [A] at the rear right of the machine. (Hooks x 2)



d1170725

5. Route the harness [A] from the mechanical counter as shown below.



d1170726

- 6. Connect the connector of the harness to the connector CN570.
- 7. Reassemble the machine.

#### 2

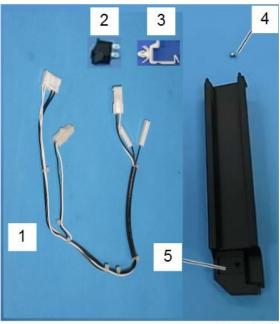
## **Anti-condensation Heater (Mainframe)**

## **Accessory Check**

All the accessories required to install the anti-condensation heater for mainframe are available as the following parts. Order these separately from the heater.



- These part numbers are correct as of July, 2015. Refer to the "Option" section in the mainframe's parts catalog to check the latest part numbers.
- The shape of actual parts may differ from the photo.



d196z2400

No.	Description	Q'ty	Part Number
1	Junction Harness	1	D1965265*1
2	Heater Power Switch	1	12042570
3	Clamp	1	11050511
4	Screw	1	08010231

No.	Description	Q'ty	Part Number
5	Heater kit	1	D1175097: EU/AA/KOR/CHN D1175091: NA/TWN



RTB 60: Wrong part number

\*1 This harness (P/N: D1955265) is also used as a harness for Anti-condensation Heater for
optional paper feed unit, and Anti-condensation Heater for mainframe paper feed tray. If you have
already ordered this harness for these heaters, it is not necessary to order this harness again at this
time.

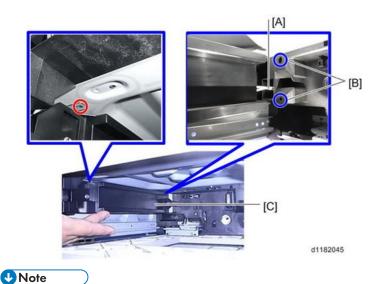
#### Installation Procedure

## **CAUTION**

Do not lift the machine together with one or more paper feed unit(s):
 If there is already a machine with one or more optional paper feed unit(s), be sure to disconnect the machine and paper feed unit(s), and lift them up separately when moving/transporting.
 Otherwise, the handle of the paper feed unit will break due to the mainframe's weight, and it can cause an injury.

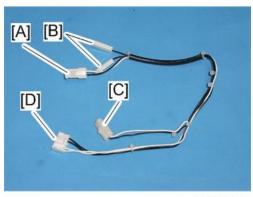
## **ACAUTION**

- Unplug the copier power cord before starting the following procedure.
- 1. Remove the following items.
  - Paper Tray
  - Waste toner bottle (page 253)
  - Left cover (page 216)
  - Rear cover (page 217)
  - PSU fan (page 376)
- 2. Do the following steps:
  - Insert the heater harness into the hole [A].
  - Fit the boss of the heater into the holes [B] to install the heater [C] ( $^{\odot}$ (M3×6) × 1)



• Use a short screwdriver to secure the screw.

#### Junction harness connections:

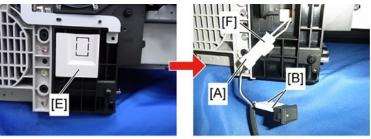


d196z2022

- A: To the heater
- B: To the power switch
- C: To the optional PFU heater (if installed)
- D: To the PSU

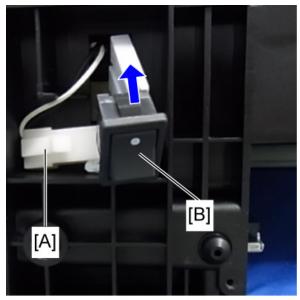
#### 3. Do the following steps:

- Remove the cover [E], and then pull out the heater harness [F].
- Connect the heater harness to the connector of the junction harness [A]. ( >> 1)
- Connect the heater power switch to the connectors of the junction harness [B]. ( $\checkmark$  × 2)



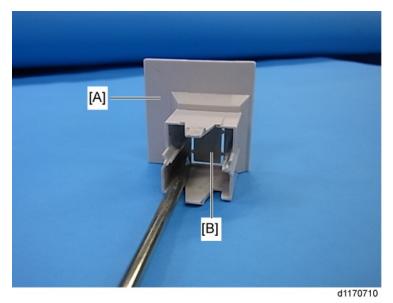
d1170706

4. Store the connector [A] in the connector holder, then push the power switch [B] into the switch hole until you feel it click into place.

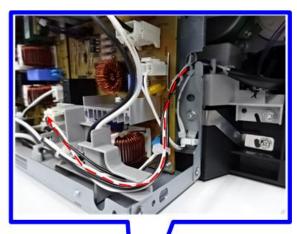


d1170707





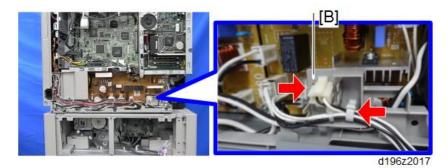
- 6. Route the junction harness as shown below.
  - Connect the connector [A] to CN600.





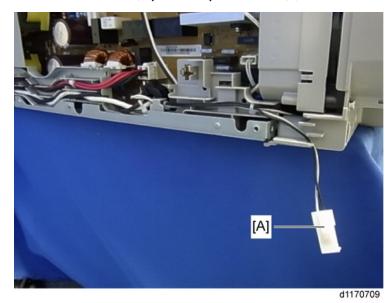
d196z2021

- Attach the clamp and route the harness. ( $\P\times$ 1)
- Only when the heater for optional paper feed tray will not be installed, store the connector [B] in the holder.



7. When the optional PFU tray heater will be installed: Pull out the connector [A] and its harness to the lower part of the machine. Then uncap the connector isolation cap in the

optional PFU and connect the connector [A] to the uncapped connector. (page 125 "Anticondensation Heater (Optional Paper Feed Unit)")



8. Reassemble the machine.

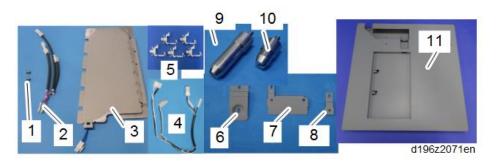


 The mainframe and the optional paper feed unit should join each other if the anticondensation heater of the optional paper feed unit is installed. See page 125 "Anticondensation Heater (Optional Paper Feed Unit)" for details.

# Anti-condensation Heater (for Mainframe Paper Tray)

## **Accessory Check**

No.	Items	Q'ty	Remarks	See Note *2
1	Screw M4 x 6	2		A: Heater Kit
2	Harness	1		
3	Heater	1		
4	Harness	1	*1	B: Harness
5	Clamps	5		A: Heater Kit
6	Bracket	1		C: Bracket Set
7	Bracket	1		
8	Bracket	1		
9	Locating pin (Long)	1		E: Pin Set
10	Locating pin (Short)	1		
11	Base	1		D: Base Set



**U**Note

RTB 60: Wrong part number

\*1 This harness (P/N: D1955265) is also used as a harness for Anti-condensation Heater for
optional paper feed unit, and Anti-condensation Heater for mainframe. If you have already
ordered this harness for these heaters, it is not necessary to order this harness again at this time.

2

 \*2 All the accessories required to install the anti-condensation heater for mainframe paper tray are available as the following kits or components. Order these separately from the heater:

A: Heater Kit (D5730400 for NA/TWN, D5730401 for EU/AA/CHN)

**RTB 50** 

B: Harness (D1965265)

C: Bracket Set (D7728431)
D: Base Set (D3AT0010)

E: Pin Set (D7728411)

Part numbers changed

These part numbers are correct as of July, 2015. Refer to the "Option" section in the mainframe's
parts catalog to check the latest part numbers.

#### Installation Procedure

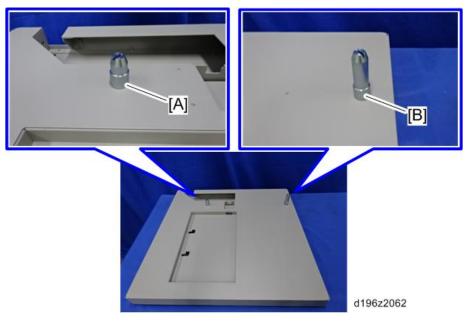
## **CAUTION**

Do not lift the machine together with one or more paper feed unit(s):
 If there is already a machine with one or more optional paper feed unit(s), be sure to disconnect the machine and paper feed unit(s), and lift them up separately when moving/transporting.
 Otherwise, the handle of the paper feed unit will break due to the mainframe's weight, and it can cause an injury.

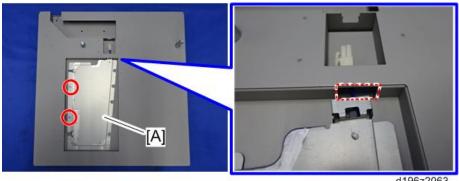
## **CAUTION**

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

1. Attach the two locating pins [A] [B] on the table.



2. Attach the heater bracket [A]. ( × 2)

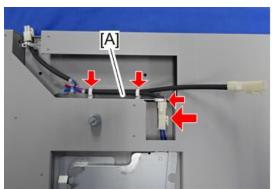


d196z2063



• Pass the connector through the hole in the table.

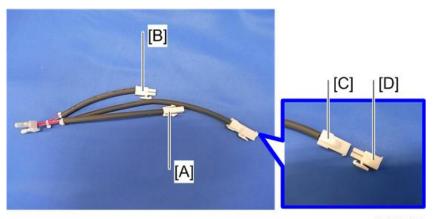
# 3. Connect the heater harness [A] to the anti-condensation heater and route it as below. ( $(x) \times 1, (x) \times 3$ )



d196z2065



- A: For the anti-condensation heater
- B: For the junction harness
- C: For the isolation cap (Not used)
- D: Isolation cap

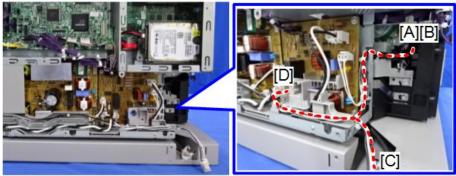


d118z2017

• The connector [C] is not used. Put the connector into the opening.



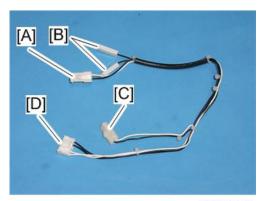
- 4. Put the mainframe on the table.
- 5. Remove the rear cover. (page 217)
- 6. Remove the left cover. (page 216)
- 7. Remove the PSU fan. (page 376)
- 8. Connect the connector to CN600 on the PSU and route the junction harness along the red dotted line in the photo. ( $\checkmark$  × 1)



d196z2102



- A: Not used (For the drum heater: If installing the anti-condensation heater for the mainframe)
- B: Not used
- C: For the heater harness
- D: For the PSU (CN600)



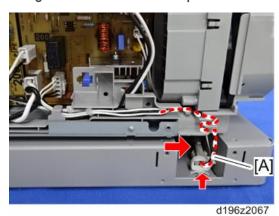
d196z2022

RTB 73 This step was modified • If the anti-condensation heater for mainframe is not going to be installed, put the connector [A] and the connector [B] into the area as shown below.

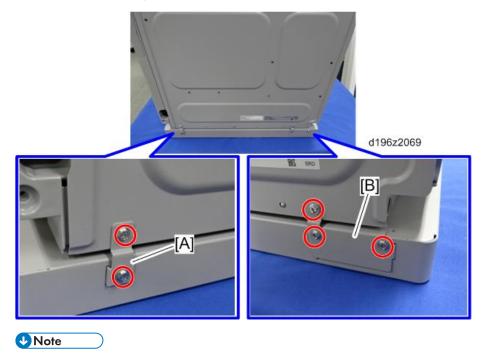


d196z2103

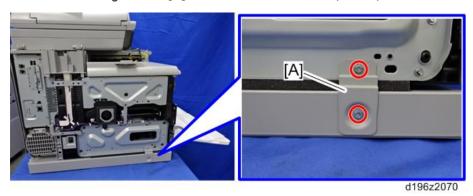
- 9. Install the PSU fan.
- 10. Connect the junction harness [A] to the heater harness and route the junction harness along the red dotted line in the photo.



11. Reattach the rear cover.



- Use the screws which are holding the rear cover.
- 13. Attach the securing bracket [A] at the left of the machine. ( $\mathfrak{D}^{\circ}$  × 2)



14. Reattach the left cover.

#### 2

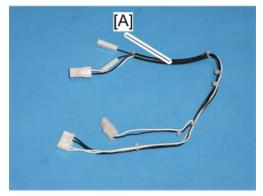
# Anti-condensation Heater (Optional Paper Feed Unit)

### **Accessory Check**

Check the quantity and condition of the accessories against the following list. Other components included in this kit are not used for installation on this machine.

## 

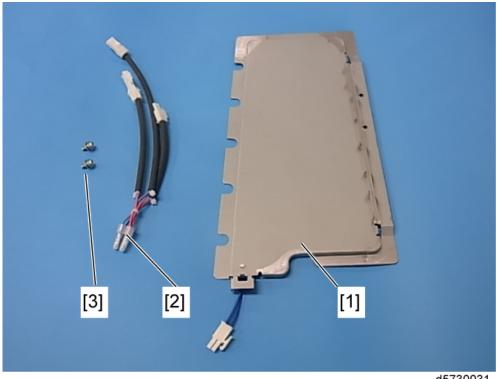
• The following junction harness (P/N: D1965265) is required to install the anti-condensation heater for optional paper feed unit. If you have already ordered this harness for installing the other anti-condensation heaters for mainframe or mainframe paper tray, it is not necessary to order this junction harness again at this time.



d196z2221

#### For Installing the Heater:

No.	Description	Q'ty	Remark
1	Anti-condensation heater	1	
2	Harness with the isolation cap	1	
3	M4 × 10: Screw	2	

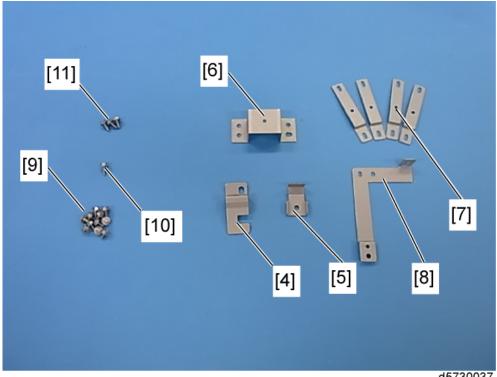


d5730031

## For Joining the Mainframe and Another Paper Feed Unit:

No.	Description	Q'ty
4	Joint bracket (Front left)	1
5	Joint bracket (Front right)	1
6	Joint bracket (Front center) (only for the optional paper feed unit)	1
7	Joint bracket (Rear)	4
8	Joint bracket (Frame) (only for optional paper feed unit)	1
9	M3 x 6: Screw	11
10	M3 x 12: Screw	1
11	Tapping screw	3

RTB 61: Part number information added



d5730037

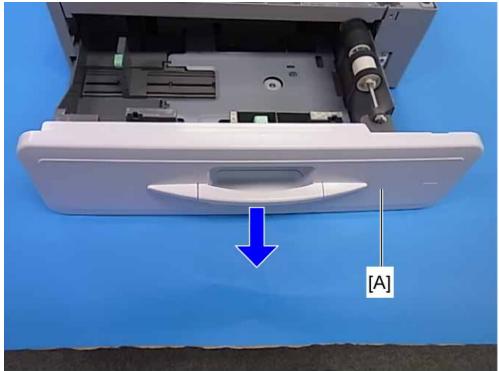
### Installation Procedure

## **ACAUTION**

- 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.

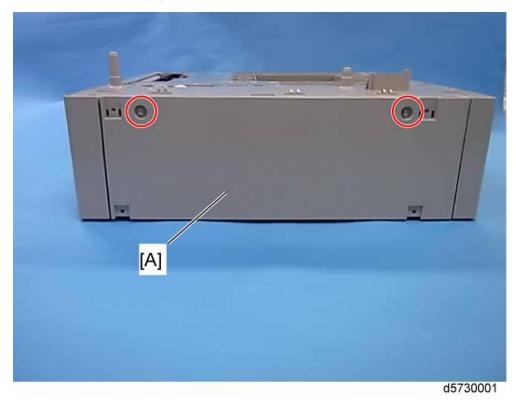
## For Installing the Tray Heater on the 1st Paper Feed Unit

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



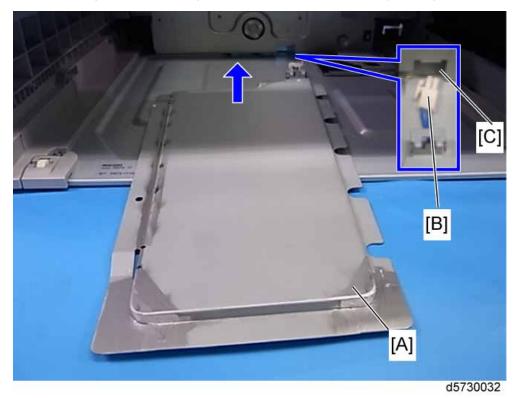
d5730002

## 2. Remove the rear cover [A] ( \$\mathbb{O}^{\mathbb{C}} x 2 )



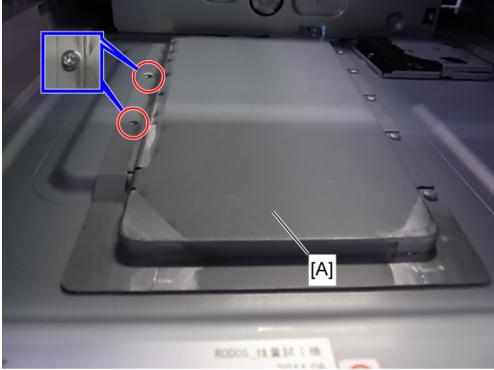
3. Remove the left cover. (page 216)

4. Slide in the tray heater [A], and pass the heater harness [B] through the square hole [C].



#### 2

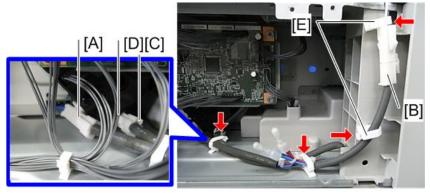
## 



d5730033

#### 6. Do the following steps:

- Connect the connector [A] to the tray heater connector (attached in step 4). ( $\checkmark$  1)
- Connect the harness [B] to the junction harness (mainframe).
- Attach two clamps [E] and route the harness through them. (  $\ensuremath{\overline{\$}} \times 4)$



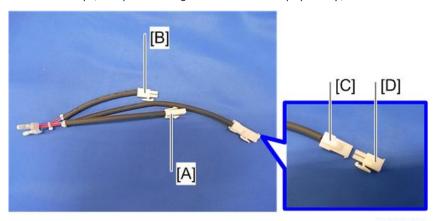
d118z2018



• A: For this tray heater

131

- B: For the mainframe
- C: For another optional tray heater
- D: Isolation cap (uncap if installing the heater for 2nd paper tray)



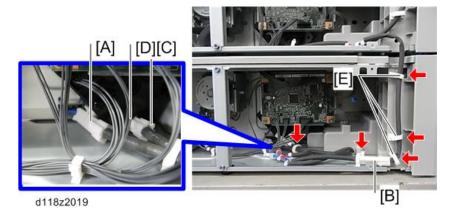
RTB 73 Note added

d118z2017

7. Reattach all the covers removed.

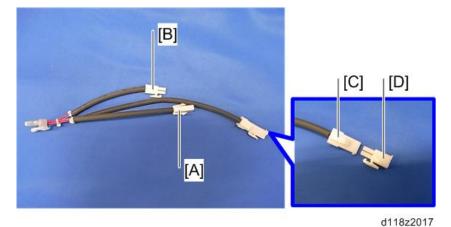
#### For Installing the Tray Heater on the 2nd Optional Paper Feed Unit

- 1. Do the same procedure for the 1st optional paper feed unit from step 1 to step 12.
- 2. Do the following steps:
  - Connect the harness [A] and heater connector for the 2nd tray.
  - Remove the cap on the 1st tray harness.
  - Connect the 2nd tray harness [B].
  - Attach three clamps [E] and route the harness through them. (% × 5)





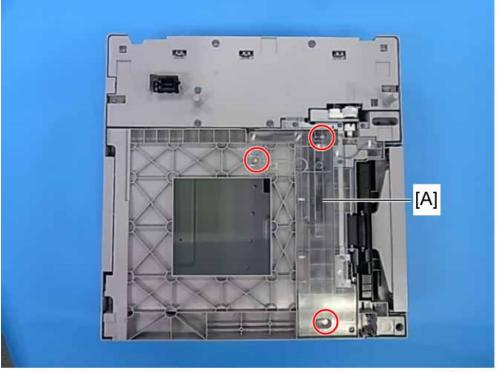
- A: To the 2nd tray heater
- B: To the 1st tray heater harness
- C: Not used
- D: Cap



3. Reattach all the covers removed.

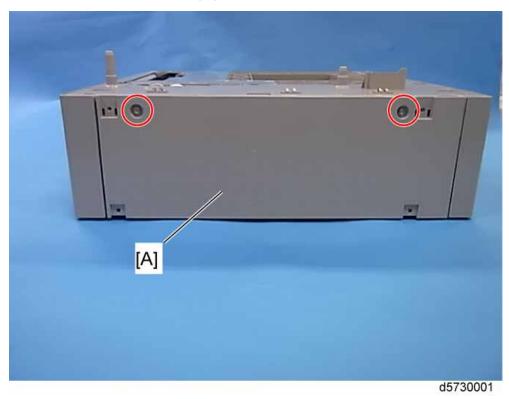
### For Joining the Mainframe with the Optional Paper Feed Unit

The mainframe and the optional paper feed unit should be joined with joint brackets after the anticondensation heater installation, because the heater harness may be damaged when the mainframe is removed accidentally. 1. Remove the upper cover [A] of the paper feed unit. ( $\mathscr{Y} \times 3$ )

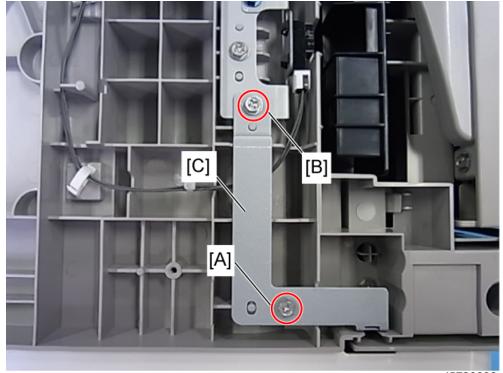


d5730007

## 2. Remove the rear cover [A] of the paper feed unit. ( $\mathfrak{P} \times 2$ )

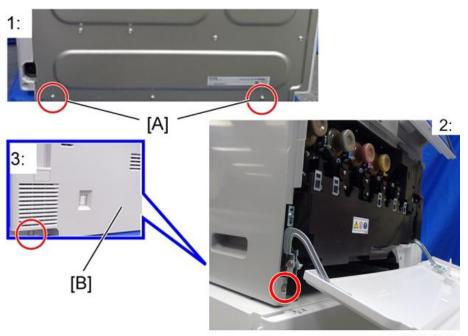


3. Attach the jointing bracket (frame) [C] (F:Tapping × 1 [A], M3×6: X × 1 [B]) and the upper cover of the paper feed unit. (X × 3)



d5730038

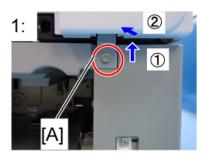
- 4. Put the mainframe on the paper feed unit.
- 5. Do the following steps.
  - Remove the paper trays from the mainframe and the optional paper feed unit.
  - Remove two screws [A] on the rear panel of the mainframe. Keep these screws until the joint brackets (rear) are installed.
  - Remove the left cover [B] of the mainframe. ( $\mathfrak{M}^{\times} \times 2$ )

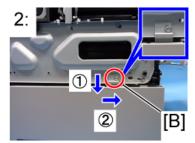


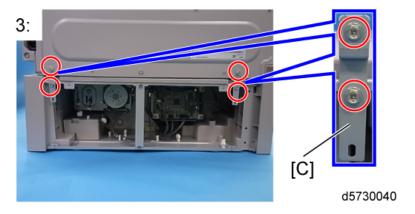
d196z2015

- 1: Rear
- 2: Front
- 3: Left

6. Join the mainframe with the optional paper feed unit with four joint brackets [A] (front right), [B] (front left) and [C] (rear) (×2). These brackets are secured with the following screws.



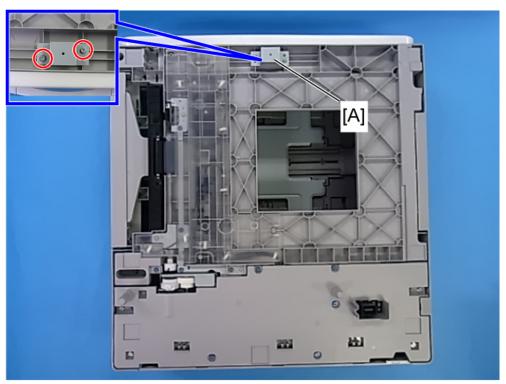




- 1: Front right
- 2: Left
- 3: Rear
- [A]: M3×12 (included in this kit)
- [B]: M3×6 (included in this kit)
- [C] (Upper): Existing screws (×2)
- [C] (Lower): M3×6 (included in this kit)
- 7. Reassemble the mainframe and the paper feed unit.

## **Joining Two Optional Paper Feed Units**

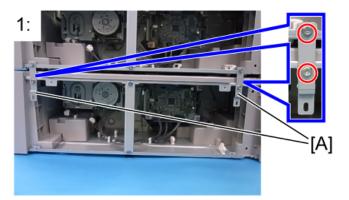
1. Attach the joint bracket (front center) [A] to the paper feed unit that will be installed at the lowest position. (39:Tapping × 2 (included in this kit))



d5730041

- 2. Put the optional paper feed unit on the paper feed unit that was fitted with the bracket [A] in step 1.
- 3. Remove the paper trays.

4. Join the two paper feed units with two joint brackets (rear) [A] and one screw [B]. (M3×6: 
3 (included in this kit))





- 1: Rear
- 2: Front center
- 5. Reassemble the mainframe and the paper feed units.

## **ACAUTION**

• Do not lift the machine together with one or more paper feed unit(s):
If there is already a machine with one or more optional paper feed unit(s), be sure to disconnect the machine and paper feed unit(s), and lift them up separately when moving/transporting. Otherwise, the handle of the paper feed unit will break due to the mainframe's weight, and it can cause an injury.



 When installing the mainframe with two paper feed units, join the two paper feed units first, and then join the mainframe with the paper feed units.

#### 2

# Enhanced Security HDD Option Type M10 (D792-09)

## Accessory Check

No.	Description	Q'ty
1	Enhanced Security HDD	1
-	EMC Address	1

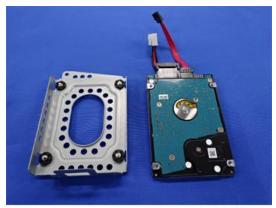


d191b0076

## Installation Procedure

1. Remove the standard HDD installed. (page 358)

## 2. Separate the standard HDD from the bracket.



d196z2120

3. Disconnect the cables from the standard HDD. ( $\checkmark$  × 2)



d191b0077

4. Remove the enhanced security HDD from its protective pack.



d191b0078

5. Connect the two cables to the enhanced security HDD. ( $\checkmark$  × 2)



d191b0079

6. Fasten the HDD to the bracket. (9 × 4)



- 7. Install the HDD bracket in the mainframe. (3° × 3, 5° × 2)
- 8. Reassemble the machine.

#### After Installing the HDD

1. Connect the power cord and turn the machine on. A message prompts you to format the hard disk.



d191b0081

2. Touch [Format].

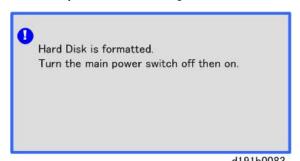


d191b0082

3. Wait for the machine to finish formatting the hard disk.



• Do not touch the power switch while the hard disk format is in progress. Wait for the machine to tell you that the formatting is finished.



- 4. Cycle the machine off/on after the message tells you formatting is finished.
- 5. Enter the SP mode.

**RTB 65** 

Steps 5 to 8 Deleted

- 6. Do SP5-846-040 to copy the address book to the hard disk from the controller board.
- 7. Do SP5-846-041 to let the user get access to the address book.
- 8. Cycle the machine off/on.
- 9. Ask an administrator to register an HDD authentication code in the machine.



• If the HDD Authentication Code is not registered, the function of the enhanced security HDD is not activated.

## RICOH e-Sharing Box (D668)

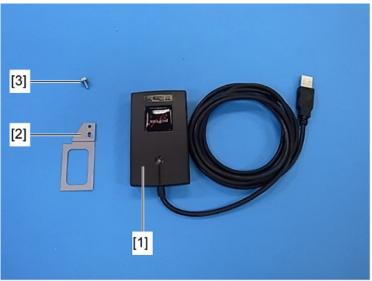
Refer to "RICOH e-Sharing Box Field Service Manual".

#### 2

## IC Card Reader (External Option)

### **Accessory Check**

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



d1170711

No.	Description	Q'ty
1	IC Card Reader	1
2	Bracket*	1
3	Screw	1

<sup>\*</sup>The IC card reader attaching bracket has two types. One is for the base machine. The other is for machines that have the 1-Bin tray unit. This bracket [2] is for the base machine.



• Consult your supervisor to obtain the bracket for machines that have the 1-Bin tray unit.

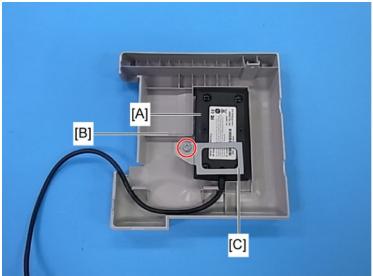
#### Installation Procedure

### **ACAUTION**

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

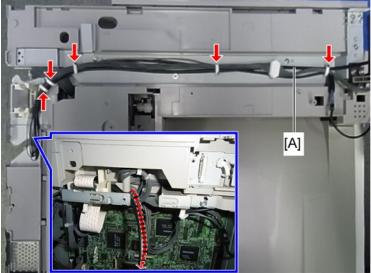
#### When Installing in a Machine That Does Not Have the 1-Bin Tray Unit

- 1. Remove the following items.
  - Scanner unit (page 228)
  - Rear cover (page 217)
- 2. Attach the IC card reader [A] to the rear of the upper right cover [B] with the bracket [C]. (3" × 1 included in this kit)



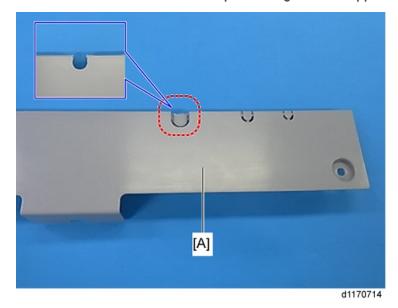
d1170712

3. Route the USB cable [A] from the IC card reader as shown below. ( $\$ \times 5$ )



d1170713

- 4. Pull out the USB cable from the rear of the machine.
- 5. Cut out the hole for the USB cable to pass through the rear upper cover [A].



- 6. Pass the USB cable from the IC card reader through the hole in the upper rear cover, and then reassemble the machine.
- 7. Do the following steps:
  - Attach the clamps [A] to prevent the cable from sagging.
  - Connect the USB cable to the USB connector at the left of the mainframe as shown below.
     Either connector can be used.



• Obtain these clamps [A] in advance, because they are not included in this kit.

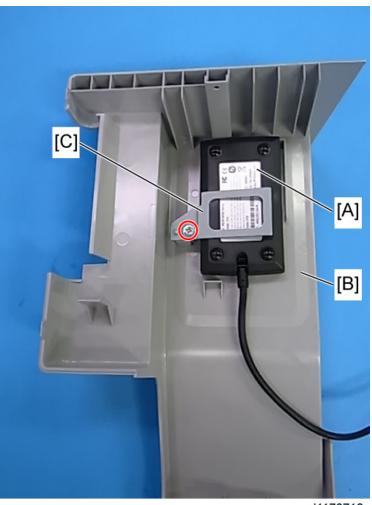
### When Installing in a Machine That Has a 1-Bin Tray Unit

1. Remove the following items.

**U** Note

- Scanner unit (page 228)
- Rear cover (page 217)
- 1-bin tray unit (page 81)

2. Attach the IC card reader [A] to the rear of the upper right cover [B] with the bracket [C]. (③\* × 1 included in this kit)

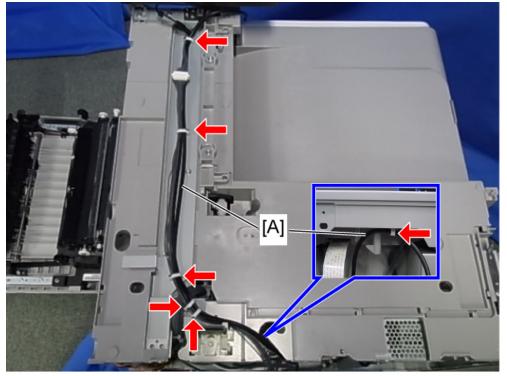


d1170716



• The bracket [C] is different from that of the base machine. The bracket for the base machine cannot be used. Consult your supervisor to obtain the correct bracket.

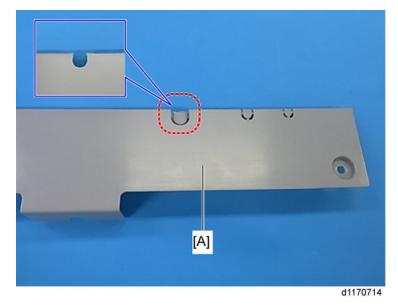
3. Route the USB cable [A] from the IC card reader as shown below. (  $\mbox{\$}\times 6\mbox{)}$ 



d1170717

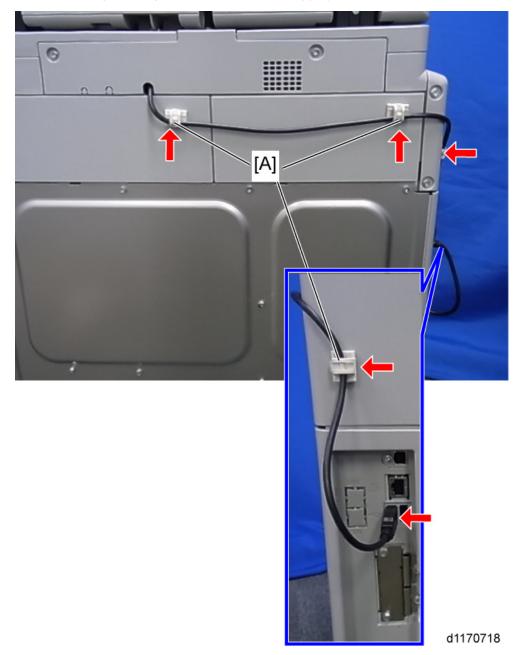
4. Pull out the USB cable from the rear of the machine in the same way as the installation on the base machine.





6. Pass the USB cable from the IC card reader through the hole in the upper rear cover, and then reassemble the machine.

7. Attach the clamps [A] to prevent the cable from sagging.



8. Connect the USB cable to the USB connector at the left of the mainframe as shown above. Either connector can be used.



• Obtain these clamps [A] in advance, because they are not included in this kit.

#### 2

# NFC Reader Type M13

## Accessory Check

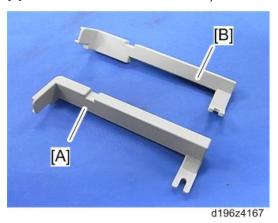


d196z4168

No.	Description	Q'ty
1	Cable Cover	2
2	USB Cable	1
3	NFC Reader	1
4	Ferrite Core	1
-	Caution Chart	1
-	EMC Address	1
-	Fastener	2
-	Decal	2
-	Label	1



- Two types of cable cover are included:
  - [A]: For a machine that has a 1-Bin tray unit installed.
  - [B]: For a machine that has no 1-Bin tray unit.



RTB 46 Modified

### **Installation Procedure**

This section includes the procedure for a machine that has no 1-Bin tray unit option. However, this procedure can be used for a machine that has a 1-Bin Tray Unit installed.

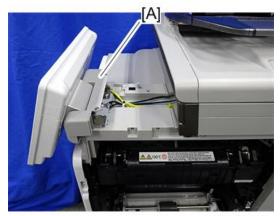
## **ACAUTION**

- Unplug the copier power cord before starting the following procedure.
- 1. Open the duplex unit.
- 2. Remove the front right cover [A]. ( \* 1)



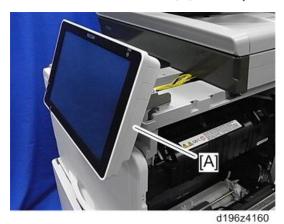
d196z4100

3. Remove the front right small cover [A].

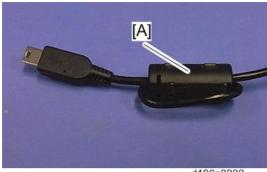


d196z4101

4. Remove the connector cover [A] on the operation panel.



5. Make a loop with the USB cable of the NFC reader, and then attach the ferrite core [A].



d196z2222

6. Connect the USB cable to the operation panel.

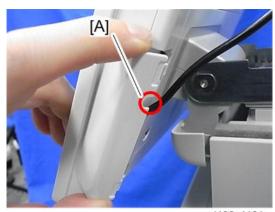


d196z4165

7. Attach the cover removed in step 4.



• Fit the cable into the slit [A] in the cover.

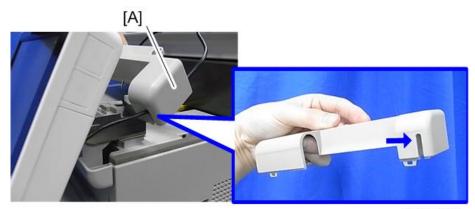


d196z4161

8. Attach the front right small cover [A].

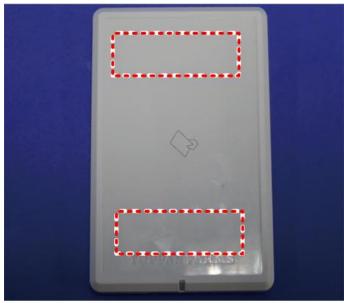


• Fit the cable into the slit.



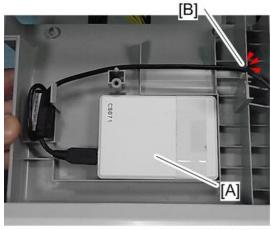
d196z4162

## 9. Attach the fasteners to the front side of the NFC reader [A].



d196z2301

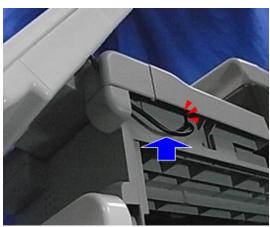
10. Attach the NFC reader [A] to the back side of the front right cover with adhesive tape.



d196z4166



- Make sure that the cable fits in the slit [B].
- 11. Install the front right cover with the NFC reader.
- 12. Push the USB cable into the covers.

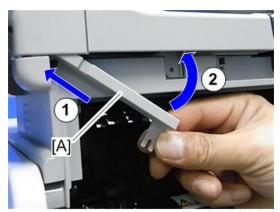


d196z2223



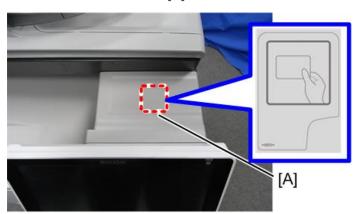
• Again, make sure that the cable fits in the slit.

13. Slide the cable cover [A] into the front right small cover as shown below.



d196z4164

- 14. Secure the cable cover together with the front right cover. ( $\mathfrak{S}^* \times 1$ )
- 15. Attach the decal to the area [A] as shown below.



d196z2019

## **Controller Options**

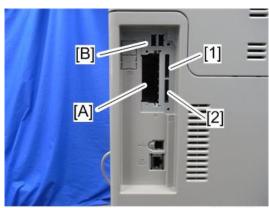
#### Overview



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

This machine has I/F card slots for optional I/F connections and SD card slots applications.

After you install an option, check that the machine can recognize it (see page 191 "Check All Connections" at the end of this section).



#### d196z2020

#### I/F Card Slots

 Slot [A] is used for one of the optional I/F connections (only one can be installed): File Format Converter Type E, IEEE 1284, IEEE 802.11a/g/n Interface Unit, USB Device Server Option

#### **SD Card Slots**

- Slot 1 (upper) is used for optional applications (Camera Direct Print Card, XPS Direct Print Option, Data Overwrite Security Unit, OCR Unit).
- Slot 2 (lower) is used for service only (for example, updating the firmware).

#### **USB Port**

• These ports (right and left) [B] are used for the Bluetooth Interface Unit, or IC Card Reader.

#### SD Card Appli Move

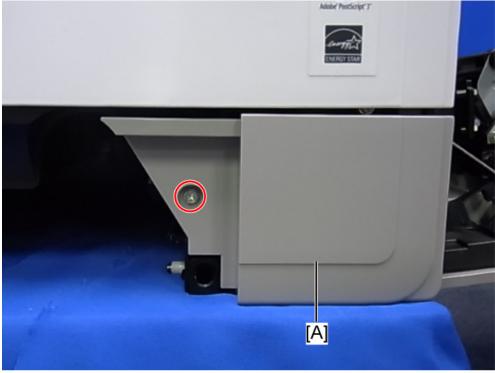
#### Overview

The service program "SD Card Appli Move" (SP5-873) allows you to move application programs from one SD card to another SD card.

If more than one application is required, the applications must be moved to one SD card with SP5873-1.

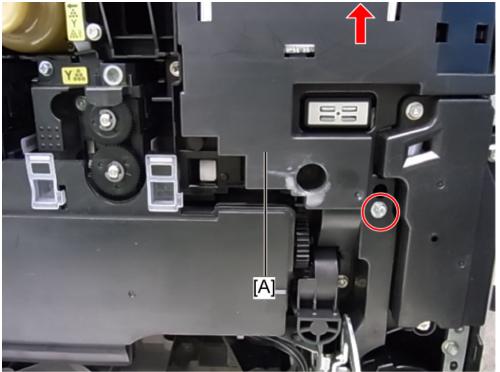
#### Be very careful when you do the SD Card Appli Move procedure:

- The data necessary for authentication is transferred with the application program from an SD card
  to another SD card. Authentication fails if you try to use the SD card after you move the application
  program from one card to another card.
- Do not use the SD card if it has been used before for other purposes. Normal operation is not guaranteed when such an SD card is used.
- The original application SD card should be stored using the following procedure.
- 1. Remove the paper tray.
- 2. Remove the cover [A]. ( \* 1)



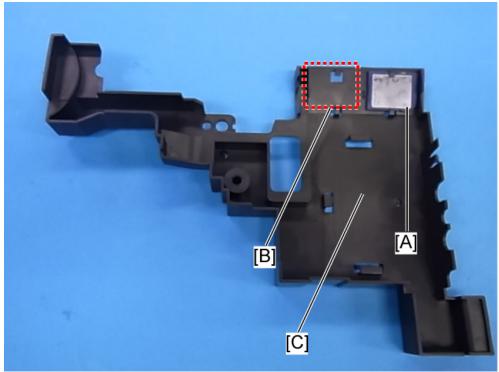
d1170210

- 3. Open the front door.
- 4. Remove the cover [A]. ( \* 1, hook × 1)



d1170212

#### 5. Insert the SD card into either socket [A] or [B].



d1170213



• The place [C] on the cover is for storing the SMC list.

#### 6. Reassemble the machine.

- The original application SD card should be kept in a safe place, for the following reasons:
  - The SD card can be the only proof that the user is licensed to use the application program.
  - You may need to check the SD card and its data to solve a problem in the future.

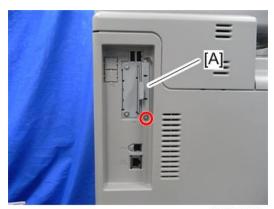
#### **Move Exec**

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



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 update or application merge.

- 1. Turn OFF the main power.
- 2. Remove the SD card slot cover [A]. ( \* 1)



d196z2028

- 3. Make sure that a target SD card is in SD Card Slot 1 (upper). The application program is moved to this SD card.
- 4. Insert the source SD card with the application program in SD Card Slot 2 (lower). The application program is copied from this source SD card.
- 5. Turn the main switch ON.
- 6. Enter the SP mode.
- 7. Select SP5-873-001 "Move Exec".
- 8. Follow the messages shown on the operation panel.
- 9. Turn the main switch OFF.
- 10. Remove the source SD card from SD Card Slot 2 (lower).
- 11. Attach the slot cover.
- 12. Turn the main switch ON.
- 13. Check that the application programs run properly.

#### Undo Exec

"Undo Exec" (SP5-873-002) lets you move back application programs from an SD card in SD Card Slot 1 (upper) to the original SD card in SD Card Slot 2 (lower). You can use this program when, for example, you have mistakenly copied some programs by using Move Exec (SP5-873-001).



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 (lower). The application program is copied back into this card.
- 3. Insert the SD card with the application program in SD Card Slot 1 (upper). 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 (lower).
- 10. Turn the main switch.
- 11. Check that the application programs run normally.
- 12. Make sure that the machine can recognize the option (see page 191 "Check All Connections" at the end of this section).

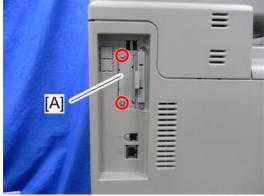
### File Format Converter Type E

### **ACAUTION**

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

You can only install one of the following interfaces at one time: (File format converter, IEEE 802.11a/g/n Interface Unit, IEEE1284, Bluetooth).

1. Remove the slot cover [A]. ( × 2)



d196z2026





d1170021

- 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)	"]"
SP5-836-002	Panel Setting	"O"

5. Make sure that the machine can recognize the option (see page 191 at the end of this section).

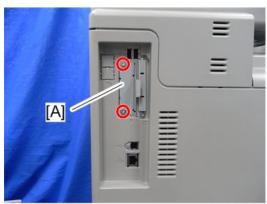
## IEEE 1284 Interface Board Type A

## **ACAUTION**

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

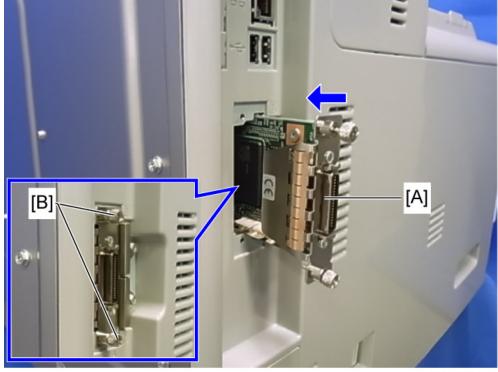
You can only install one of the following network interfaces at a time: (IEEE 802.11a/g/n Interface Unit, IEEE 1284, File format converter).

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



d196z2026

2. Install the interface board [A] into the slot. (Knob-screw × 2 [B])



d1170019a

3. Make sure that the machine can recognize the option (see page 191 "Check All Connections" at the end of this section).

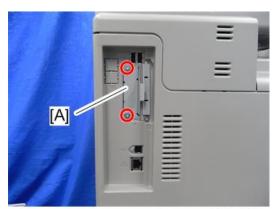
## IEEE 802.11a/g/n Interface Unit Type M2

## **ACAUTION**

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

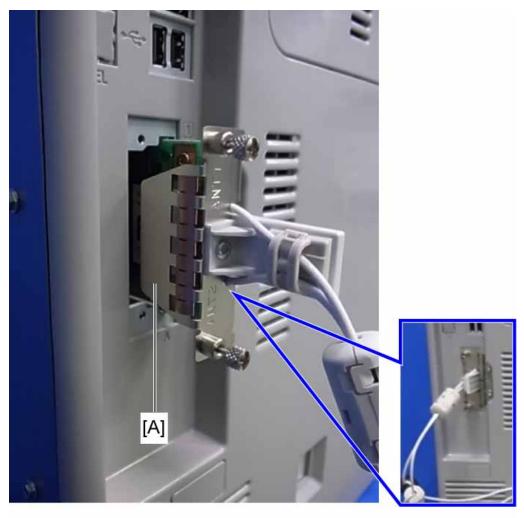
You can only install one of the following network interfaces at one time: (IEEE 802.11a/g/n Interface Unit, IEEE 1284, Bluetooth, File format converter).

1. Remove the slot cover [A] from the board slot. (  $\ensuremath{\mathbb{G}}\xspace^\times$  × 2)



d196z2026

2. Install the wireless LAN board [A] (Knob 🖤 × 2) into the board slot.



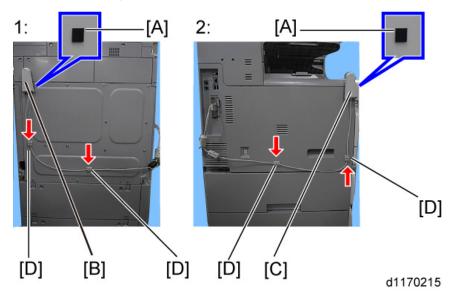
d1170022

- Make sure that the machine can recognize the option (see page 191 "Check All Connections" at the end of this section).
- 4. Do the following steps.
  - Peel off the double-sided tapes on the Velcro fasteners [A], and then attach them [A] at the front left and rear of the machine.
  - Attach "ANT1" (having a black ferrite core) [B] to the rear of the machine.
  - Attach "ANT2" (having a white ferrite core) [C] to the front left (forward) of the machine.



• "ANT1" is a transmission/reception antenna and "ANT2" is a reception antenna. Do not attach them at the wrong places.

• Attach the clamps [D] as shown below.



- 1: Rear
- 2: Left
- 5. Wire the cables and clamp them. (\sqrt{x} \times 4)



• 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 802.11a/g/n. These settings take effect every time the machine is powered on.



- You cannot use the wireless LAN if you use Ethernet.
- The Bluetooth interface unit and the Wireless LAN interface unit cannot be used simultaneously.
- 1. Press the "User Tools/Counter" key.

On the touch panel, press "System Settings".



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

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)



- The allowed range for the channel settings may vary for different countries.
- 7. Set the "Security Method" to specify the encryption of the Wireless LAN.
  - The WEP (Wired Equivalent Privacy) setting is designed to protect wireless data transmission.
     The same WEP key is required on the receiving side to unlock encoded data. There are 64 bit and 128 bit WEP keys.

Range of Allowed Settings:

64 bit: 10 characters

128 bit: 26 characters

 Specify "WPA2" when "Communication Mode" is set to "Infrastructure Mode". Set the "WPA2 Encryption Method" and "WPA2 Authent. Method".

WPA2 Encryption Method: CCMP (AES) is fixed.

WPA2 Authent. Method: Select either "WPA2-PSK" or "WPA2".

If you select "WPA2-PSK", enter the pre-shared key (PSK) of 8 -63 characters in ASCII code. When "WPA2" are selected, authentication settings and certificate installation settings are required.

- 8. Press "Wireless LAN Signal" to check the machine's radio wave status using the operation panel.
- 9. Press "Restore Factory Defaults" to initialize the following settings:
  - Transmission mode
  - Channel

- WEP
- SSID
- WEP Key

#### SP Mode and UP Mode Settings for IEEE 802.11a/g/n

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

SP No.	Name	Function
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.

## Bluetooth Interface Unit Type D

## **ACAUTION**

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

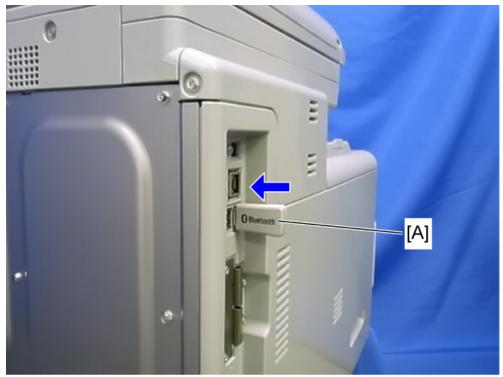
## **ACAUTION**

• Do not remove the Bluetooth unit while the power of the machine is on.



- You cannot install this option together with IEEE 802.11a/g/n.
- Turn OFF the power of the machine, and then unplug the power cable from the wall outlet.

2. Insert the Bluetooth Interface adapter [A] into the USB connector (Either USB connector can be used).



d1170026a

- 3. Plug the power cable and turn ON the power of the machine.
- 4. Make sure that the machine can recognize the option (see page 191 "Check All Connections" at the end of this section).

## Camera Direct Print Card Type M13

## **ACAUTION**

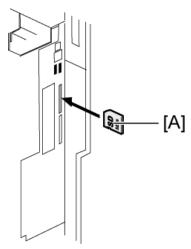
• Unplug the main machine power cord before you do the following procedure.

1. Remove the SD-card slot cover [A] from the SD card slots. (  $\ensuremath{\mathbb{SP}} \times 1)$ 



d196z2028

2. Insert the SD card (PictBridge) in SD slot 1 (upper) with its label face [A] to the rear of the machine.



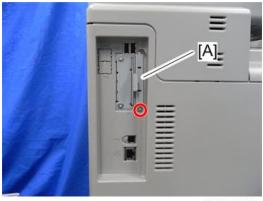
d1170002b

- 3. Attach the SD-card slot cover, and then turn on the machine ( $\mathfrak{O}^* \times 2$ ).
- 4. Make sure that the machine can recognize the option. (see page 191 "Check All Connections" at the end of this section)

## OCR Unit Type M13

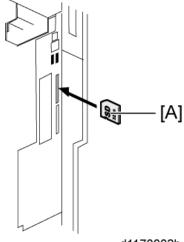
1. Turn OFF the main power.

### 2. Remove the SD card slot cover. ( \* 1)



d196z2028

3. Insert the SD card in SD slot 1 (upper) with its label face [A] to the rear of the machine.



d1170002b

- 4. Turn ON the main power.
- 5. Press "Enter" in SP5-878-004 (Option Setup: OCR Dictionary).

The SD card ID is saved in the NVRAM, and the ID of the MFP is saved on the SD card. The MFP and SD card are thereby linked.

6. When "operation complete" is displayed, press "Close".



- If installation fails, "Failed" is displayed.
- If installation fails, perform the following steps.
- 1. Check whether it is a used SD card.
- 2. Turn the main power OFF, and repeat steps 1-5.

- 7. Turn the main power OFF/ON.
- 8. Press "Enter" in SP5-878-004 (Option Setup: OCR Dictionary).

Dictionary data is copied to the HDD.



- On the first run, SP5-878-004 links the SD card, and on the second run, copies dictionary data.
- 9. Turn the main power OFF, and remove the SD card from the SD card slot.



- Keep the SD card in the SD card storage location of the MFP. The original SD card is needed
  in the event of a HDD malfunction.
- 10. Return the SD card slot cover to the original position.
- 11. Turn the main power ON.
- 12. Press [Send File Type / Name] on the [Scanner] screen.



w\_d1351739

13. Check if [OCR Settings] is displayed on the [Send File Type / Name] screen.



w d1351740



- After installation, the OCR setting can be changed on the "OCR setting" screen.
- When setting OCR, set [OCR setting] to [Yes]. (Default setting: [No])

### **Recovery Procedure**

When this option is installed, a function is saved on the HDD, and ID information on the SD card is saved in the NVRAM. Therefore, when replacing the HDD and/or NVRAM, this option must be reinstalled.

### When storing the original SD card and;

- When only the HDD is replaced;
   Reinstall using the original SD card.
- When only the NVRAM is replaced;

When performing upload/download of NVRAM data, reinstall using the original SD card.

When not performing upload/download of NVRAM data, order and reinstall a new SD card (service part).

When the HDD and NVRAM are replaced simultaneously;
 Reinstall using the original SD card.

### If the original SD card is lost;

Order and reinstall a new SD card (service part).



• Perform reinstallation in the same way as installation.

## **XPS Direct Print Option Type M13**

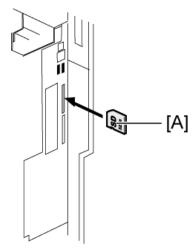
1. Turn OFF the main power.

2. Remove the SD card slot cover [A]. ( \* × 1)



d196z2028

Insert the SD card (XPS) in SD slot 1 (upper) with its label face [A] to the rear of the machine.



d1170002b

- 4. Merge the SD card contents if necessary. (page 163)
- 5. Attach the SD card slot cover. (@x 1)
- 6. Turn ON the machine.
- 7. Print out the "Configuration Page", and then check if this option is correctly recognized.

  User Tools > Machine Features > Printer Features > List/Test Page > Configuration Page

### Data Overwrite Security Unit Type I

#### Overview

This option should be installed only for the customer who requires the CC certified Data Overwrite Security function.

The function of this option is completely the same as the Data Overwrite Security in Security Functions, which is standard on this machine.

### Before You Begin the Procedure

1. Confirm that the Data Overwrite Security unit SD card is the correct type for the machine. The correct type for this machine is "Type I".



- If you install any version other than "Type I", you have to replace the NVRAM and do this
  installation procedure again.
- 2. Make sure that the following settings are not at their factory default values:
  - Supervisor login password
  - Administrator login name
  - Administrator login password

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

3. Make sure that "Admin. Authentication" is ON.

[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).

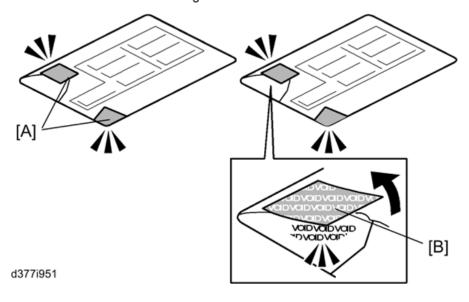
[System Settings] – [Administrator Tools] – [Administrator Authentication Management] - [Available Settings]

If this setting is disabled (not selected), tell the customer this setting must be enabled (selected) before you do the installation procedure.

### Seal Check and Removal

## **ACAUTION**

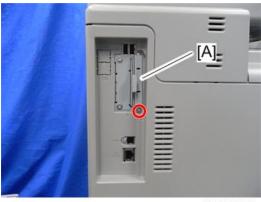
- You must check the box seals to make sure that they are not removed after the items have been sealed in the box at the factory before you do the installation.
- 1. Check the box seals [A] on each corner of the box.
  - Make sure that a tape is attached to each corner.
  - The surfaces of the tapes must be blank. If you see "VOID" on the tapes, do not install the components in the box.
- 2. If the surfaces of the tapes do not show "VOID", remove them from the corners of the box.
- 3. You can see the "VOID" marks [B] when you remove each seal. In this condition, they cannot be attached to the box again.



### Installation Procedure

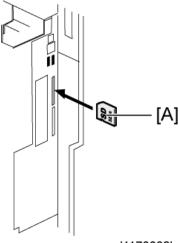
1. Turn the main power OFF.

2. Remove the SD card slot cover. ( \* 1)



d196z2028

Insert the SD card (DataOverwriteSecurity Unit) in SD slot 1 (upper) [A] with its label face
towards the front of the machine. Then push it slowly into SD slot 1 (upper) until you hear
a click.



d1170002b

4. Install the application using SP5-878-001.

## **USB Device Server Option Type M12**

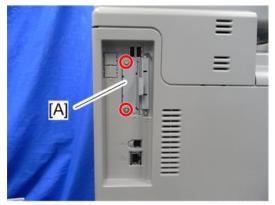
## **ACAUTION**

• Turn off the main power and disconnect the power supply cord.

## 

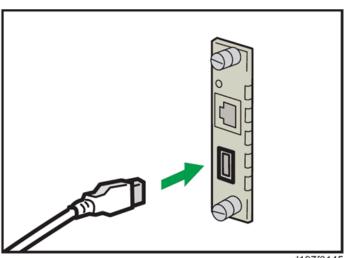
 When you install this option on the main machine for the first time, the interface board must be connected directly to your PC to set up the IP address and other network settings.

- Turn OFF the main power of the machine, and unplug the power cord from the wall socket.
- 2. Remove the interface slot cover [A] ( $\mathfrak{S}^{n}x$  2).



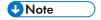
d196z2026

- 3. Install the interface board in the interface slot ( $\Im x$  2).
- 4. Insert the USB cable into the USB port on this option.

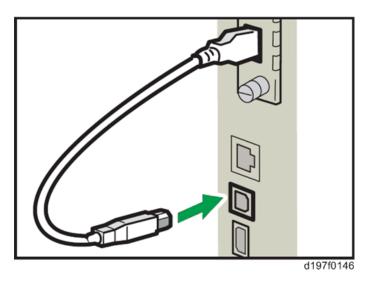


d197f0145

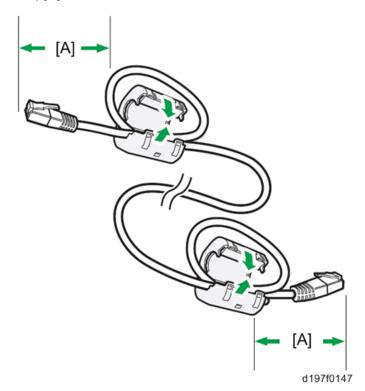
5. Insert the other side of the USB cable into the USB port B on the main machine.



• The machine shape and/or USB port location differs depending on the machine.



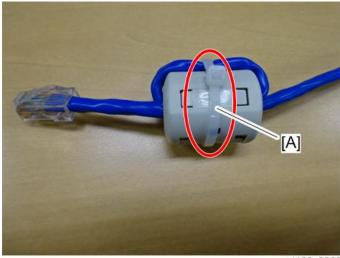
6. Attach the ferrite cores to the Ethernet cable, while looping the cable at 3 cm (approx. 1.2 inch) [A] from the each end of the cable.



7. Only for installing this option in North America, bind both cores with cable ties [A] as shown below.

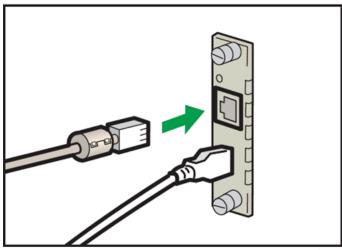


• The two binds are not included in options produced before March, 2015. To bind the cores, use the binds (P/N: 11050047) registered as service parts or similar ones.



d196z2302

8. Insert the Ethernet cable into the Ethernet port on this option.



d197f0148

9. Insert the other end of the Ethernet cable to a PC for network setting.

10. Plug the power cord into the wall socket and turn ON the main power of the machine.



- Do not unplug the USB cable while the machine is recognizing this option. It may take
  between 30 seconds to 1 minute to finish recognizing it (the LEDs on the Ethernet port of this
  option light up after recognizing this option; see below). If unplugged, connect the cable
  again.
- 11. Make sure that the machine recognizes this option correctly by doing one of the following:
  - 1. Access the option's IP address from a web browser.
  - 2. Ping the option's IP address from a command prompt on a Windows PC in the same network as the mainframe.

If the IP address cannot be found (DHCP server), use the MAC address. This is the number printed on the seal attached to the printed circuit board for the USB server.



d196z2350

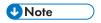
Use "RX" + the option's MAC address and access a web browser.
 Example: http://RX0080926A3264



4. Ping the "RX" + "MAC address" from the command prompt, on a windows PC which is on the same network as the mainframe.

```
\Users\
                            100.100:
100.100:
                                                         Lost = 0 (0\% loss),
      kimate round trip times
inimum = 0ms, Maximum =
```

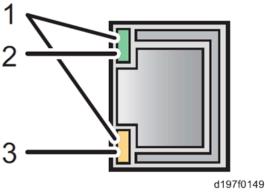
d196z2352



 When installing the USB Device Server Option Type M12, the installation status is not shown on the Configuration Page.

### What Do the LED Indications Mean?

When this option is properly installed and recognized by the main machine, the LED indicators light up under the following conditions.



No.	Light Color	Lights Up When:
1	Green and Yellow	1000BASE-T operates
2	Green	10BASE-T operates
3	Yellow	100BASE-TX operates

### Notes for Energy Save Mode Setting

If the machine which has this option enters into the energy save mode, you cannot print because there will be a communication error. Follow the instructions below to disable the machine's entering the energy save mode.

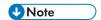
- 1. Press [Features Settings] on the operation panel.
- 2. Press [Administrator Tools] in [System Settings].
- 3. Press [Energy Saver Mode to Disable Print Server].
- 4. Press [Disable Mode].
- 5. Press [OK].
- 6. Press [Features Settings].

### **IP Address Setting**

This section describes how to set an IP address on this option manually. Note that you can set an IP address which is not only on the same network segment but also on a different network segment to share a single printer with devices in multiple networks.

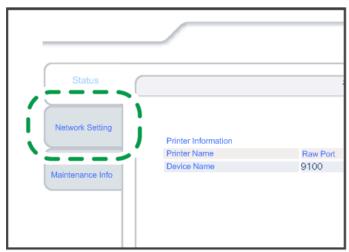


- You cannot change the IP address for this option from the operation panel of the main machine.
   The setting must be done from a web browser on your PC.
- The network setting of this option is initially assigned as follows:
   IP address: 192.168.100.100 / Subnet mask: 255.255.255.0
- The network setting of your PC must be in the same network segment to change the network setting
  of this option.
- 1. Make a note of the current network settings of your PC.
- 2. Change the IP address on your PC to [192.168.100.xxx (\*0 255)].
- 3. Change the subnet mask on your PC to [255.255.255.0].
- 4. Open a web browser.
- 5. Type [http://192.168.100.100/] in the address bar.
- 6. Press the "Enter" key.



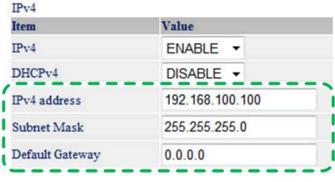
• The setting screen for this option appears.

7. Click [Network Setting].



d197f0134

- 8. Enter "root" in the user name textbox and click [OK].
- 9. Input [IP Address], [Subnet Mask] and [Default Gateway].



d197f0135a

- 10. Set other items if necessary.
- 11. Press [Set].
- 12. Close the web browser.
- 13. Disconnect the Ethernet cable from the PC.
- 14. Connect the Ethernet cable to a network device (e.g. switching hub).
- 15. Set the IP address of this option in the printer driver which you use.

### **Check All Connections**

1. Plug in the power cord. Then turn ON the main switch.

2

2. Enter the printer user mode. Then print the configuration page.

User Tools → Machine Features → Printer Features → List Test Print → Configuration Page
All installed options are shown in the "System Reference" column.

## 3. Preventive Maintenance

## **Maintenance Tables**

See "Appendices" for the following information:

• Maintenance Tables

## **PM/Yield Parts Settings**

### Set-up Procedure for Replacing the PM/Yield Parts

- 1. Enter the SP mode.
- 2. Get the SMC log data using one of the following ways:
  - a) Execute SP5-990-001 to print SMC log data.
  - b) Execute SP5-992-001 (page 429) to save SMC log data to an SD card.
- 3. In the SMC data, look at the values of the counters in SP 7-621-002 to 208, to determine what parts should be replaced. (Refer to the SP table and PM tables in the appendix.)
- 4. The following parts require the manual new unit detection setting by a predetermined SP. See the table below:

ltem	SP	
Fusing Sleeve Belt	SP3-701-116	
Pressure Roller	SP3-701-118	
ITB Unit	SP3-701-093	
Paper Transfer Roller Unit	SP3-701-109	
Waste Toner Bottle	SP3-701-142	
	Friction Pad: SP3-701-206	
ARDF	Pickup Roller: SP3-701-207	
	Feed Roller: SP3-701-208	



- The PCDU and fusing unit detect a new unit automatically. Other parts require the manual new unit detection setting with the above SPs.
- 5. Turn OFF the main power.
- 6. Perform the parts replacement.
- 7. Turn ON the main power.
- 8. On the operation panel, look at the PM counters of the parts that you replaced, to make sure that these counters were reset to 0. (The PM counter values are in SP 7-621-002 to 208.) If the PM counter for a unit is not reset, repeat steps 4, 5, and 7.
- 9. Exit the SP mode.

### **Preparation before Operation Check**

- 1. Clean the exposure glasses (for DF and book scanning).
- 2. Enter the user tools mode.
- Do the "Automatic Color Calibration (ACC)" for the copier mode and 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 a 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.

## **Operation Check**

Check if the sample image has been copied correctly.

## 4. Replacement and Adjustment

## Notes on the Main Power Switch

### **Push Switch**

The main power button of this machine has been changed to a push-button switch (push button) from the conventional rocker switch. The push switch has characteristics and specifications different from the rocker switch. Care must be taken when replacing and adjusting parts.

### Characteristics of the Push Switch (DC Switch)

### Power is supplied to the machine even when the main power switch is turned OFF.

The push switch in this machine uses DC (direct current). Therefore, if the AC power cord is connected to an electrical outlet, power is supplied to the controller board, the operation unit and other modules even when the main power is turned OFF. When replacing the controller board and the operation unit in this state, not only these boards, it will damage other electrical components.

So, when performing maintenance work such as replacing parts, in addition to turning off the main power with the push switch, always unplug the AC power cord after the LED on the operation panel is turned off.



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

# When you disconnect the power cord from the AC wall outlet, inside the machine there is still residual charge.

When you disconnect the power cord from the AC wall outlet, there is still residual charge inside the machine for a while. Therefore, if you remove boards in this state, it can cause a blown fuse or memory failure.

How to remove the residual charge inside the machine
 After you unplug the power cord from the AC wall outlet, in order to remove the residual charge from inside the machine, press the main power switch. The charge remaining in the machine is released, and it is possible to remove boards.

## When you reconnect the AC power cord into an AC wall outlet, the machine will start automatically.

In order to remove the residual charge, push the main power switch after you disconnect the AC power cord. At that time, the power ON flag inside the machine is set. Therefore, after you finish work on the machine and reconnect the power cord to the AC, even if you do not press the main

power switch, the machine will start automatically and the moving parts will begin to move. When working on moving parts, be careful that fingers or clothes do not get caught.



 Automatic restart deals with cases when you accidentally unplugged the AC power cord or unexpected power outages. By keeping the power flag ON, after the resumption of power, the machine will start up automatically.

In rare cases, when you reconnect the AC power cord to a power outlet, the machine does not start automatically. In this case, the machine has not failed. The cause is due to the timing of releasing the residual charge. If you press the main power switch when the residual charge was already released, the power ON flag will not be set. At this time, start the machine manually by pressing the main power switch.

#### Shutdown Method

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



d196z4000

## **CAUTION**

- Before removing and adjusting electrical boards, do the following procedure. Otherwise, the board can be damaged by the residual charge inside the machine and must be replaced.
- 1. Take out the power cord after shutdown.
- 2. Press the power switch for a second to remove the residual charge inside the machine.

### Forced Shutdown

In case normal shutdown does not complete for some reason, the machine has a forced shutdown function.

1

To make a forced shutdown, press and hold the main power switch for 6 seconds.

In general, do not use the forced shutdown.



• Forced shutdown may damage the hard disk and memory, and can cause damage to the machine. Use a forced shutdown only if it is unavoidable.

## **ACAUTION**

• 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 userprogrammed 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.

## 

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



- Before you start to remove components from the machine, do the following:
  - 1. Turn OFF the main power switch.
  - 2. Make sure that the shutdown process has finished and that the LED on the operation panel has turned OFF.
  - 3. Unplug the power cord.
- 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 shut down safely.

4

## **Special Tools**

Part Number	Description	Q'ty
B645 5010	SD Card	1
G021 9350	Loop-back Connector – Parallel *NOTE	1
C401 9503	20X Magnification Scope	1
A257 9300	Grease Barrierta – S552R	1
5203 9502	Silicone Grease G-501	1
A092 9503	C4 Color Test Chart (3 pcs/set)	1
B679 5100	Plug - IEEE1284 Type C	1
B132 9700	Lubricant Powder	1



• The "Loop-back Connector-Parallel" requires the "Plug-IEEE1284 Type A", and the optional IEEE1284 interface option must also be installed.

## **Image Adjustment**

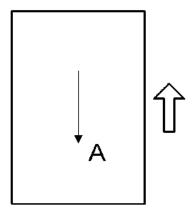
## Scanning

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



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

## Scanner Sub-Scan Magnification



A: Sub-scan magnification

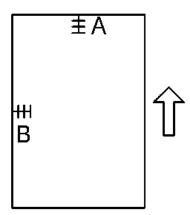
- 1. Put the test chart on the exposure glass. Then make a copy from one of the feed stations.
- $\textbf{2. Check the magnification ratio.} \ \textbf{Adjust with SP4-008-001 if necessary}.$

Standard: ±1.0%.

4

#### 4

### 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.
- Check the leading edge and side-to-side registration. Adjust the following SP modes if necessary.

Standard:  $0 \pm 2$ mm for the leading edge registration,  $0 \pm 2.5$ mm for the side-to-side registration.

What It Does	SP Code	
Leading Edge Registration	SP4-010-001	
Side-to-Side Registration	SP4-011-001	

### **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:  $4.2 \pm 2$  mm for the leading edge registration,  $2 \pm 1$  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	± 2.0 mm
SP6-006-003	Leading Edge Registration	± 5.0 mm
SP6-006-007	Rear Edge Erase (Trailing Edge)	± 5.0 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.

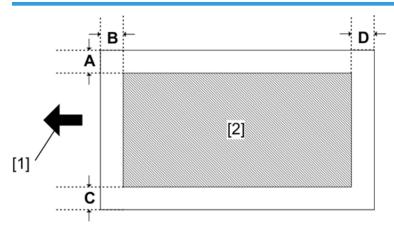
• Standard: ±5.0%

• Reduction mode: ±1.0%

• Enlargement mode: ±1.0%

## Registration

### **Image Area**



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

A = C = 2.25 mm, B = D = 3.25 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.

4

### 4

#### 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): 3.25 ± 2.75 mm
- Trailing edge (sub-scan direction): 3.25 ± 2.75 mm
- Side to side (main-scan direction): 2.25 ± 1.75 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.

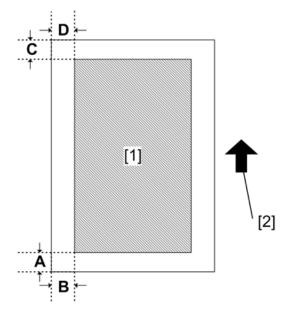


- Registration can change slightly as shown on the previous page. Print some pages of the 1-dot trimming pattern for step 3 and 4. Then average the leading edge and side-to-side registration values, and adjust each SP mode.
- 3. Do the leading edge registration adjustment.
  - 1) Check the leading edge registration and adjust it with SP1-001.
  - 2) Select the adjustment conditions (paper type and process line speed).
  - 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.

### **Erase Margin Adjustment**



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)

## **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 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

#### **Printer Gamma Correction**



• 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.



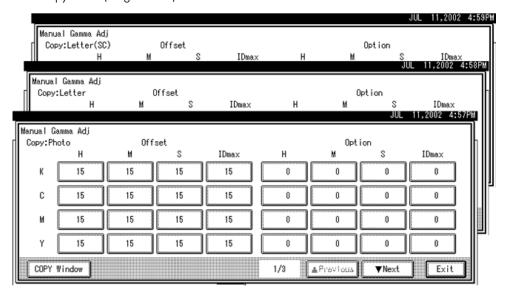
Never change "Option" values (default value is 0).

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.
- Adjust the offset values until the copy quality conforms to the standard (see the table below).



- 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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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 color="" copy="" full="" the=""></on>	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 8 matches that of level 8 on the C-4 chart.

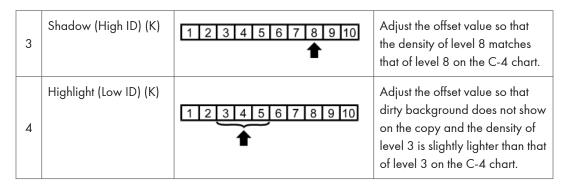
## - Text (Letter) Mode, Full Color -

	Item to Adjust	Level on the C-4 chart (K)	Adjustment Standard
1	ID max: (K, C, M, and Y)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	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)	1 2 3 4 5 6 7 8 9 10	Adjust the offset value so that the density of level 6 matches that of level 6 on the C-4 chart.

4





• 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	С	М	Υ
Highlight	SP1-104-1	SP1-104-21	SP1-104-41	SP1-104-61
Shadow Middle	SP1-104-2	SP1-104-22	SP1-104-42	SP1-104-62
IDmax	SP1-104-3	SP1-104-23	SP1-104-43	SP1-104-63
	SP1-104-4	SP1-104-24	SP1-104-44	SP1-104-64

### - Adjustment Procedure -

- 1. Do ACC for the printer mode.
- 2. Enter SP mode.
- 3. Select "Printer SP".

- 4. Select SP1-102-001. Then select the necessary print mode to adjust.
- 5. Choose SP1-103-1 to print out a tone control test sheet if you want to examine the image quality for these settings.
- Adjust the color density with SP1-104. Compare the tone control test sheet with the C4 test chart.

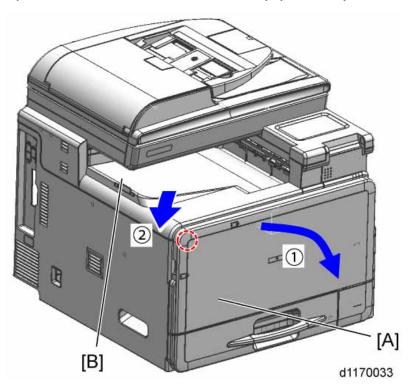


- Adjust the density in this order: "ID Max", "Shadow", "Middle", "Highlight".
- 7. Use SP1-105-001 to keep the adjusted settings.
- 8. Cycle the power off and on.

## **Color Skew Adjustment**

The skew adjustment of this machine should be performed manually. The adjustment procedure is as follows:

1. Open the front door [A] and then remove the paper exit tray [B]. ( x 1)



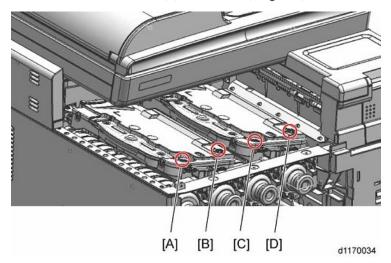
2. Close the front door and execute MUSIC (SP2-111-004).

4

- 3. Check the result for each color with the following SPs.
  - SP2-117-004 (K)
  - SP2-117-002 (C)
  - SP2-117-001 (M)
  - SP2-117-003 (Y)

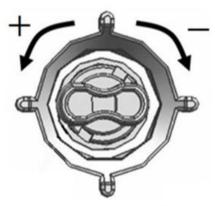


- If all of the SP values are within ±5, go to Step 5.
- If any of the SP values are not within ±5, go to Step 4.
- 4. Rotate the knob(s) shown in the diagram [A] to [D] at 90 degree intervals until the SP value for the affected color(s) is within ±5 (target: 0).





- There are two knobs on each of the two LD units. A click is felt every 90 degree rotation.
- Turning the knob **clockwise** by 90 degrees changes the SP value by -1.
- Turning the knob counter-clockwise by 90 degrees changes the SP value by +1.



d196z2356

- Example:
   SP value for magenta in Step 4 was "+6" → Turn knob [C] 6 clicks (1 1/2 rotations) clockwise.
- SP value for yellow in Step 4 was "-7" → Turn knob [D] 7 clicks (1 3/4 rotations) counter-
- 5. Reattach all parts that you removed in the above steps.



• Do not touch the LD units while installing the Paper Exit Tray. Otherwise, the LD unit may move, and you may have to adjust the color skew again.

# **Exterior Covers**

#### Front Cover

1. Pull out the paper tray.



d196z4001

2. Front lower cover [A] ( \* 1)



d196z4002

3. Open the front cover.

4. Front cover [A] (\$\mathbb{B} \times 2, pins \times 2)\$



# Upper Left Cover

1. Upper left cover [A] ( × 1)



### Left Cover

1. Upper left cover (page 216)

Δ

- 2. Pull out the paper tray.



d196z4005

### Rear Cover

1. Rear cover [A] (@ × 13)



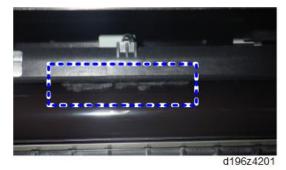
### Rear Right Cover

1. Open the duplex unit.



**U**Note

• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.



2. Rear right cover [A] ( \$\mathscr{O}^{\mathscr{O}} \times 3)



d196z4008



• Remove the rear right cover while pushing it downward.

### Paper Exit Tray

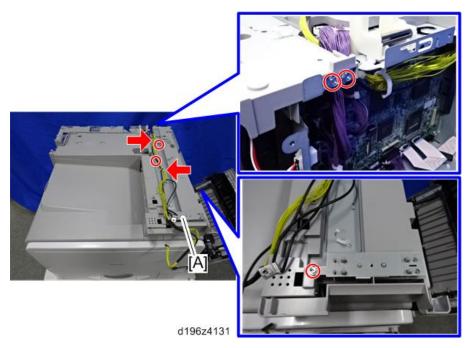
- 1. Open the front cover.
- 2. Paper exit tray [A] ( × 1)



### Inner Cover

- 1. Scanner unit (page 228)
- 2. Operation panel (page 224)

# 3. Bracket [A] (Ѿ× 5, Ѿ× 2)

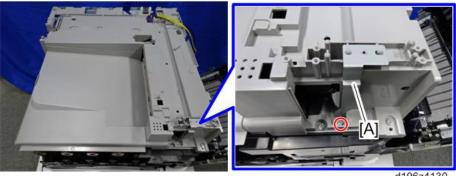


4. The cover under the operation panel [A] (🕮 x 1)



d196z4129

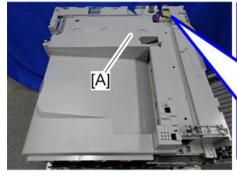
### 5. Bracket [A] (🕮× 1)



d196z4130

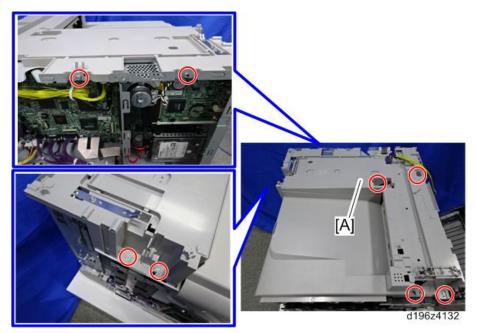
6. Disconnect the harness [B] to remove the inner cover [A]. (% × 2, % × 7)







# 7. Inner cover [A] ( \*\* 8)

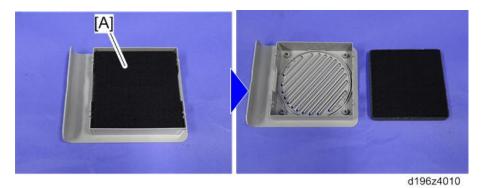


### Ozone Filter

#### 1. Filter cover [A]



#### 2. Ozone filter [A] from the filter cover.



# **Operation Panel**

This section includes only the replacement procedure which is unique for the MP C306/C406 series. The replacement procedures for the other parts are included in the FSM for the Smart Operation Panel, because these parts are also used with other models.

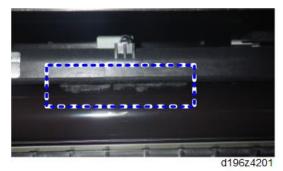
#### **Operation Panel**

1. Open the duplex unit.



**U** Note

• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.

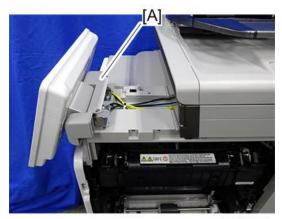


# 2. Front right cover [A] ( × 1)



d196z4100

### 3. Front right small cover [A]

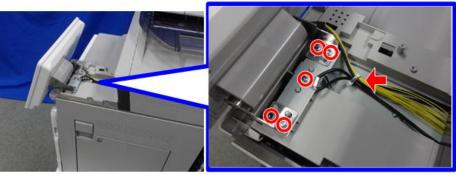


d196z4101



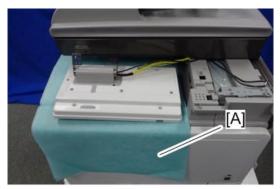
• Release the tab inside, and then pull the cover out.

### 4. Operation panel (⊕×5, ≪×1)



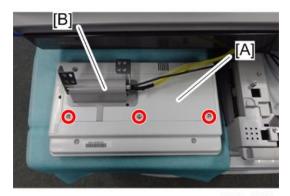
d196z4102

• Spread a cloth or service mat [A] on the paper exit tray to protect the display. Place the operation panel on the paper exit tray so that the display faces down.



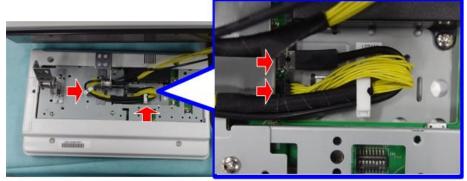
d196z4103

5. Rear cover [A] and hinge cover [B] ( \* 3)



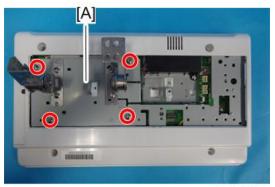
d196z4104

6. Connector (♥ × 2, ♥ × 2)



d196z4105

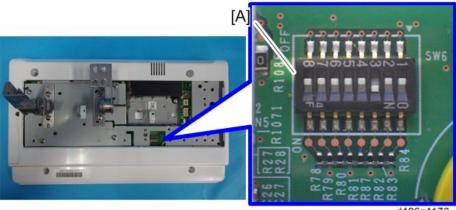
### 7. Hinge base [A] (🖤 × 4)



d196z4106

#### Check before Installing the new Operation Panel

There is a DIP switch [A] on the sub board in the operation panel unit.



d196z4170

The switch setting to use depends on the model.

For the C306/406 series, make sure that switch 7 is OFF, and make sure that only switch number 3 is ON. Otherwise, SC672-11 occurs when starting the machine.

#### **Internal Parts**

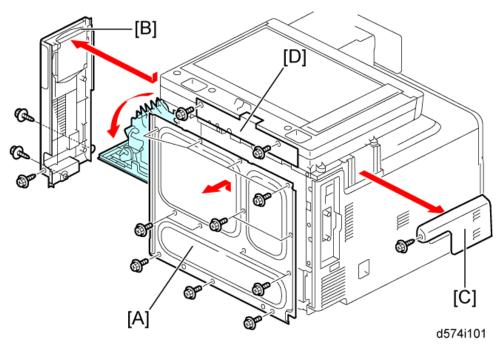
Refer to the FSM for the Smart Operation Panel.

### Scanner

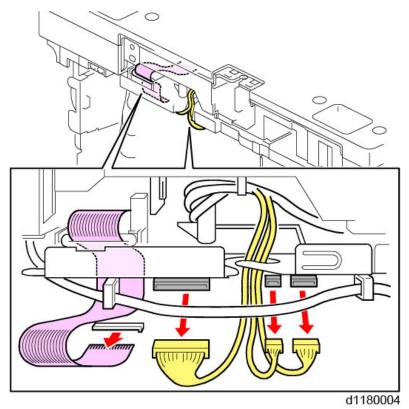
#### Scanner Unit

### 1. Remove the following items:

- ARDF Unit (page 344)
- Rear cover [A] ( \* × 13)
- Open the duplex unit to remove rear right cover [B] ( 3)
- Upper left cover [C] (@" × 1)
- Scanner rear cover [D] ( \$\text{OP} \times 2)

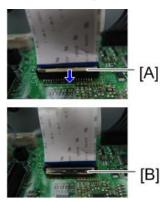






**U**Note

• When connecting the FFC, lower the lever [A] to lock it as shown [B].

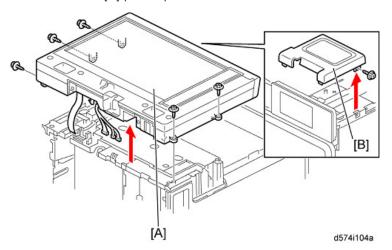


d1182086

• If the FFC is not locked correctly, SC101 may occur.

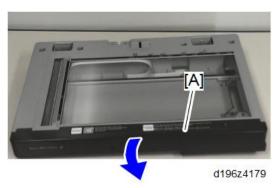
#### 3. Remove the following items:

- Front right cover [B] (© × 1)
- Scanner unit [A] (\$\mathbb{O}^{\mathbb{O}} \times 5)\$



### ARDF/Platen Cover Sensor

- 1. ARDF Unit (page 344)
- 2. Scanner front cover [A]

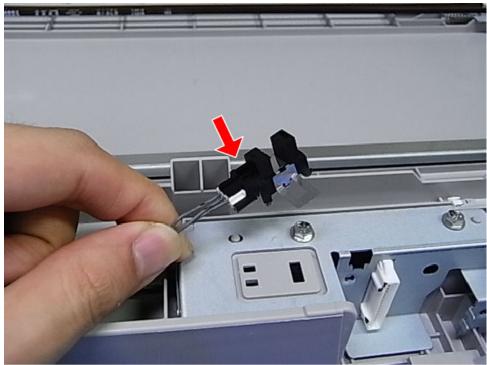


# 3. Scanner upper cover ( × 7, Hook × 2)



d1180006

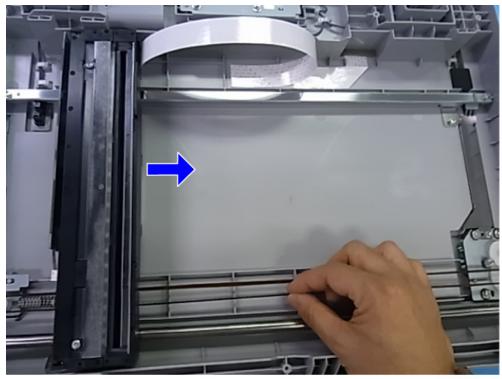
### 4. Platen cover sensor ( × 1)



d1180007

#### Scanner HP Sensor

- 1. Scanner upper cover (page 230)
- 2. Move the carriage to the right.



d1180008

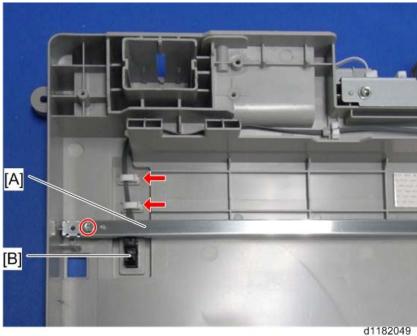


- To move the carriage, hold the carriage belt and move it carefully.
- Never hold the carriage itself.

### 3. Bracket [A] (@ × 2)

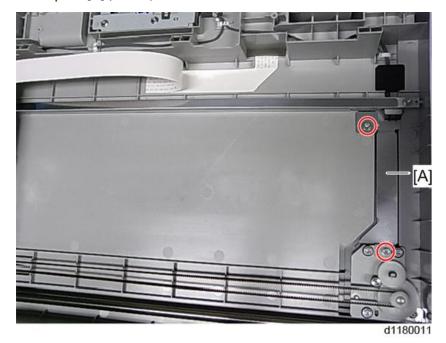


4. Remove the Scanner HP sensor [B] while lifting up the bracket [A] slightly. (>> 1, >> × 2)

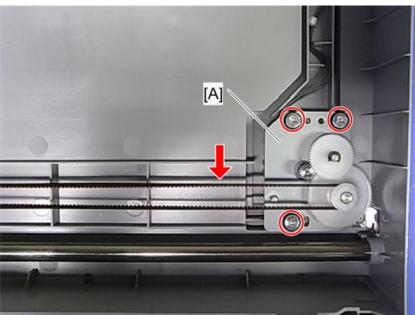


### Scanner Motor

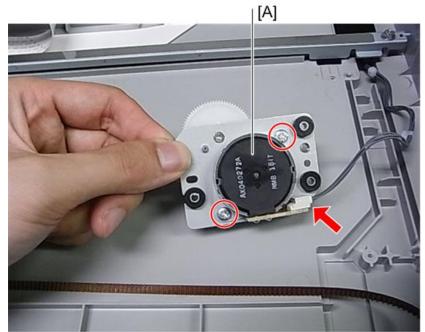
- 1. Scanner upper cover (page 230)
- 2. Shield plate [A] (((\*\* 2)



3. Scanner motor with the bracket [A] ( \$\mathbb{O}^{\mathbb{O}} \times 3, belt \times 1 )



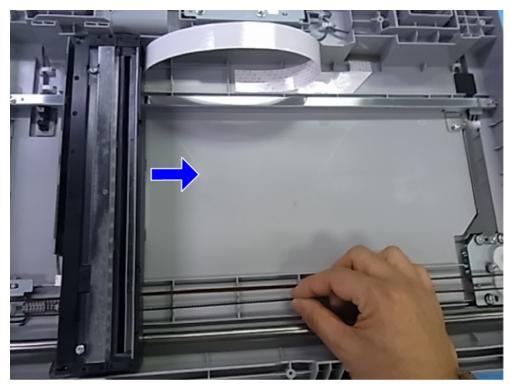
d1180012



d1180013

### Scanner Carriage

1. Scanner upper cover (page 230)



d1180008

- To move the carriage, hold the carriage belt and move it carefully.
- Never hold the carriage itself.

# 3. Bracket [A] (@ × 2)



d1182048

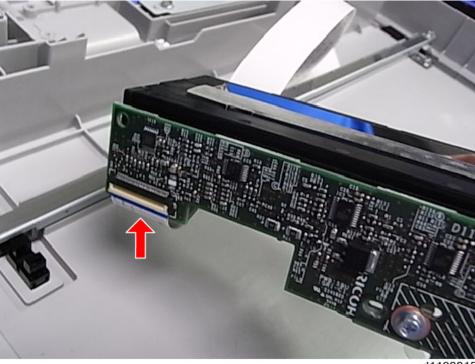
# 4. Bracket [A] (@ × 2)



d1180014

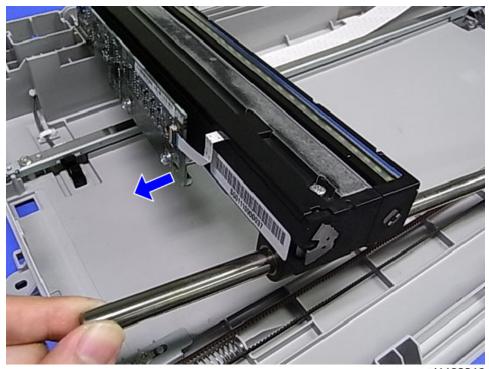
5. Disconnect the flat cable while lifting up the carriage shaft. ( $\checkmark$  × 1)

• The FFC is attached with double-coated adhesive tape. When reassembling, be sure to align the tape position where originally attached.



d1180015

#### 6. Remove the scanner carriage.



d1180016



- Wipe off oil adhered disproportionately to the carriage after the carriage is replaced.
- Never wipe off the oil on the shaft of the carriage.

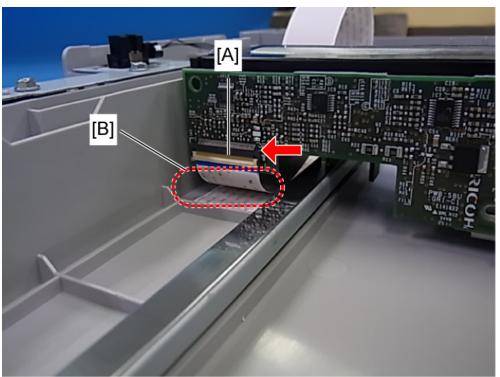
#### Reinstalling the Carriage

Make sure that the flat cable of the carriage is correctly connected and routed referring to the following points.

• The flat cable [A] must be connected straight, and not at an angle.

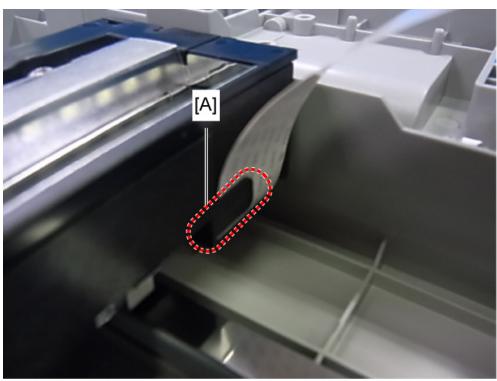


- Never connect the flat cable to the carriage connector at an angle. Otherwise, the BiCU or the SBU may be damaged.
- The flat cable must not be sagging and must not drag on the bottom of the scanner unit [B].



d1170737

• The flat cable must be hooked at part [A] of the carriage.



d1170738

# **Laser Optics**

#### **MARNING**

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

#### **Caution Decal Location**

The caution decal is attached as shown below.





#### **Laser Units**

**U**Note

• The machine has two laser units. This procedure describes replacement of laser unit 1. Replacement of laser unit 2 can be done in the same way.

- 1. Paper exit tray (page 219)
- Remove the screw and connector. Disconnect the stopper of the flat cable of the laser unit
   1 [A]. (ॐ × 1, ॐ × 1, ॐ × 2)

Repeat this procedure with the laser unit 2 [B].



**U** Note

• Be sure to install the washer under the screw when assembling.



d196z4013

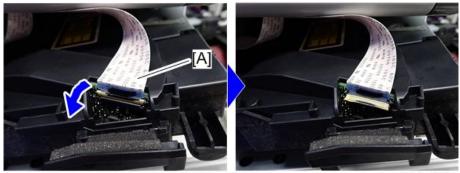
Pull the laser unit [A] out slightly, open the connector cover, and then disconnect the FFC [B]. ( × 1)



d196z4014



• Unlock the FFC [A] by lowering the white tab.



d196z4015

• Never touch the shield glass under the laser units when replacing them.

#### Adjustment after Laser Unit Replacement

Do the following settings after replacing the laser unit.

#### Initializing the D-Phase data and shading data

- 1. Plug in and turn on the main power switch of the machine.
- 2. Enter the SP mode.
- 3. Execute the SPs of the replaced laser unit.

K/C:

SP2-180-004 (Line Pos. Adj. Clear Area Magnification Correction: unit 1)

SP2-180-006 (Shade. Adj. Clear Shading Correction: Unit1)

M/Y:

SP2-180-005 (Line Pos. Adj. Clear Area Magnification Correction: unit2) SP2-180-007 (Shade. Adj. Clear Shading Correction: Unit2)

- 4. Execute SP3-011-001 (Manual ProCon: Exe, Normal ProCon).
- 5. Exit SP mode.
- 6. Cycle the main power off/on.

#### **Executing Skew Adjustment**

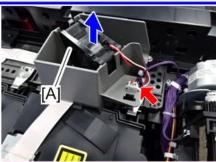
Do the skew adjustment manually.

Refer to "page 212 "Color Skew Adjustment""

#### **LD Unit Cooling Fan**

- 1. Scanner Unit (page 228)
- 2. Paper Exit Tray (page 219)
- 3. LD unit cooling fan [A] ( × 1)





d196z4134

# PCDU, Toner Supply

#### **PCDU (Photo Conductor and Development Unit)**

#### ☆ Important

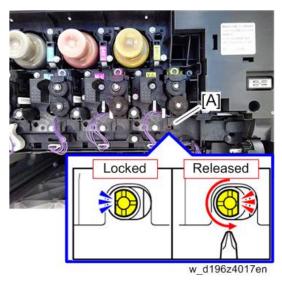
- The PCDU (K) for MP C306 is different from the one for MP C406. Make sure that you use the correct part number when ordering a PCDU (K).
- 1. Waste toner bottle (page 253)
- 2. Only when removing the PCDU (K): Release the lock lever [A].





• This step is not required for removing the PCDU (CMY).

3. Check that the ITB has no tension before removing the PCDU. Otherwise, the ITB may be damaged. To release the tension of the ITB, turn the pressure release screw [A] counterclockwise, until the flat part of the half moon on the screw points to the right.



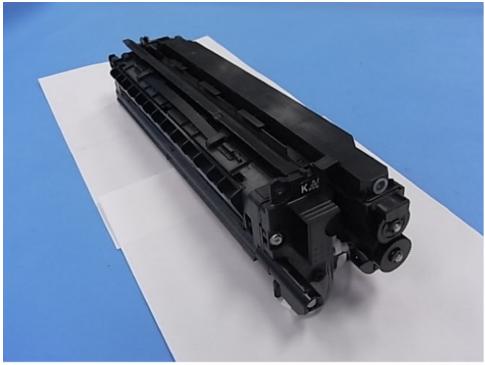
4. PCDU [A] (☞×2, ☞×1, 屬×1)



d196z4017

### **ACAUTION**

• Before putting the PCDU back in the machine, check that the ITB has no tension. See step 3 for how to do this.



d1170059

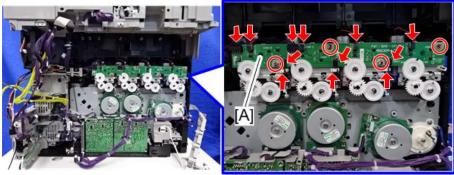


- After replacing the PCDU, set the lock lever released in step 2.
- A new unit detection mechanism for the PCDU clears the PM counters automatically.
- After replacing the PCDU, do the skew adjustment manually. See "page 212 "Color Skew Adjustment"".

### Toner Bottle Detection Board

1. Power Pack (Development) (page 374)

# 2. Toner Bottle Detection Board [A] (☞×4, 屬×3, ☞×9)

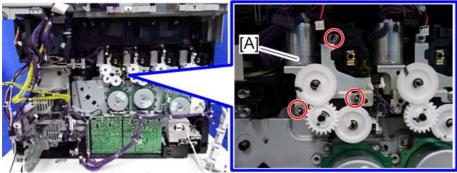


#### d196z4074

### **Toner Supply Motors**

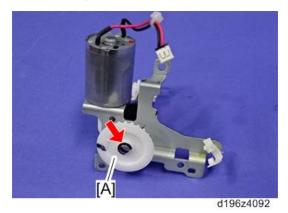


- The following is the replacement procedure for Y. The motors for the other three colors can be replaced with the same procedure as Y.
- 1. Toner Bottle Detection Board (page 248)
- 2. Toner supply motor unit [A] ( × 3)

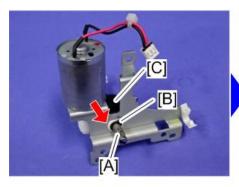


d196z4090

### 3. Remove the gear [A]. (® × 1 each)



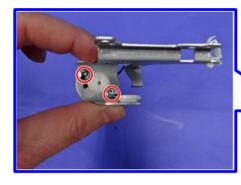
4. Shaft [A], bearing [B], gear [C] (🔊 × 1 each)

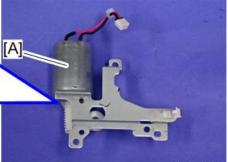




0.0

5. Toner supply motor [A] ( × 2)





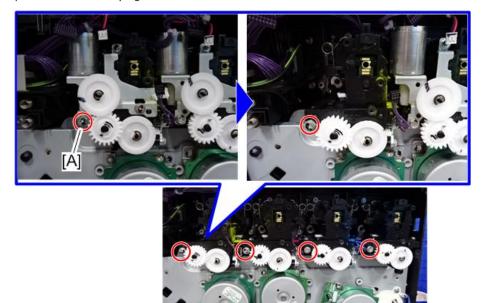
d196z4094

## **Toner Transport Section**

1. Toner supply motors (All colors) (page 249)

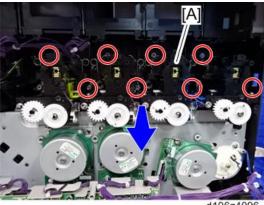


• After removing the toner supply motor, secure four screws [A] on the toner transport section to prevent toner from flying off.



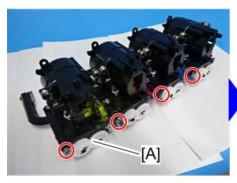
d19674095

- 2. Toner bottles (all colors)
- 3. PCDU (all colors) (page 246)
- 4. Toner supply unit ( \* 8)



d196z4096

- Pull out the toner supply unit upward at an angle.
- 5. Toner transport section [A] ( \* 1)





d196z4091

#### **SP Setting after Replacing the Toner Transport Section**

The following SP settings are required after a toner transport section (the toner sub-hopper) is replaced.

- 1. Plug in and turn the main power on.
- 2. Enter the SP mode.
- 3. Set the following SPs (Toner supply flag) to "1" depending upon the color of the replaced unit.
  - SP3-510-031 (Image Quality Adj.: Exec Flag Init Toner Replenishment: Bk)
  - SP3-510-032 (Image Quality Adj.: Exec Flag Init Toner Replenishment: C)
  - SP3-510-033 (Image Quality Adj.: Exec Flag Init Toner Replenishment: M)
  - SP3-510-034 (Image Quality Adj.: Exec Flag Init Toner Replenishment: Y)
- 4. Exit from the SP mode.
- 5. Turn the main power off and on.

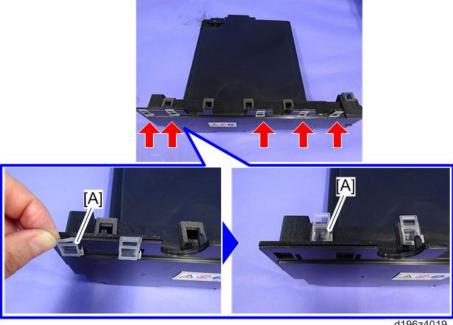
# **Waste Toner**

#### Waste Toner Bottle

- 1. Pull out the paper tray.
- 2. Open the front cover.
- 3. Waste toner bottle [A]



4. Install the five waste toner bottle caps on the waste toner inlets. The examples [A] in the photo are for black.



d196z4019

#### Adjustment after Replacement

- When you replace the waste toner bottle AFTER a waste toner full or near-full message appears on the operation panel, the PM counters are automatically cleared after turning the main power ON.
- When you replace the waste toner bottle BEFORE a waste toner full or near-full message appears on the operation panel, do SP3-701-142 (Manual New Unit Set Waste Toner Bottle) to set it to "1", and turn the main power off and on.

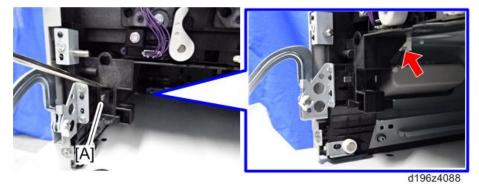
#### Waste Toner Full Sensor

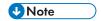
- 1. Waste toner bottle (page 253)
- 2. Waste toner full sensor [A] ( × 1, hook × 2)



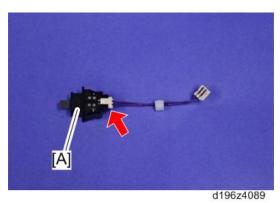
#### **Waste Toner Bottle Set Sensor**

- 1. Waste toner bottle (page 253)
- 2. Waste toner bottle set sensor [A] ( × 1)





- Release the tab with a jeweler's screwdriver to remove the sensor.
- 3. Remove the harness from the waste toner bottle set sensor [A]. (>> 1)



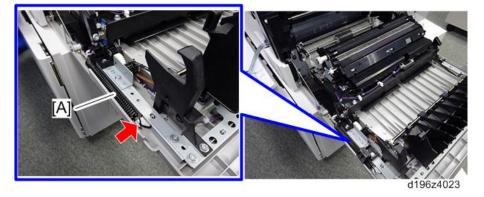
# Image/Paper Transfer

## ITB (Image Transfer Belt) Unit

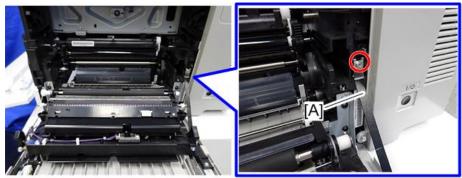
- 1. All PCDUs (page 246)
- 2. Fusing Unit (page 277)
- 3. Tension spring cover [A] ( \* 1)



4. Tension spring [A] ( × 1)



## 5. Tension belt [A] ( \* 1)



d196z4024

6. Put a sheet of paper [A] on the duplex unit with the short edge of the paper pointing towards the ITB unit.



d196z4025

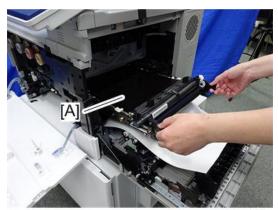


- This is to protect the paper transfer unit from toner when removing the ITB unit.
- 7. ITB unit securing bracket [A] ( \* 1)



d196z4026

#### 8. Pull out the ITB unit [A].



d196z4027

#### After Replacing the Image Transfer Belt Unit

Do the following after replacing the ITB unit.

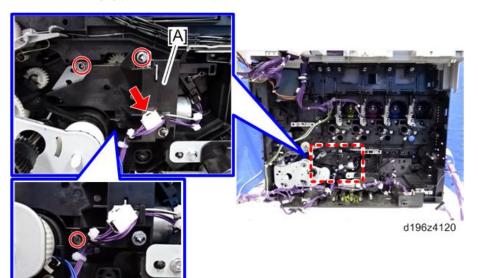
- 1. Enter the SP mode.
- 2. Set SP3-701-093 to "1" (This is the manual setting for the new unit detection).
- 3. Set SP1-001-031 (Leading Edge Registration Std. Measure: On/Off) to "1".
- 4. Execute SP2-111-004 (Forced Line Position Adj. Mode d).
- 5. SP values from SP1-001-033 to 040 (Leading Edge Registration Offset Standard: 1 to 8) are updated by the above steps.
- 6. Reset SP1-001-031 to "0".
- 7. Exit from the SP mode.
- 8. Turn the main power off and on.

#### **ITB Contact Motor**

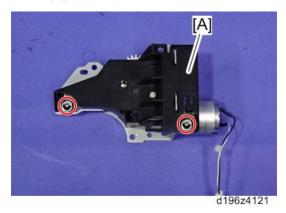
1. Drive unit (page 269)

#### 4

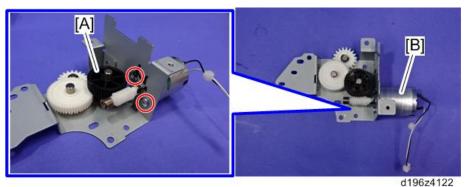
# 2. ITB contact unit [A] (\$\mathbb{O}^{\tilde{\tiilde{\tiii}}}}}}}} \tilde{\tilde{\tilde{\tilde{\tilde{\tild



3. Cover [A] ( × 2)

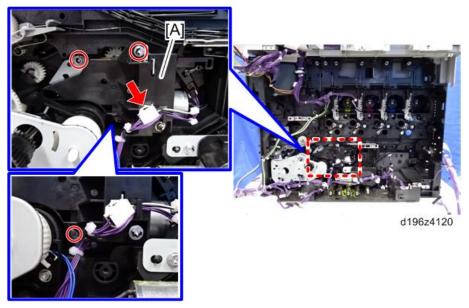


4. Gear [A] and ITB contact motor [B] (  $\ensuremath{ \mathbb{G}}\xspace^\times$  × 2)

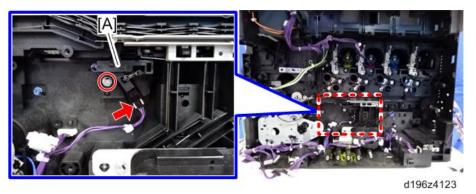


#### ITB Contact HP Sensor

- 1. Drive unit (page 269)
- 2. ITB contact unit [A] (@ × 3, & × 1)

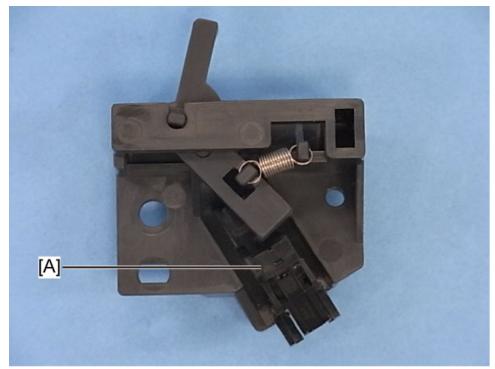


3. Sensor bracket [A] (@\* × 1, @\* × 1)



#### 4

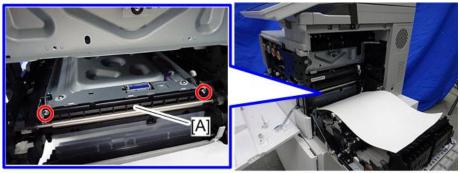
#### 4. ITB contact HP sensor [A] (Hook × 2)



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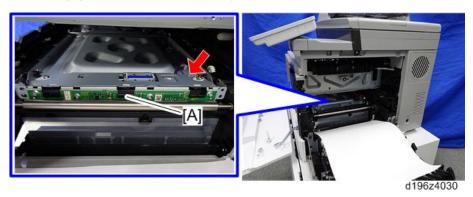
## ID Sensor

- 1. ITB unit (page 256)
- 2. Guide plate [A] (③\* × 2)

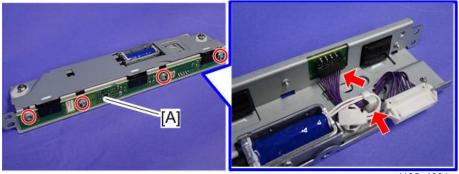


d196z4029

#### 3. ID sensor [A] with the bracket ( × 1)



# 4. ID sensor [A] (𝑉 × 4, ❤ × 1, ♥ × 1)



d196z4031

#### **U** Note

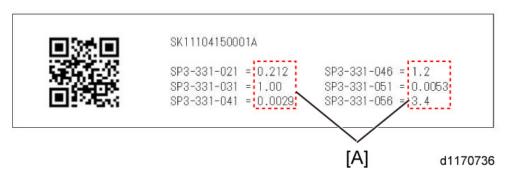
- When cleaning the ID sensor, wipe the part [A] with a damp cloth.
- Do not wipe it with a dry cloth, or the ID sensor may attract dirt because of static electricity. Let it dry naturally if necessary.

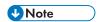
#### After Installing a New ID Sensor Board

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

- 1. Plug in and turn on the main power.
- 2. Enter the SP mode.

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

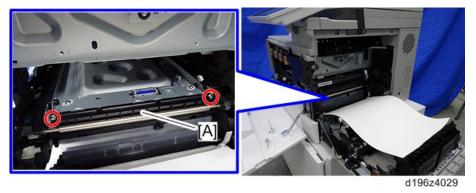




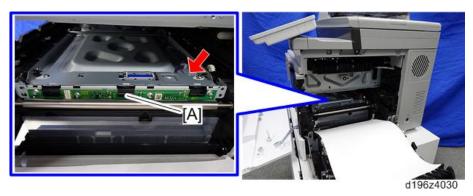
- For example, enter "1.2" with SP3-331-046.
- 4. Exit the SP mode.

#### **ID Sensor Shutter Solenoid**

- 1. ITB unit (page 256)
- 2. Guide plate [A] ( \*\* 2)



3. ID sensor with the bracket (\*\* × 1)



4. ID sensor shutter solenoid (\$\mathbb{O}^{\tilde{\tiilde{\tiide{\tiii}}}}}}}}} \tilde{\tilde{\tiiit}}}}}}



# Paper Transfer Roller

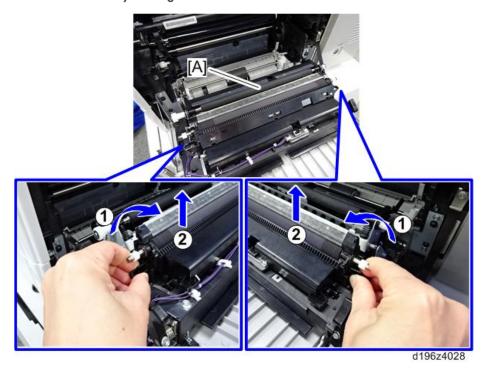
1. Open the duplex unit.



• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.



2. Remove the paper transfer unit [A] while holding the knob on both ends of the paper transfer roller with your fingers.



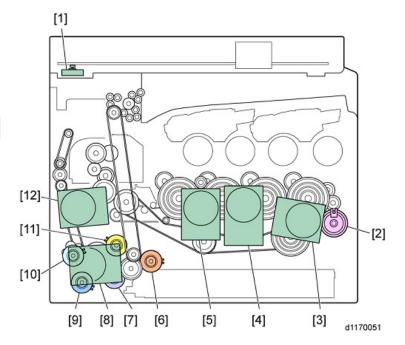
#### **Adjustment after Replacement**

Do the following SP:

- 1. Turn on the main power.
- 2. Enter the SP mode.
- 3. Set SP3-701-109 (Manual New Unit set # PTR Unit) to "1".
- 4. Exit the SP mode.
- 5. Turn off the main power.

# **Drive**

#### Overview

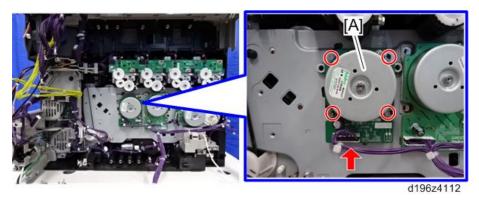


- 1. Scanner Motor
- 2. Development Clutch (K)
- 3. Drum Motor (K)
- 4. Drum Motor (CMY)
- 5. Development Motor (CMY)
- 6. Paper Feed Clutch
- 7. Bypass Lift Clutch
- 8. Paper Transport Motor
- 9. Bypass Feed Clutch
- 10. Duplex Clutch
- 11. Registration Clutch
- 12. Fusing Motor

#### Δ

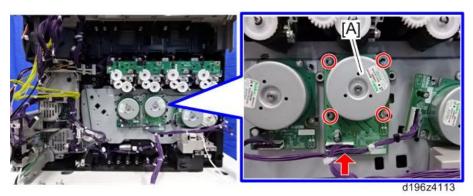
## **Development Motor (CMY)**

- 1. Power Pack (Transfer) with the bracket (page 375)
- 2. Remove the development motor (CMY) [A]. ( $^{\circ}$  × 4,  $^{\circ}$  × 1)



## Drum Motor (CMY)

- 1. Power Pack (Transfer) with the bracket (page 375)
- 2. Remove the drum motor (CMY) [A]. ( \* 4, \* 1)



## Drum Motor (K)

1. Power Pack (Transfer) with the bracket (page 375)

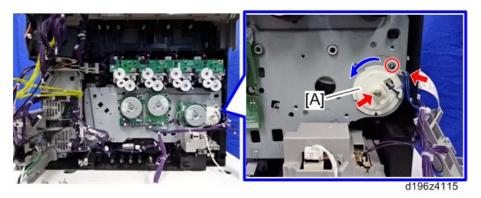
2. Remove the drum motor (K) [A]. ( \*\* 4, \*\* 1)



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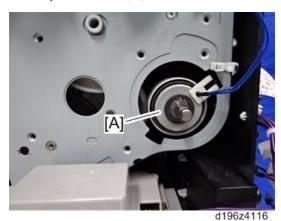
## Development Clutch (K)

- 1. Drum motor (K) (page 267)
- 2. Remove the development clutch cover [A] by rotating counterclockwise. (③\* × 1, ⑤\* × 1, ⑤ × 1)



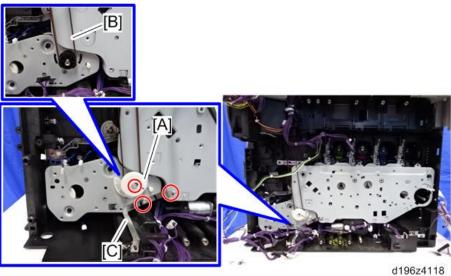
4

#### 3. Development Clutch [A]

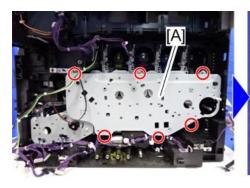


#### **Drive Unit**

- 1. Toner transport section (page 251)
- 2. Development Motor (CMY) (page 267)
- 3. Drum Motor (CMY) (page 267)
- 4. Drum Motor (K) (Link)
- 5. Development Clutch (K) (page 268)
- 6. Gear cover [A], Belt [B], Grounding plate [C] ( $\mathfrak{O}^{\times} \times 3$ ,  $\mathfrak{D} \times 1$ )



## 7. Drive Unit [A] (@ × 6)





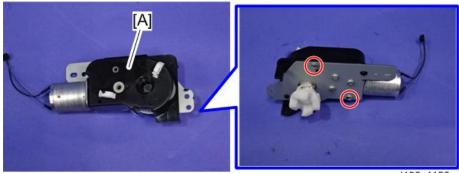
d196z4119

# Tray Lift Motor

- 1. Drive unit (page 269)
- 2. Tray lift motor unit [A] (𝑓 × 2, 🗣 × 2, 𝑓 × 1)



3. Motor cover [A] ( \* 2)

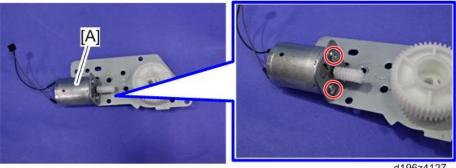


d196z4126

Δ

## 4

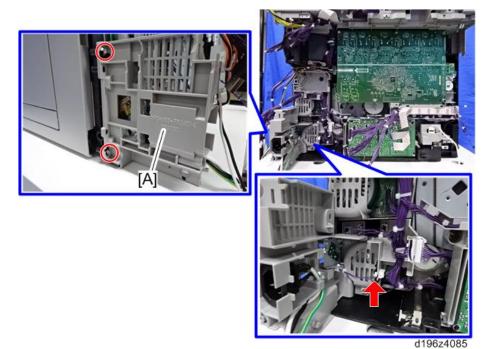
# 4. Tray lift motor [A] ( \* 2)



#### d196z4127

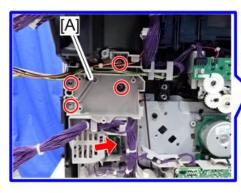
# **Fusing Motor**

- 1. PSUs with the bracket (page 370)
- 2. DC Switch cover [A] ( \* 2, \* 1)



3. Power Pack (Development) (page 374)

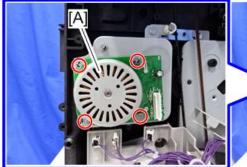
4. Release the harness and remove the harness guide [A]. (  $^{\circ}$  × 4,  $^{\circ}$  × 1)





d196z4097

5. Fusing motor [A] ( \*\* 4)

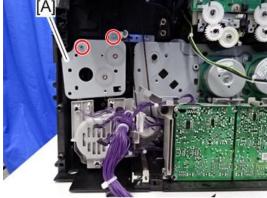




d196z4098

## Paper Transport Motor

- 1. Fusing motor (page 271)
- 2. Fusing drive motor bracket [A] ( \* × 2)

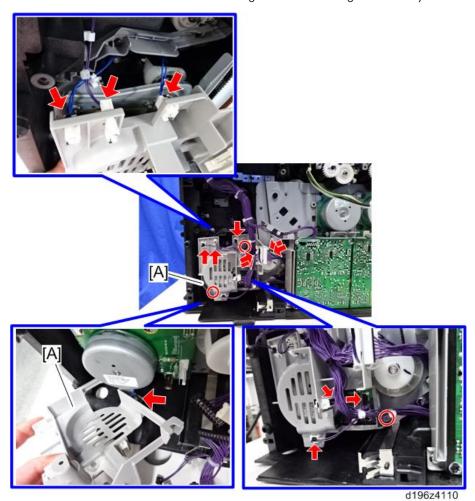


d196z4099

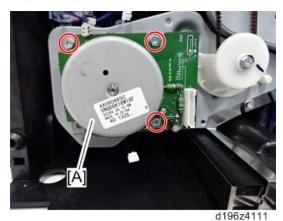
3. Harness guide [A] (③\* × 3, ⑤\* × 14)



• There are connectors behind the harness guide. Remove the guide carefully.

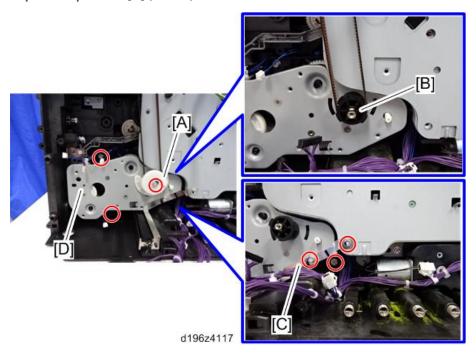


#### 4. Paper transport motor [A] ( \* 3)

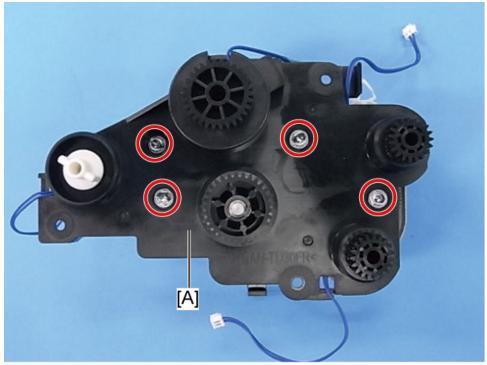


## Duplex Clutch, By-pass Feed Clutch, Registration Clutch, Paper Feed Clutch

- 1. Paper transport motor (page 272)
- 2. Power pack (Transfer) with the bracket (page 375)
- 3. Gear cover [A], gear [B] (③\* × 1, ⑤ × 1)
- 4. Grounding plate [C] (© × 2)
- 5. Paper transport unit [D] ( \$\mathbb{O}^{\mathbb{O}} \times 3 )

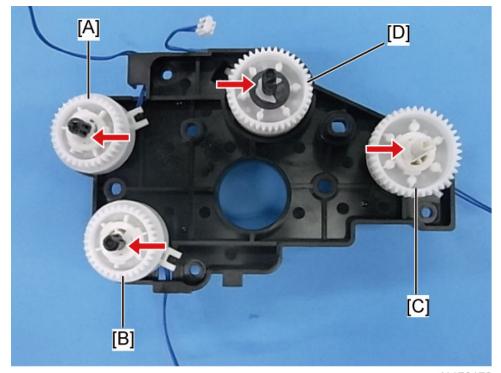


# 6. Paper transport unit cover [A] ( × 4)



d1170175

## 7. Each clutch (®×1 each)



d1170176

[A]: Duplex clutch

[B]: By-pass feed clutch

[C]: Paper feed clutch

[D]: Registration clutch

#### 4

# **Fusing**

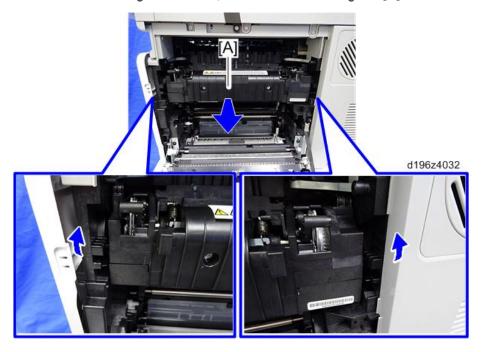
#### **Fusing Unit**

#### **ACAUTION**

• 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.

#### Mportant !

- Basically, the entire fusing unit must be replaced when SC554-00 occurs.
- In some cases, the fusing unit need not be replaced if SC554-00 occurs. See "page 293 "Actions When SC554-00 Occurs" for these cases.
- 1. Release the left and right lock levers, then remove the fusing unit [A].



#### **SP Setting after Fusing Unit Replacement**

- 1. Plug in and turn the main power on.
- 2. Enter the SP mode.
- 3. Set SP3-701-115 (Manual New Unit set # Fusing Unit) to "1".
- 4. Exit the SP mode.

# **Fusing Upper Cover**

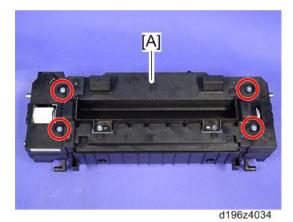
1. Fusing upper cover [A] (\$\mathscr{O}^{\mathscr{O}} \times 4)\$



d196z4033

# **Fusing Lower Cover**

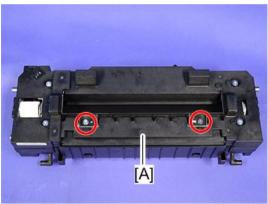
1. Fusing lower cover [A] ( × 4)



#### 4

#### Fusing Entrance Guide Plate

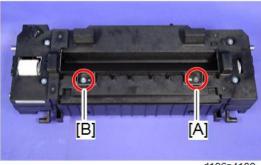
1. Fusing entrance guide plate [A] ( × 2)



d196z4035



- There are two screw holes for each screw on the entrance guide plate. Use the outer holes when tightening the entrance guide plate.
- Different types of screws are used for [A] and [B]:
- [A]: Shoulder screw
- [B]: Double sems screw (a screw with a washer)



d196z4189

#### **Fusing Thermostat**

1. Fusing upper cover (page 278)

#### 2. Fusing Thermostat [A] ( \* × 2)



d196z4036



• Never re-use a thermostat that has activated. Use a new thermostat for replacement.

## **Fusing Thermistor**



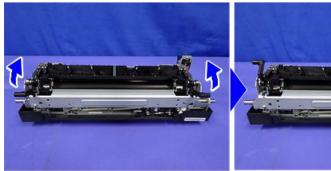
- · If the hook of the fusing thermistor is broken, the fusing thermistor cannot be attached. Replace the entire fusing unit in that case.
- 1. Fusing upper cover (page 278)
- 2. Push the hooks and remove the fusing thermistor [A] (\*\* × 1).



# **Fusing Pressure Roller Thermistors**

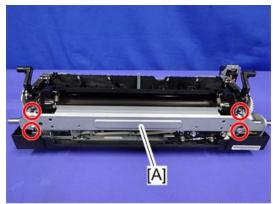
1. Fusing upper cover (page 278)

#### 2. Raise the fusing lever.





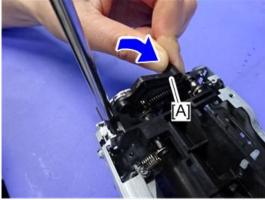
# 3. Remove the bracket [A]. ( × 4)



d196z4039

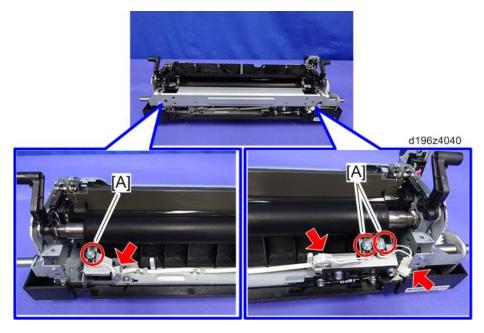
**U**Note

• Lift the fusing lever while removing the upper screws



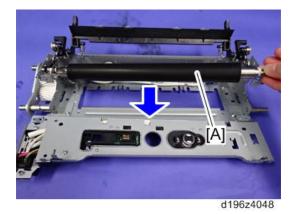
d196z4049

4. Pressure Roller Thermistors [A]. ( × 1 each, × 1 each)



#### **Pressure Roller**

- 1. Fusing Sleeve Belt Assembly (page 283)
- 2. Pressure roller [A]

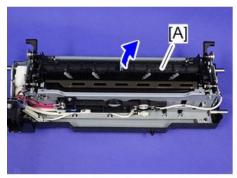


#### **Fusing Sleeve Belt Assembly**

1. Fusing lower cover (page 278)

#### **ACAUTION**

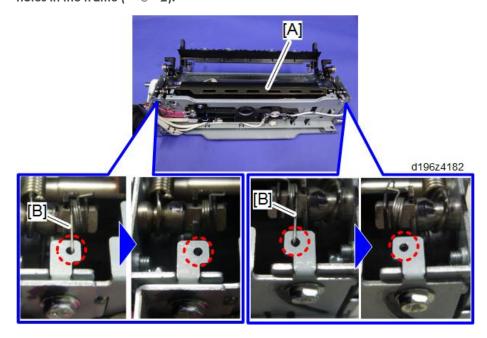
- Place a cloth or sheet of paper under the fusing unit when removing the fusing lower cover.
   Otherwise, the screw(s) and gear(s) exposed after removing the cover will scratch or transfer grease to the work surface.
- 2. Fusing entrance guide plate (page 279)
- 3. Fusing upper cover (page 278)
- 4. Raise the fusing exit guide plate [A].



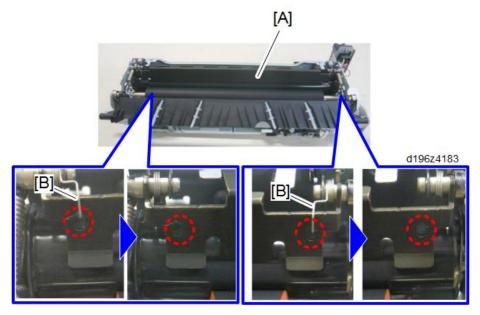


d196z4041

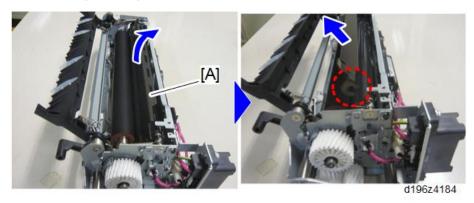
5. Remove the springs [B], which are on both ends of the separation plate [A], from the holes in the frame ( × 2).



 Remove the springs [B], which are on both ends of the separation plate [A], from the holes in the separation plate ( 2).



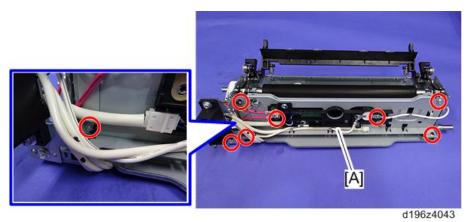
7. Rotate the separation plate [A], and remove it from the frame.



## **ACAUTION**

- Do not apply excess force to the separation plate when removing it, to prevent the separation plate from deforming.
- When reattaching the separation plate, make sure that the plate is firmly attached to the frame hole.
- 8. Fusing lamp harness ( × 2)

9. Screws on the rear frame [A] ( × 6)



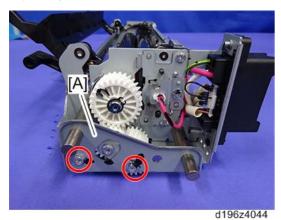
**U** Note

• When reattaching the harness, route the harness exactly the same way as before removal.

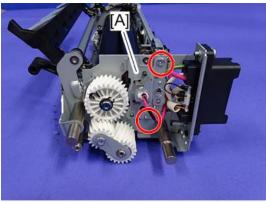


d196z4188

# 10. Right stay [A] ( \* 2)

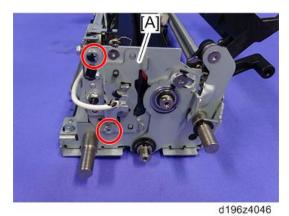


# 11. Screws at the right ( × 2)

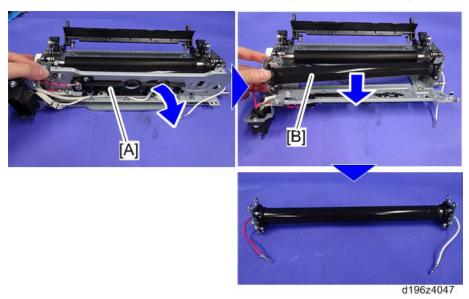


d196z4045

# 12. Screws at the left ( × 2)







### **ACAUTION**

- Do not touch the surface of the fusing sleeve belt assembly.
- When reattaching the rear frame, do not let the fusing sleeve belt hit the projection of the thermostat and the frame.



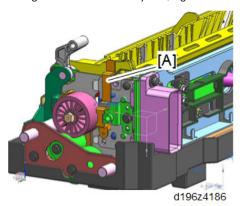
• When reattaching the fusing sleeve belt assembly, do not let the fusing sleeve belt assembly hit the projection of the sensor or the screws on the stay.



 Make sure that both side plates fit right into the locating bosses of the frame before securing the screws.



• The fusing sleeve belt assembly for replacement has a jig [A], which must be removed. Set the fusing sleeve belt assembly first, tighten the screws, then remove the jig.

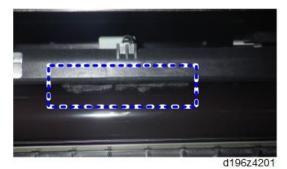


### **Fusing Entrance Sensor**

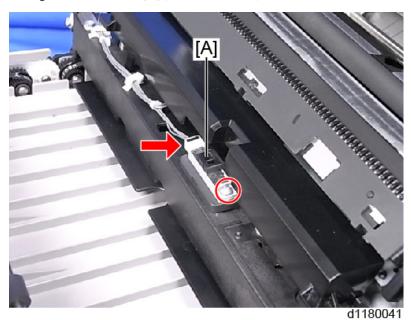
1. Open the duplex unit.



• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.

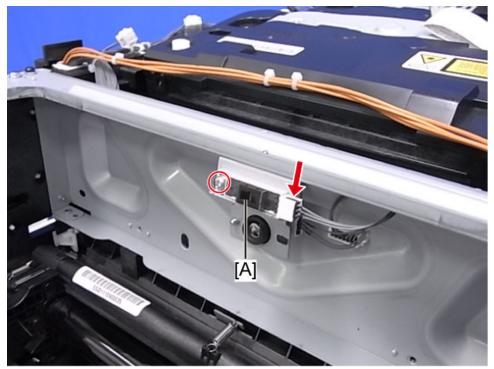


2. Fusing entrance sensor [A] ( \*\* 1, \*\* 1)



Fusing Exit Sensor

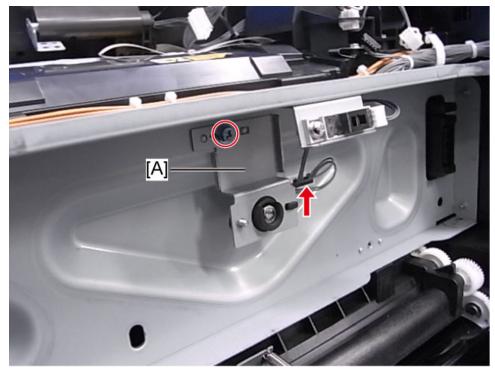
1. Paper exit unit (page 327)



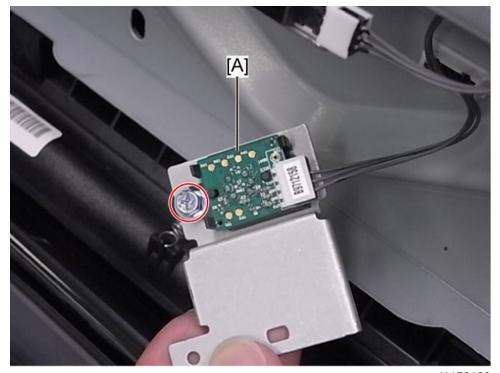
# Fusing Thermopile

1. Paper exit unit (page 327)

# 2. Bracket [A] (@ × 1, & × 1)

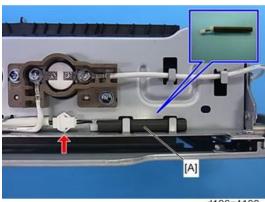


d1170128



## **New Fusing Unit Detection Fuse**

- 1. Fusing upper cover (page 278)
- 2. Remove the new fusing unit detection fuse [A] if the old blown fuse is attached. ( x 1)



d196z4108

4

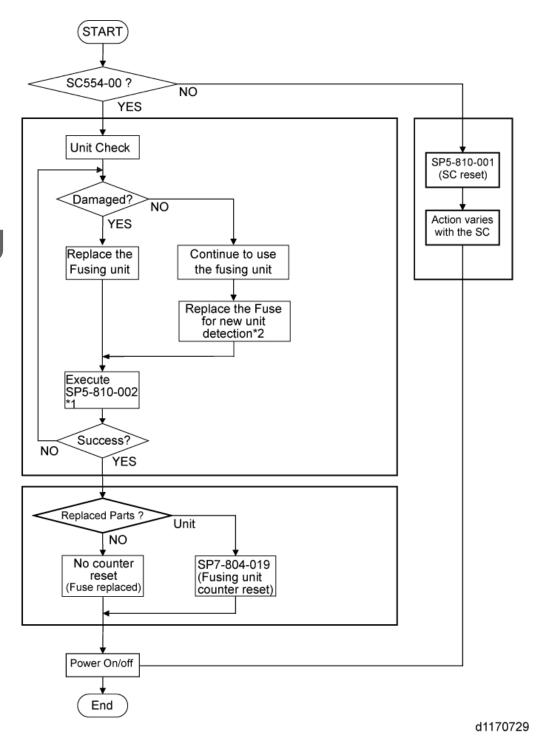
3. Connect the fuse connector, and insert the fuse into place from the upper side.



 Refer to the flow chart below when SC554 occurs. (page 293 "Actions When SC554-00 Occurs")

#### **Actions When SC554-00 Occurs**

Basically, the entire fusing unit must be replaced when SC554-00 occurs. However, it is possible to continue to use the old fusing unit when there is no damage found when you inspect the fusing unit in accordance with the flow chart shown below.



\*1: a) Do not use SP 3-701-014 to reset the fusing unit counter manually when doing the above reset procedure for SC554-00. b) Do not open the door when doing the procedure in this flow chart ("SC reset failure" will be shown.). The SC reset will be successful if the fuse for new fusing unit detection is

blown if the machine door is open during the SC reset, and it will not be successful if it is not blown. The SC reset should be performed again if it fails.

"SC reset failure" will be shown when this SP (SP5-810-002) is executed if an SC other than SC554-00 occurred.

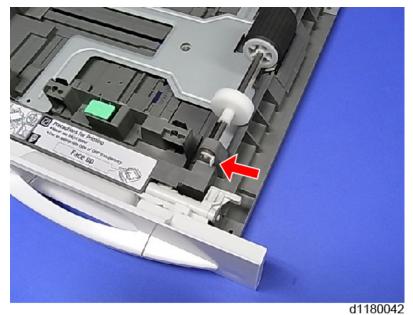
\*2: If there is no fuse for new unit detection (such as in the fusing unit that comes with the machine from the factory), install a fuse.

- Never use a damaged fusing unit.
- Inspect the entire fusing unit carefully if you will continue to use this unit.

# Paper Feed

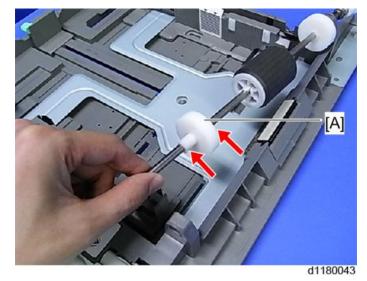
# Paper Feed Roller (Standard Tray)

- 1. Pull out the paper tray.
- 2. Bearing (🕅 × 1)

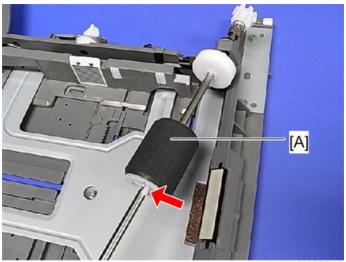


dilo

3. Sub paper feed roller [A] ( $\mathbb{C} \times 2$ )



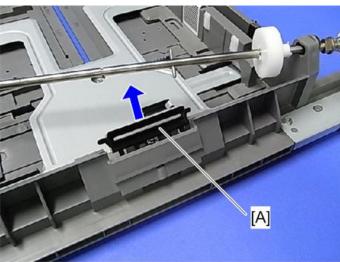
### 4. Paper feed roller (Hook × 1)



d1180044

### Friction Pad

- 1. Paper feed roller (page 296)
- 2. Friction pad [A] (Hooks × 2)



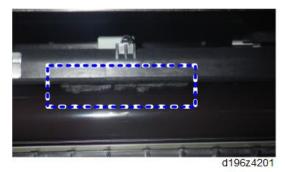
d1180045

### Registration Sensor / Paper Feed Sensor

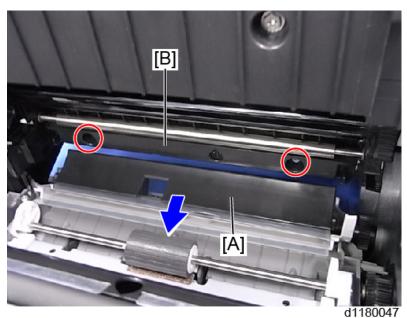
1. Open the duplex unit.



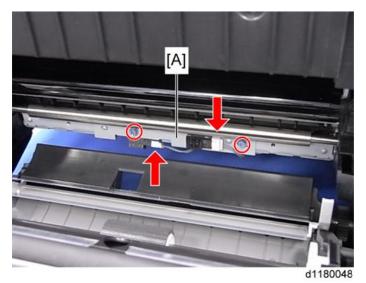
• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.



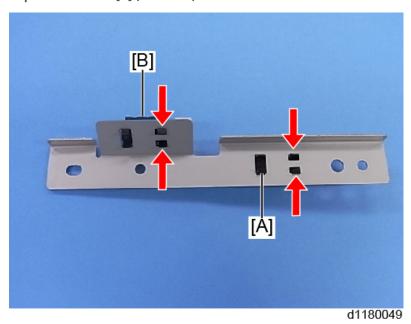
- 2. Pull down the guide plate [A].
- 3. Sensor cover [B] ( \* 2)



4. Sensor bracket [A] (@ × 2, & × 2)



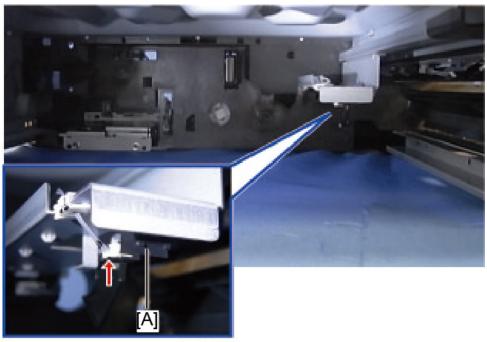
- 5. Registration sensor [A] (Hook × 2)
- 6. Paper feed sensor [B] (Hook × 2)



## Tray Paper End Sensor

1. Waste Toner Bottle (page 253)

2. Tray paper end sensor [A] (\*\* 1, hook \* 2)



d1170205a

### Tray Lift Sensor

- 1. Waste Toner Bottle (page 253)
- 2. Tray Lift Sensor [A] ( × 1, hook × 2)



### Draw-in Unit

1. PSU fan (page 376)

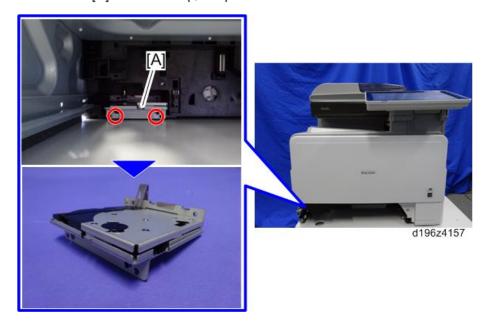
### 2. Rear cover (page 217)

## 3. Screw (@\* 1)

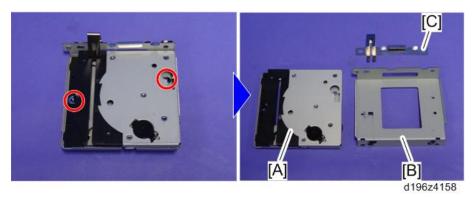


d196z4156

### 4. Draw-in unit [A] with bracket (@x 2)

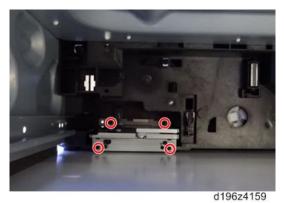


5. Remove the bracket [B] and ground plate [C] from the draw-in unit [A].



**U** Note

• When installing the draw-in unit, fit the bracket's holes onto the bosses on the mainframe. (37 × 4)



#### Δ

# Bypass

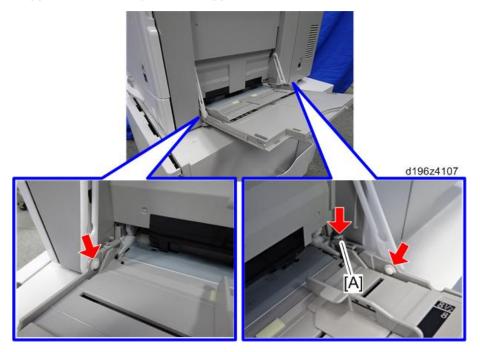
# Bypass Tray

1. Open the bypass tray [A].

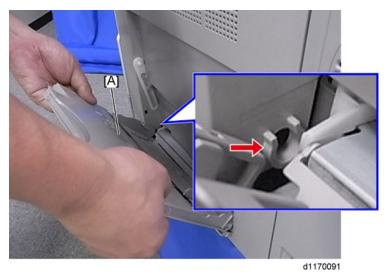


d1170089

2. Stopper [A], and E-rings ( $\mathbb{C} \times 2$ , Stopper  $\times 1$ )



3. Close the Bypass tray [A] slightly and pull it out upwards.

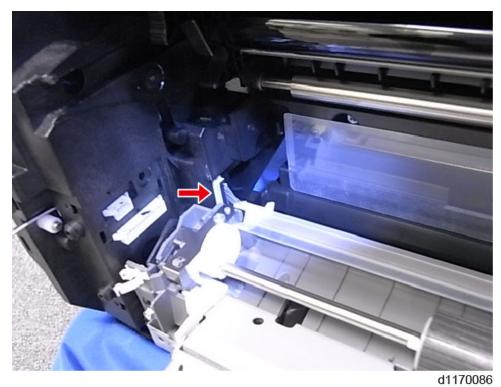


## Bypass Feed Unit

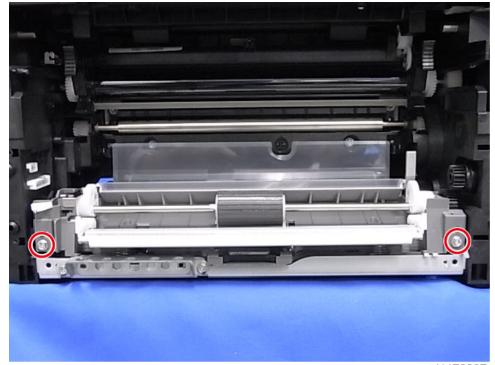
1. Duplex unit (page 330)

Δ

## 2. Disconnect the connector. ( × 1)

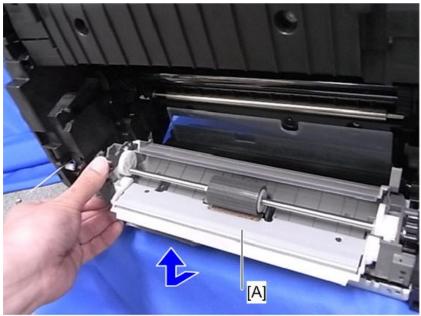


# 3. Two screws (🍑 × 2)

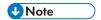


d1170087

### 4. Bypass feed unit [A]



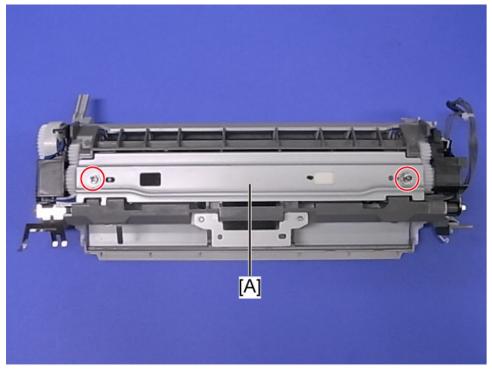
d1170088



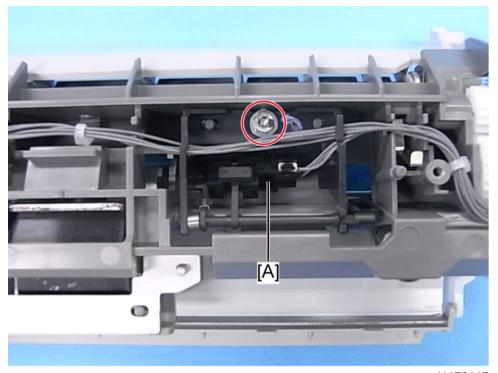
• Lift up the left side of the unit and remove it while pulling it out forward.

## Bypass Paper End Sensor

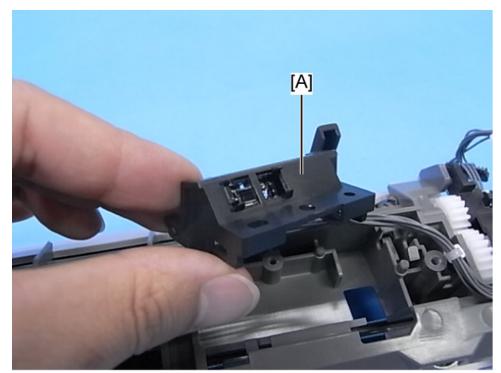
- 1. Bypass feed unit (page 304)
- 2. Bracket [A] (🕮 × 2)



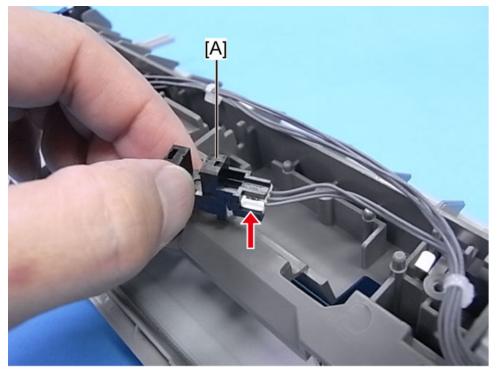
d1170116



### 4. Sensor holder [A] (Hook × 2)



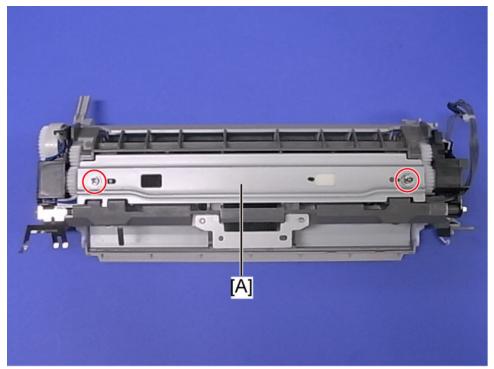
d1170118



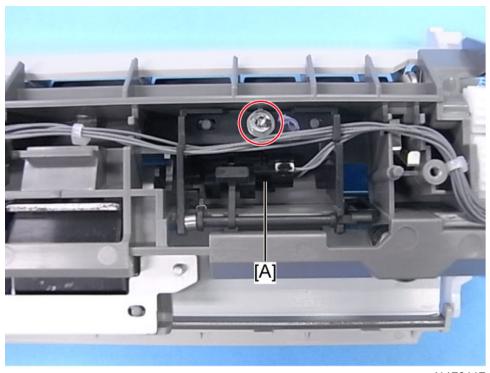
## Bypass Paper Width Sensor

1. Bypass feed unit (page 304)

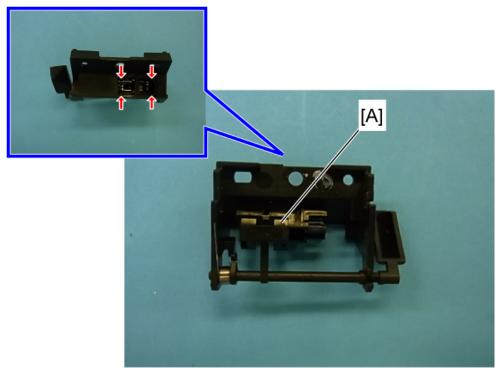
# 2. Bracket [A] (@ × 2)



d1170122



4. Bypass paper width sensor [A] (Hooks × 4)

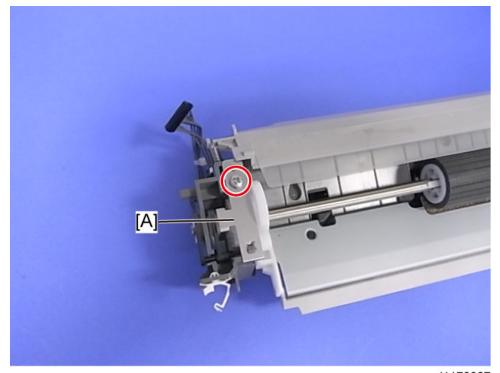


d1170742

# Bypass Feed Roller

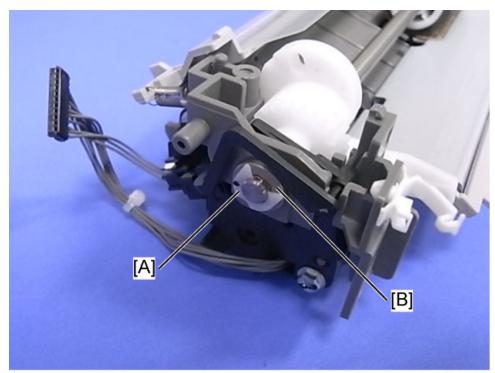
1. Bypass feed unit (page 304)

# 2. Bracket [A] (@ × 1)

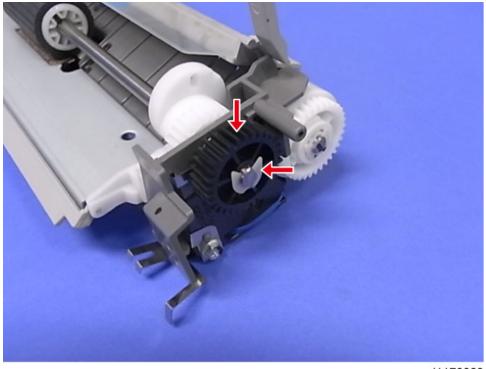


d1170067

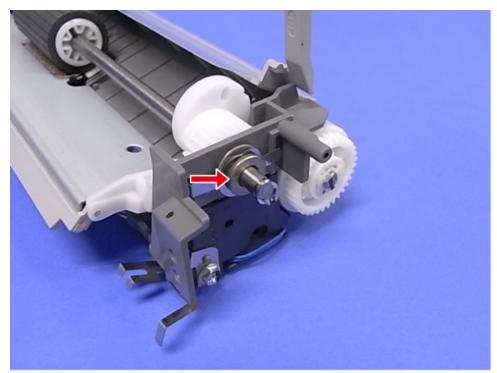
3. E-ring [A] and bearing [B] at the front of the bypass feed unit ( $\mathbb{C} \times 1$ , bearing  $\times 1$ )



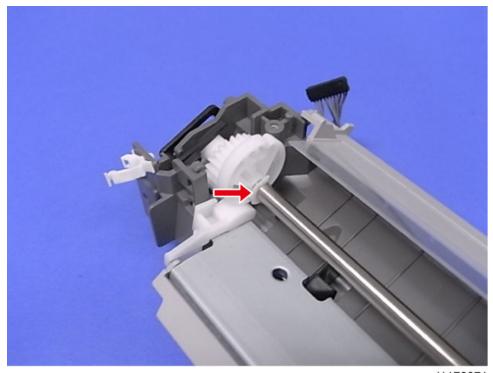
d1170068



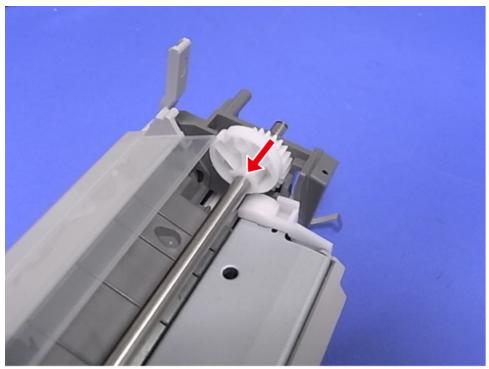
### 5. Bearing (bearing × 1)



d1170070

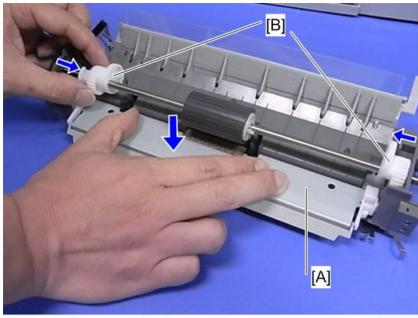


## 7. E-ring at the rear of the bypass feed unit ( $\mathbb{C} \times 1$ )

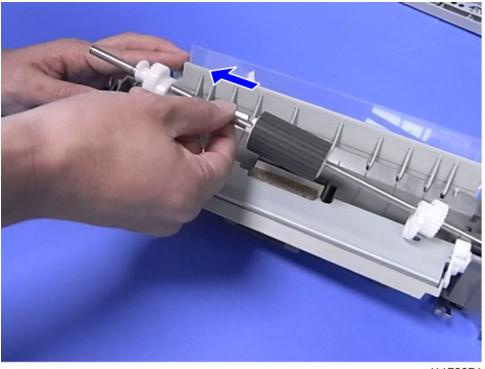


d1170072

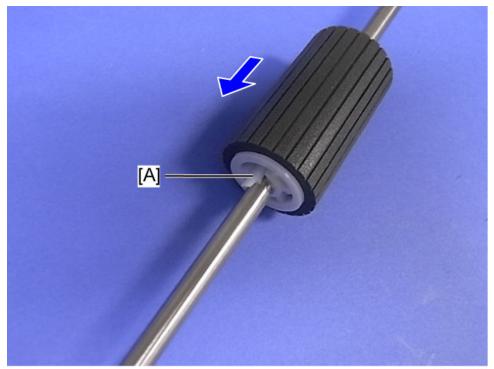
8. Move the front cam and rear cam [B] inward while pushing down the bottom plate [A].



d1170073



### 10. Bypass feed roller [A] (Hook × 1)

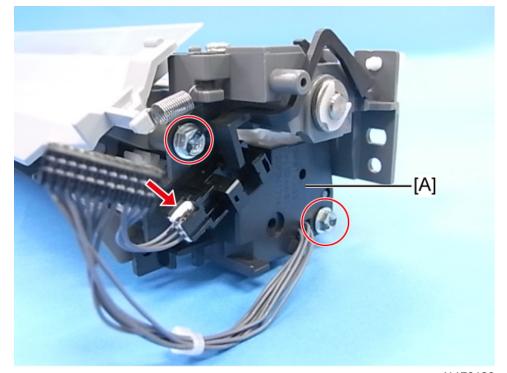


d1170075

## Bypass Lift Sensor

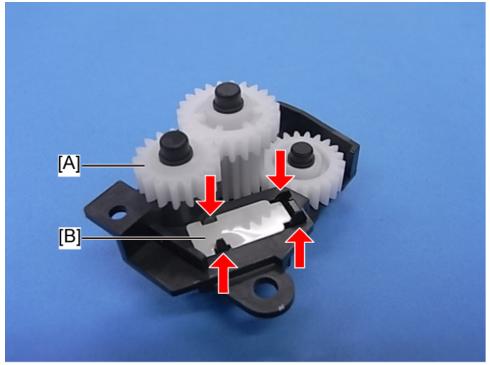
1. Bypass feed unit (page 304)

# 2. Sensor holder [A] ( \$\mathbb{O}^{\mathbb{O}} \times 2, \$\mathbb{O}^{\mathbb{C}} \times 1 \)



d1170120

### 3. Gear [A] and Bypass lift sensor [B] (Hooks × 4)

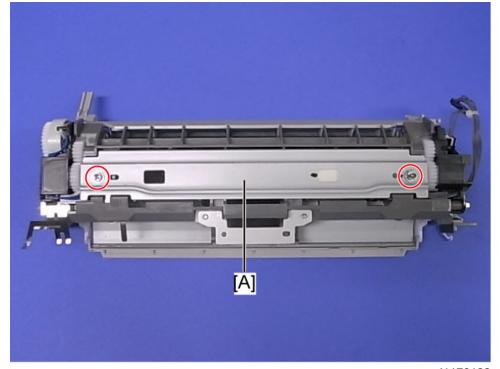


d1170121

# Bypass Lift Clutch

1. Bypass feed unit (page 304)

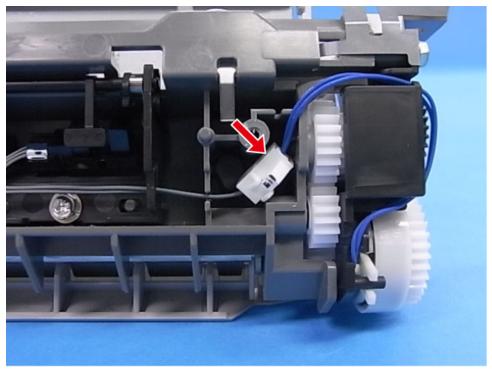
# 2. Bracket [A] (🖤× 2)



d1170122

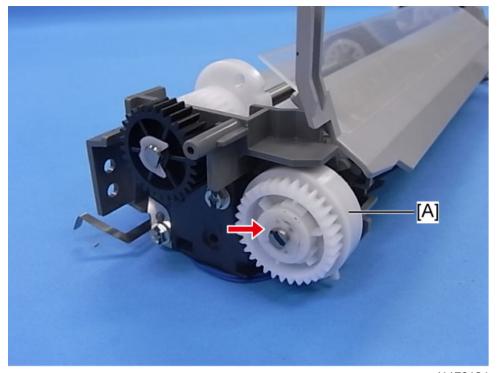
Δ

# 3. Disconnect the connector of the clutch. ( × 1)



d1170123

# 4. Bypass lift clutch [A] (© × 1)



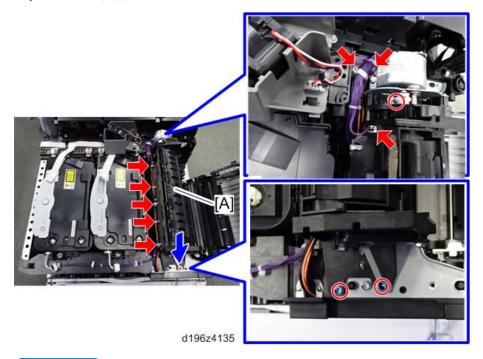
d1170124

#### 4

# **Paper Exit**

# Paper Exit Unit

- 1. Scanner Inner cover (page 219)
- 2. Paper exit unit [A] (𝖤 × 3, 𝒗 × 2, 🖗 × 6)



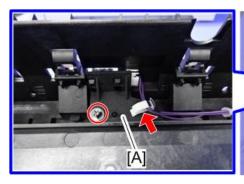


• Make sure that you do not release the exit roller drive belt [A] by mistake when removing the paper exit unit.



## Paper Exit Sensor

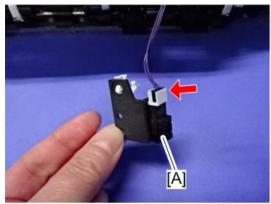
- 1. Paper exit unit (page 327)
- 2. Sensor bracket [A] (\$\varphi \times 1, \widetilde{0}^{\pi} \times 1)





d196z4137

3. Paper exit sensor [A] ( × 1)

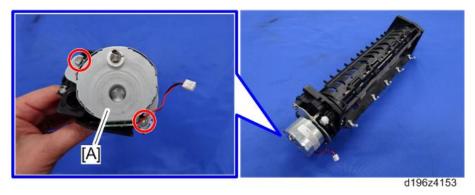


d196z4138

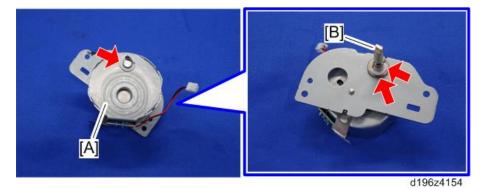
# Paper Exit Rotary Solenoid

1. Paper exit unit (page 327)

2. Paper exit rotary solenoid [A] with the bracket ( $\mathfrak{D}^* \times 2$ )



3. Remove the pulley and two clips, and then remove the shaft [B] from the paper exit rotary solenoid [A].  $(\mathbb{R} \times 2)$ 



4. Pull out the bracket [B] and grounding plate [C] from the paper exit rotary solenoid [A].



# **Duplex**

# **Duplex Unit**

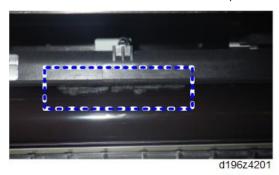
1. Open the duplex unit.



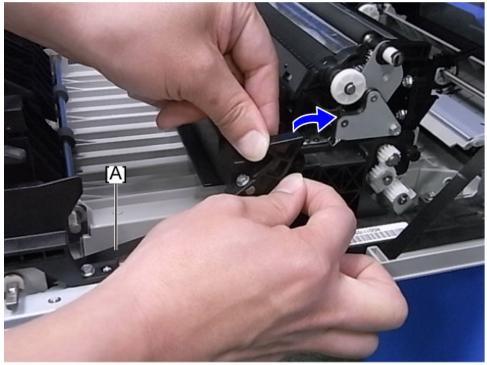
d196z4007



• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.



2. Push the lever and reduce the tension of the belt [A], then remove the belt.



d1170077



d1170078

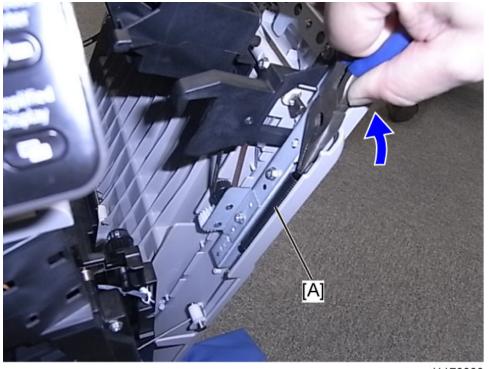
Δ

## 4. Lift the paper transport unit [A].



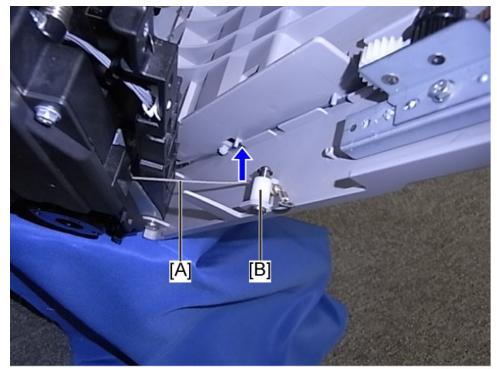
# 5. Tension spring cover [A] ( \* 1)





d1170080

## 7. Release the tension wire [A] from the roller [B].

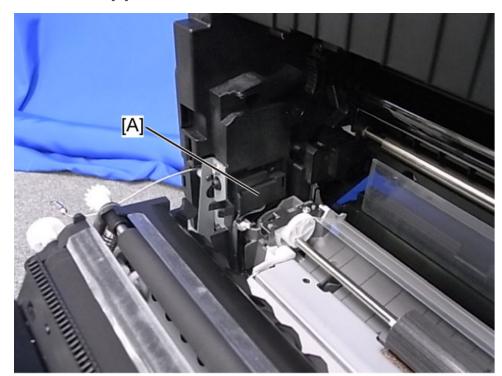


d1170081

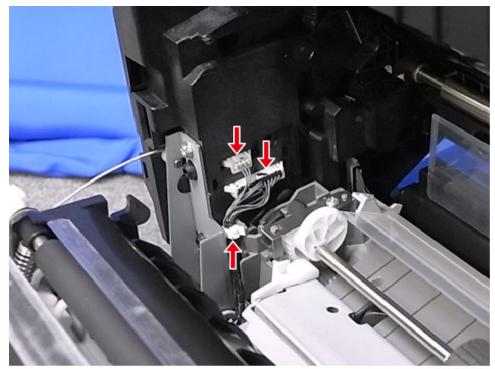
## 8. Restore the paper transport unit [A].



### 9. Connector cover [A]



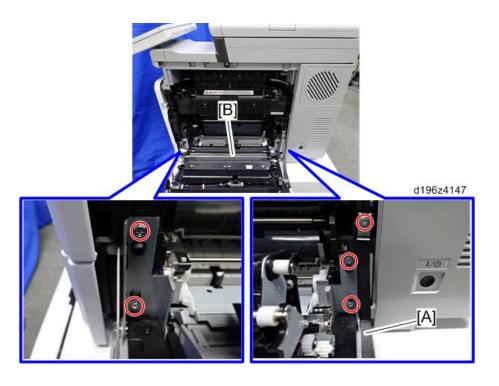
d1170083



d1170084

### 11. Remove the following items:

- Belt [A] (🖤 × 1)
- Duplex unit [B] (@ × 4)

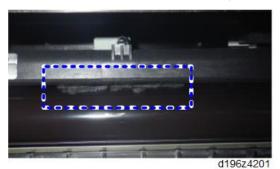


# **Duplex Entrance Sensor**

1. Open the duplex unit.



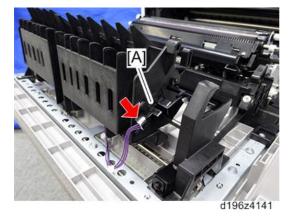
• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.



### 2. Sensor cover [A] (Hooks × 3)



3. Duplex entrance sensor [A] ( × 1)

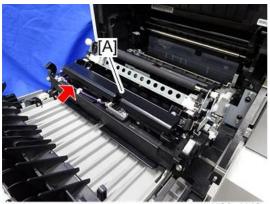


# **Duplex Exit Sensor**

1. Paper transfer roller (page 264)

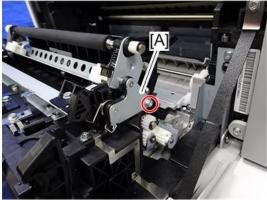
# 4

### 2. Cover [A] (Hook × 1)



d196z4142

# 3. Bracket [A] (@ × 1)



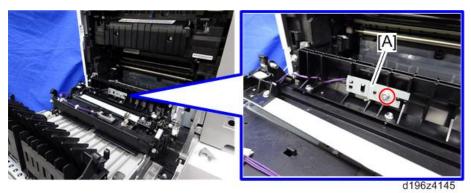
d196z4143

### 4. Registration roller unit [A]



d196z4144

# 5. Sensor bracket [A] ( \* 1)



6. Duplex exit sensor [A] ( × 1)

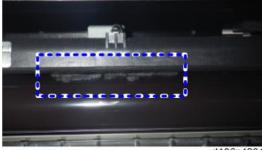


# **Right Cover Sensor**

1. Open the duplex unit.



• If you find paper dusts on the registration section when you open the duplex unit, remove the dusts. Otherwise, the dusts cause to develop lines on the image.



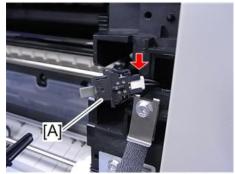
d196z4201

2. Release the tab [A] of the right cover sensor [A] with a jeweler's screwdriver.



d196z4139

3. Right Cover Sensor [A] (\*\* × 1)

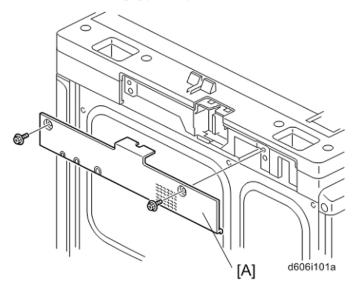


d1182511

# **ARDF**

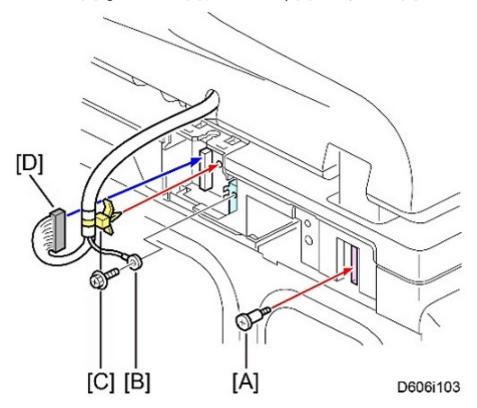
# ARDF Unit

1. Scanner rear cover [A] ( \$\mathscr{O}^{\mathscr{O}} \times 2 )

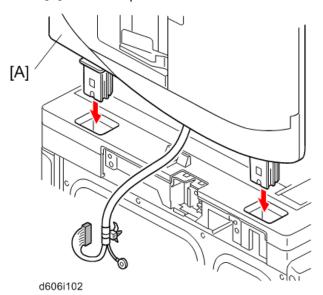


#### 4

# 

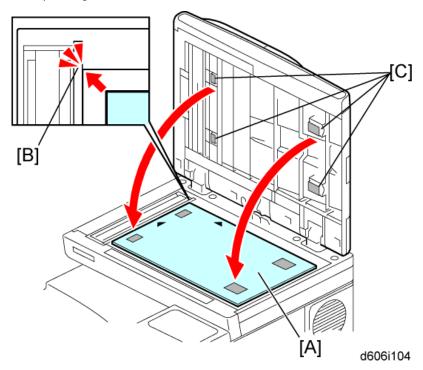


## 3. ARDF [A] from the copier



### When Installing the ARDF

- 1. Open the ARDF.
- 2. Do the following steps:
  - Place the platen sheet [A] on the exposure glass.
  - With Velcro tape [C], line up the rear left corner of the platen sheet flush against corner [B] on the exposure glass.



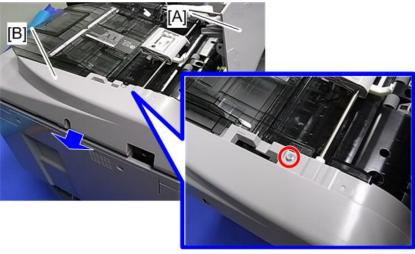
- 3. Close the ARDF.
- 4. Reopen the ARDF.
- 5. Press the surface of the platen sheet gently to fix it on the ARDF firmly.

#### **ARDF Rear Cover**

1. Open the ARDF left cover [A].

#### 4

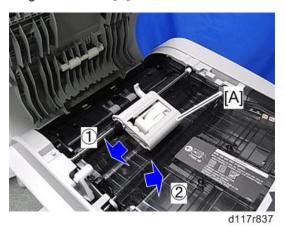
# 2. ARDF rear cover [B] ( × 1)



d117r826

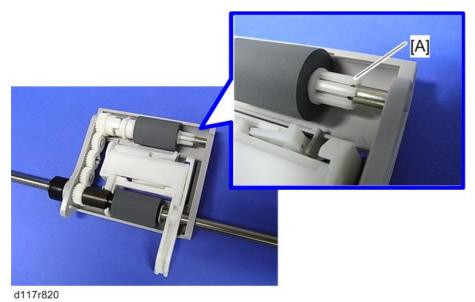
# **Original Feed Unit**

- 1. Open the ARDF left cover.
- 2. Original feed unit [A]

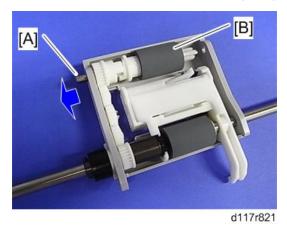


# Pickup Roller

1. Original feed unit (page 347)



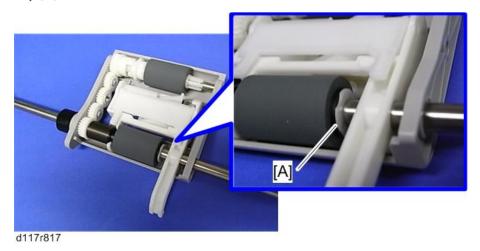
3. Slide the shaft [A], and then remove the pickup roller [B].



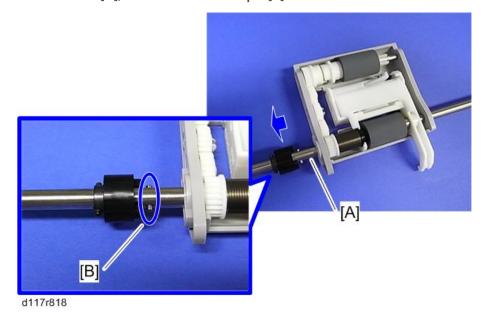
## Feed Roller

1. Original feed unit (page 347)

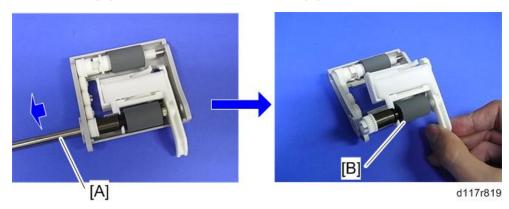
# 2. Clip [A].



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

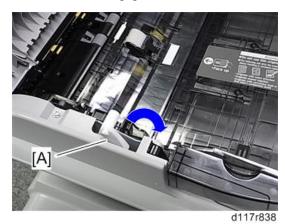


4. Slide the shaft [A], and then remove the feed roller [B].



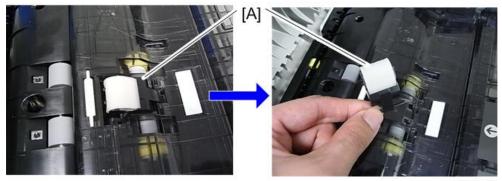
## Friction Pad

- 1. Original feed unit (page 347)
- 2. Turn the lock lever [A] clockwise.



# 4

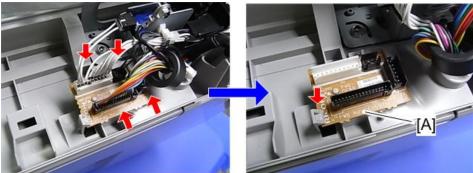
### 3. Friction pad [A] (hook × 3)



d117r822

## DFRB

- 1. ARDF rear cover (page 346)
- 2. DFRB [A] ( × 4, hook × 1)



d117r827

# ARDF Top Cover Sensor, Original Set Sensor

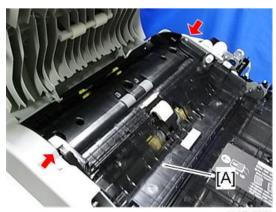
1. ARDF rear cover (page 346)



d117r828

### **ARDF Drive Motor**

- 1. Original feed unit (page 347)
- 2. ARDF rear cover (page 346)
- 3. Guide plate [A] (hook × 2)

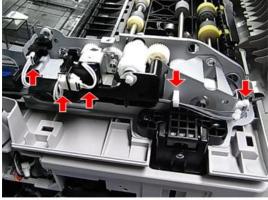


d117r829

# 4. Guide plate [A] (@ × 5)



5. Release the clamps and disconnect the connectors. (  $\checkmark$  × 3, % × 2)



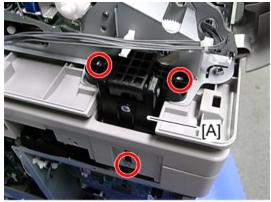
d117r831

# 6. Holder [A] ( \* 1)



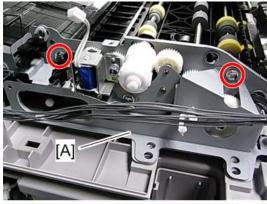
d117r832

# 7. Hinge [A] (🕯 × 3)



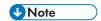
d117r833

# 8. Bracket [A] ( \* 2)

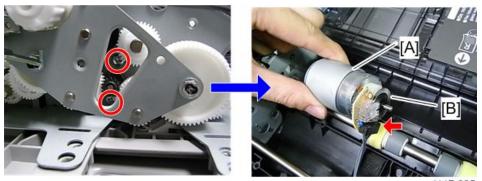


d117r834

# 9. ARDF drive motor [A] (☞×2, ☞×1)



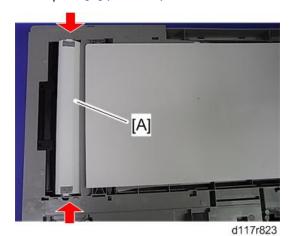
• Do not touch the encoder [B] when holding the motor.



d117r835

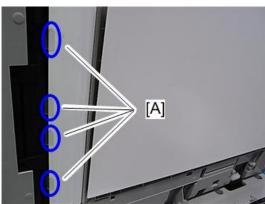
## White Plate

- 1. Open the ARDF.
- 2. White plate [A] (hook × 2)



UNote

• When installing the white plate, make sure that the mylars [A] are outside the white plate.



d117r839

## **Registration Sensor**

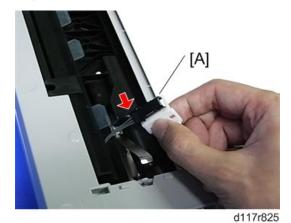
1. White plate (page 355)

# 2. Registration sensor holder [A] ( °× 1)



d117r824

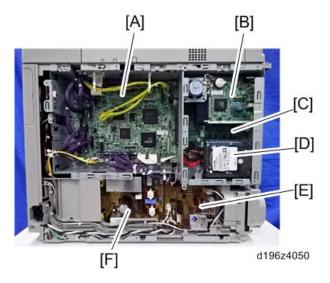
# 3. Registration sensor [A] (\*\* × 1)



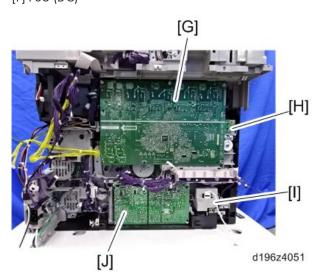
#### 4

# **Electrical Components**

### Overview



- [A] BiCU
- [B] FCU (if the machine has the fax unit)
- [C] Controller Board
- [D] HDD
- [E] PSU (AC)
- [F] PSU (DC)



[H] Toner Bottle Detection Board

[I] AC Detection Board

[J] Power Pack (Transfer)

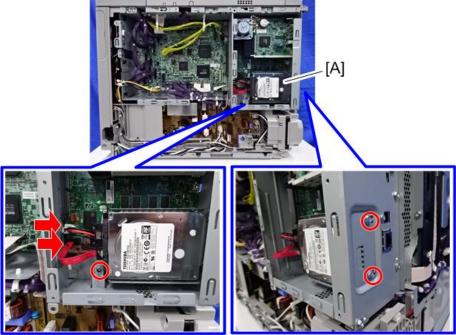
#### **HDD**



 Before replacing the HDD, copy the address book data to an SD card with SP5-846-051 if possible.



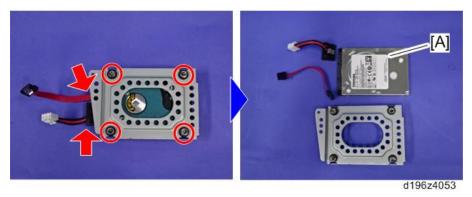
- If the customer uses the Data Overwrite Security, IC card reader, or OCR unit, these applications must be installed again.
- 1. Rear cover (page 217)
- 2. Left cover (page 216)
- 3. HDD with the bracket [A] (5° × 3, 5° × 2)



d196z4052

4

# 4. Bracket and connectors from the HDD [A] ( \* 4, \* 2)



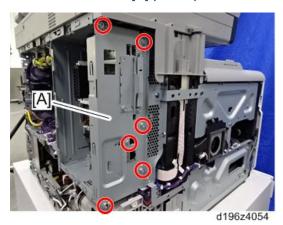
### Adjustment after Replacement

- Do SP5-832-001 to initialize the HDD.
   Initialization should be performed for the HDD which already formatted before.
- 2. If applicable, do SP5-846-052 to restore the address data from SD card to the HDD.
- 3. Cycle the power Off/On.

### **Controller Board**



- Keep NVRAMs away from any objects that can cause static electricity. Static electricity can damage NVRAM data.
- 1. HDD (page 358)
- 2. Controller box cover [A] ( × 6)



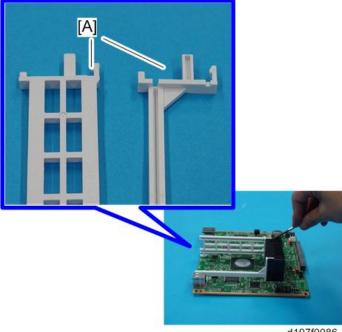
359

3. Pull out the controller board [A]. ( \* 4, \* 1)



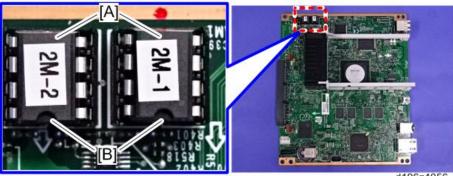
d196z4055

4. Remove the guide rail [A] from the controller board.



d197f0086

Remove the two used NVRAMs from the old controller board and install them on the new controller board.



d196z4056



- Make sure the NVRAM [A] is installed at the correct mounting location and orientation). Install
  the NVRAM so that the indentation on the NVRAM corresponds with the mark [B] on the
  controller board.
- Incorrect installation of the NVRAM will damage both the controller board and NVRAM.

#### NVRAM on the controller board

### **ACAUTION**

- SC195 (Machine serial number error) will be displayed if you forget to attach the NVRAM.
- If you mounted the NVRAM in the wrong direction, each component needs to be replaced because a short circuit was caused in the controller board and the NVRAM.
- Installing a new NVRAM initializes SPs and issues an SC. Reset the SC with the procedure below.
- Make sure that you have the SMC report (factory settings). This report comes with the machine.
- Output the SMC log using one of the following methods:
   To print SMC log data, execute SP5-990-001.

   To save SMC log data to an SD card, execute SP5-992-001 (page 429).
- 3. Turn off the main power switch.
- 4. Insert a blank SD card in the SD slot 2, and then turn on the main power switch.
- 5. Use SP5-824-001 to upload the NVRAM data from the controller board.

6. Make sure the customer has a backup of their address book data. If not, obtain the backup by referring to SP5-846-051.



- The address data stored in the machine will be discarded later during this procedure. So be sure to obtain a backup of the customer's address book data.
- Note that the counters for the user will be reset when doing the backup/restore of the address book data.
- If they have a backup of the address book data, use their own backup data for restoring. This
  is because there is a risk that the data cannot be backed up properly depending on the
  NVRAM condition.
- 7. Do the following steps if the machine has the fax unit. If not, skip this step:
  - 1. Print the Box List with the User Tools/Counter.
    - [User Tools/Counter] [Facsimile Features] [General Settings] [Box Setting: Print List]
  - 2. Print the Special Sender List by pressing these buttons in the following order.
    - [User Tools/Counter] [Facsimile Features] [Reception Settings] [Program Special Sender: Print List]
  - 3. Write down the following fax settings.
    - [Receiver] in [User Tools/Counter] [Facsimile Features] [Reception Settings] [Reception File Settings] [Forwarding].
    - [Notify Destination] in [User Tools/Counter] [Facsimile Features] [Reception Settings] [Reception File Settings] [Store].
    - [Specify User] in [User Tools/Counter] [Facsimile Features] [Reception Settings] [Stored Reception File User Setting].
    - [Notify Destination] in [User Tools/Counter] [Facsimile Features] [Reception Settings] [Folder Transfer Result Report].
    - Specified folder in [User Tools/Counter] [Facsimile Features] [Send Settings] -[Backup File TX Setting].
    - [Receiver] in [User Tools/Counter] [Facsimile Features] [Reception Settings] [Reception File Settings] [Output Mode Switch Timer].
    - [Store: Notify Destination] in [User Tools/Counter] [Facsimile Features] [Reception Settings] - [Output Mode Switch Timer].
    - All the destination information shown on the display.



In the fax settings, address book data is stored with entry IDs, which the system internally
assigns to each data. The entry IDs may be changed due to re-assigning in backup/
restore operations.

- 4. Make sure that there is no transmission standby file. If any standby file exists, ask the customer to delete it or complete the transmission.
- 8. Turn the main power OFF and unplug the power supply cord.
- 9. Push the main power switch ON again to discharge the residual charge.
- 10. Replace the NV-RAM with a new one.
- 11. Turn the power ON.



- SC673 appears at start-up, but this is normal behavior. This is because the controller and the smart operation panel cannot communicate with each other due to changing the SP settings for the operation panel.
- 1. Change the SP settings for the operation panel.
  - SP5-748-101: (OpePanel Setting: Op Type Action Setting): Change bit 0 from "0" to "1".
  - SP5-748-201: (OpePanel Setting: Cheetah Panel Connect Setting): Change the value from "0" to "1".
- 12. Cycle the main power OFF/ON with the SD card where the NV-RAM data has been uploaded in SD slot 2.



- SC992 appears at start-up, but this is normal behavior. This is because information written to the NV-RAM and on the hard disk do not match due to replacement of the NV-RAM. Go to Step 13.
- Download the NV-RAM data stored in the SD card to the brand-new NV-RAM using SP5-825-001 (NV-RAM Data Download).



- The download will take a couple of minutes.
- 14. Turn the main power OFF and remove the SD card from SD slot 2.
- 15. Turn the main power ON.
- 16. Restore the original settings of the following SPs, referring to the SMC data obtained in step 2.

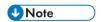


- SP5-825-001 does not download the following SP data to the new NV-RAM. So you must set them manually.
- a. SP5-985-001 (Device Setting: On Board NIC)
- b. SP5-985-002(Device Setting: On Board USB)

18. Ask the customer to restore their address book. Or restore the address book data using SP5-846-052 (UCS Setting: Restore All Addr Book), and ask the customer to ensure the address book data has been restored properly.



- If you have obtained the backup of the customer's address book data, delete the backup immediately after the NV-RAM replacement to avoid accidentally taking out the customer's data.
- Output the SMC log using one of the following methods:
   To print SMC log data, execute SP5-990-001.
   To save SMC log data to an SD card, execute SP5-992-001 (page 429).



- · Check that the counters are reset.
- 20. Make sure that the list output in step 7-1 through step 7-3 matches the destination information in step 7-4. If not, set it to the setting before replacement.
- 21. Execute the process control (SP3-011-001).



- Try all the items below if NVRAM upload (SP5-824-001) or download (SP5-825-001) cannot be done.
  - Check the SP values that changed on the SMC you printed out in step 2. Adjust the
    values manually. Make sure that the values of SP5-045-001 and SP5-302-002 are the
    same as before replacing.
  - Replace all PM parts because all PM counters will be reset.

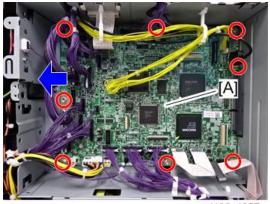


 If a message tells you need an SD card to restore displays after the NVRAM replacement, create a "SD card for restoration" and restore with the SD card. Refer to "page 75" "Encryption Key Restoration""

#### **BiCU**

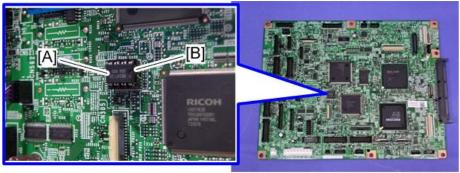
1. Rear cover (page 217)

2. BiCU [A] ( \*\* 8, \*\* 3, USB connector \*1, all \*\*s).



d196z4057

3. Remove the NVRAM from the old BiCU and attach it to the new BiCU.



d196z4058



- Attaching the used NVRAM to the new BiCU allows users to use old data such as SP settings.
- RTB 40 Delete this note
- SC995 occurs when replacing the BiCU. Execute SP5-811-004 then turn the main power off

   and on.
- Install a new NVRAM [A] so that the indentation [B] on the NVRAM corresponds with the mark on the BiCU. Incorrect installation of the NVRAM will damage both the BiCU and NVRAM.

### Replacing the NVRAM (EEPROM) on the BiCU



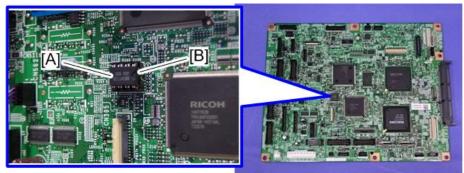
- The following shows the procedure for replacing the NVRAM on the BiCU with a new NVRAM.
- Make sure that you have the SMC report (factory settings). This report comes with the machine.

4

- 2. Output the SMC data ("ALL") using SP5-990-001/SP5-992-001.
- 3. Turn off the main switch.
- 4. Insert a blank SD card in the SD slot #2, and then turn on the main switch.
- 5. Use SP5-824-001 to upload the NVRAM data from the BiCU
- 6. Turn off the main power switch and unplug the power cord.
- 7. Replace the NVRAM on the BCU with a new one.



 Install a new NVRAM [A] so that the indentation [B] on the NVRAM corresponds with the mark on the BiCU. Incorrect installation of the NVRAM will damage both the BiCU and NVRAM.



d196z4058

8. Plug in, and then turn on the main switch.



RTB 40 Delete this note

- When the power is turned ON, SC195-00 appears. Continue with the following steps.
- 9. Select the destination setting (SP5-131-001 JPN: 0, NA: 1, EU/AA/TWN/CHN: 2).



- After changing the EEPROM, some SPs do not have the correct values.
- Because of this, steps 10 to 12 must be done.
- Set the machine serial number SP5-811-001, Area selection SP5-807-001, CPM set SP5-882-001.



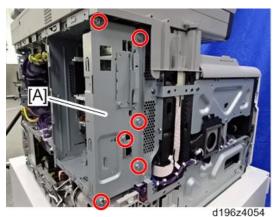
- For information on how to configure the above SPs, contact the supervisor in your branch
  office.
- 11. Cycle the power off/on.
- 12. Use SP5-801-002 "Memory Clear Engine".
- 13. Turn off the machine, and then turn it back on.

- From the SD card where you saved the NV-RAM data in step 5, download the NV-RAM data with SP5-825-001.
- 15. Turn off the machine, and then remove the SD card from SD slot 2.
- 16. Turn on the main power switch.
- 17. Check the factory setting sheet and the SMC data printout from step 2, and set the user tool and SP settings so they are the same as before.
- 18. Execute ACC (Copy and Printer).

### Controller Box



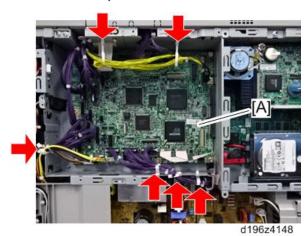
- If the optional counter interface unit is installed, remove the optional counter interface unit before removing the controller box.
- 1. HDD (page 358)
- 2. Rear right cover (page 218)
- 3. Controller box cover [A] ( \* 6)



### 4. Scanner rear cover [A] ( × 2)

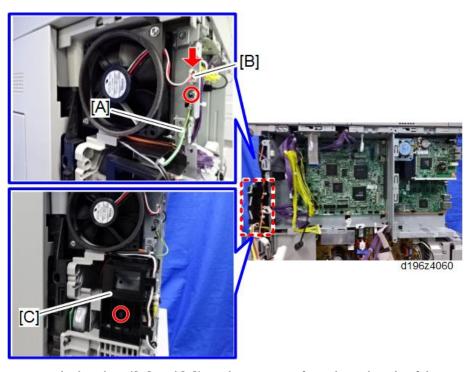


- 5. All connectors on the BiCU [A] ( × 3, USB connector × 1, all × s)
- 6. Remove the clamps to make room for removal of the BiCU [A]. (🕸 × 6)



### 7. Do the following steps:

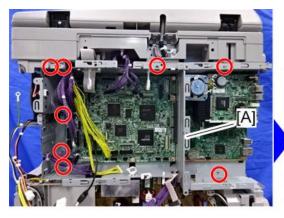
- Remove the ground wire [A] and connector [B] from the left side of the controller box.
- Disconnect the harness and remove the harness guide [C]. ( $\mathfrak{G}^p \times 1$ )



8. Remove the brackets ([A] and [B]), and two screws from the right side of the controller box. (③\* × 6)



d196z4061





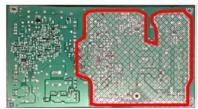
d196z4062

## PSU (AC), PSU (DC)

### **ACAUTION**

• Do not touch the areas outlined in red in the following diagrams when replacing the PSU. Residual charge on the board may cause electric shock.



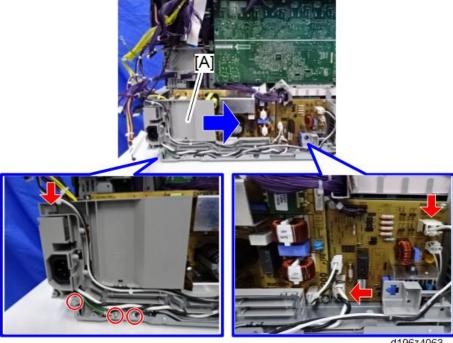


d196z4152

- 1. Controller box (page 367)
- 2. PSU fan (page 376)

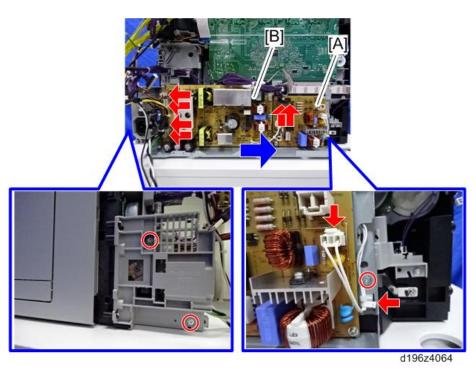
\_

3. Disconnect the harness and remove the harness guide [A]. ( \*3, \* 3, \* 2, Hook \* 1)

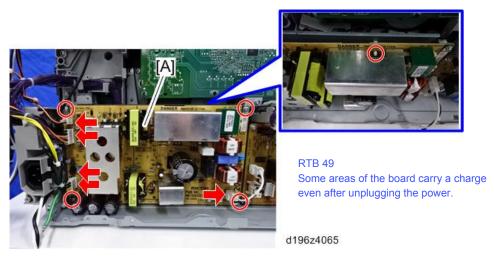


- d196z4063
- 4. The next step varies according to the parts that you want to remove.
  - For removing the PSUs with the bracket, disconnect the connectors on the PSU (AC) [A] and PSU (DC) [B]. ( $\checkmark$  × 7,  $\checkmark$  × 1,  $\checkmark$  × 3)



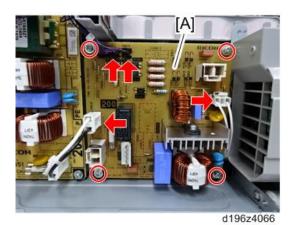


• For removing the PSU (DC) alone, remove the PSU (DC) [A]. ( $\mathfrak{S}^{\times} \times 4$ ,  $\mathfrak{S}^{\times} \times 5$ ,  $\mathfrak{S}^{\times} \times 1$ :Locking wire saddle)



• For removing the PSU (AC) alone, remove the PSU (AC) [A]. (  $^{\circ}$  × 4,  $^{\circ}$  × 4)



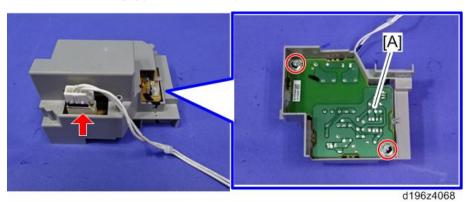


### **AC Detection Board**

- 1. PSU with the bracket (page 370)
- 2. AC detection board with the bracket [A] ( \* 1, \* 1)



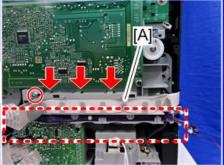
3. AC detection board [A] (🍑 × 2, 💝 × 1)



### Power Pack (Development)

- 1. PSU with the bracket (page 370)
- 2. Disconnect the harness and remove the harness guide [A]. ( \* 1, hook \* 3)

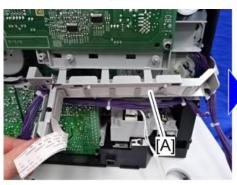




d196z4069

**U** Note

• Release the harness guide [A] as shown below.

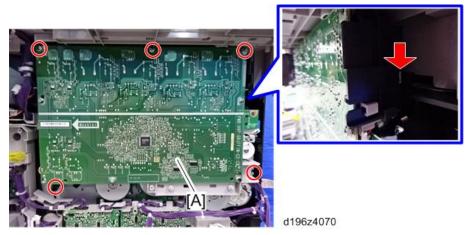




d196z4150

#### 4

3. Power Pack (Development) [A] with the bracket (@ × 5, hook × 1)



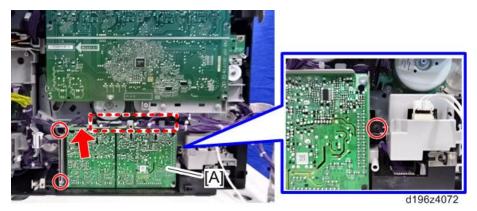
4. Power Pack (Development) [A] ( \$\mathbb{O}^{\mathbb{O}} \times 5, \$\mathbb{O}^{\mathbb{N}} \times 1 )



d196z4071

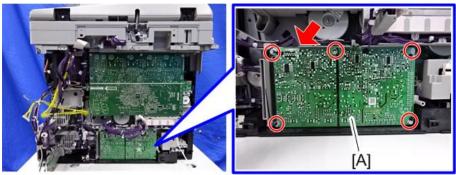
## Power Pack (Transfer)

1. PSU with the bracket (page 370)



### Removing the Power Pack (Transfer) Alone

- 1. PSU with the bracket (page 370)
- 2. Power Pack (Transfer) [A] (@ × 5, & × 1)

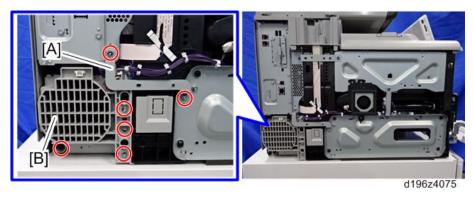


d196z4073

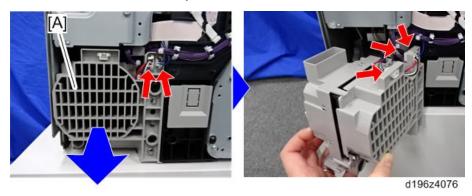
### **PSU Fan**

- 1. Left cover (page 216)
- 2. Bracket [A] (🖤 × 2)

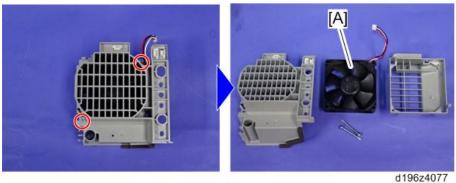
3. Screws of the fan cover [B] ( \* 4)



4. Disconnect the connectors and pull out the PSU fan [A] with the cover. (5 × 5)



5. Remove the cover from the PSU fan [A]. (50° × 2)



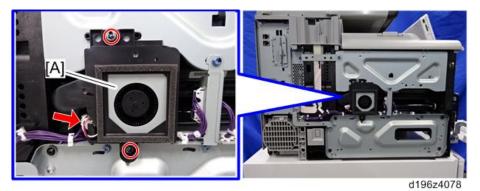


• Install the PSU fan with its label facing the inside of the machine.

# **PCDU Cooling Duct Fan**

1. Left cover (page 216)

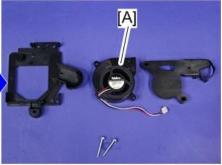
# 2. Duct [A] (\$\text{\$\text{\$\psi}\$} \times 2, \$\text{\$\psi\$} \times 1)



3. PCDU Cooling Duct Fan [A] ( \* 2, hook × 4)







d196z4079

**U** Note

• Install the PCDU cooling duct fan with its label facing the inside of the machine.

### **Fusing Fan**

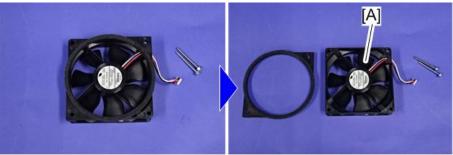
1. Rear right cover (page 218)

#### 4

## 2. Fusing fan [A] (@ × 2, & × 1)



3. Remove the cover from the fusing fan [A].



d196z4080

# **ACAUTION**

• Install the fusing fan with its label facing the outside of the machine.

# Temperature/Humidity Sensor

1. Pull out the paper tray.

# 2. Front Lower Cover [A] ( \* 1)



d196z4002

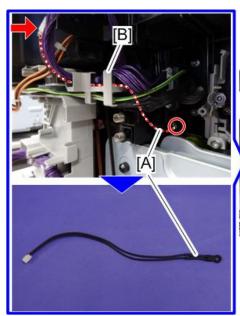
# 3. Temperature/humidity sensor [A] (@\* × 1, @\* × 1)



## **Image Creation Temperature Sensor**

1. Toner Transport Section (page 251)

2. Remove the image creation temperature sensor [A] while releasing the harness of the image creation temperature sensor from the harness guide [B]. (③\* × 1, ⑤\*\* × 1)





d196z4169

### Interlock Switches

- 1. Pull out the paper tray.
- 2. Front lower cover [A] ( × 1)





d196z4002



d196z4082

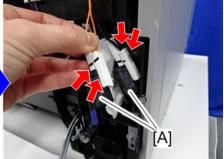
4. Cover [A] (3 × 3)



d196z4083

5. Interlock switches [A] ( × each 2)





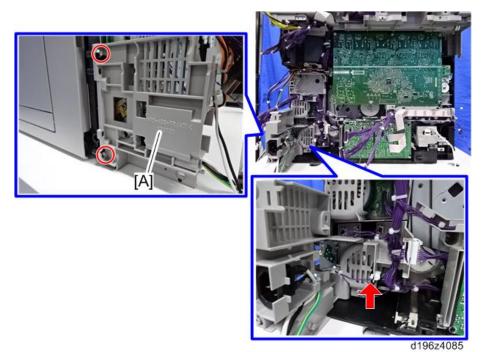
d196z4084

### DC Switch

1. PSU with the bracket (page 370)

#### 4

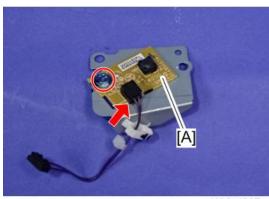
# 2. DC switch cover [A] (☞ × 2, ☞ × 1)



3. DC switch [A] with the bracket ( × 2)



# 4. DC switch [A] (@ × 1, & × 1)



d196z4087

# 5. System Maintenance

# Service Program Mode

### **SP Tables**

See "Appendices" for the following information:

- SP Mode SP1000
- SP Mode SP2000
- SP Mode SP3000
- SP Mode SP4000
- SP Mode SP5000
- SP Mode SP6000
- SP Mode SP7000
- Printer SP Mode
- Scanner SP Mode
- Input Check
- Output Check

# Firmware Update

### Overview

In order to update the firmware of this machine, it is necessary to download the latest version of firmware on a SD card.

Insert the SD card in SD card slot 2 beside the left rear of the controller box.

### Firmware Type

Firmware type	Firmware position	Message display
FONT2	Controller Board	GW1 e_prt_psfnt8
HDD Format option	Controller Board	GW1 a_zoffym0ond
FONT1	Controller Board	GW9a_pcl_fntM
FONT	Controller Board	GW7e_prt_SAMf
CSPF	Smart Operation Panel – CPU board	M2a_cspf
PictBridge	Controller Board	GW11 a_prt_Pict
XPS	Controller Board	GRIC2a_prt_XPS
PCL	Smart Operation Panel – CPU board	GRIC2e_prt_PCL
PS	Controller Board	GRC2e_prt_PDF
RPCS	Smart Operation Panel – CPU board	GRC2e_prt_RPCS
Firmware	Smart Operation Panel – CPU board	M2a_System
Eco-friendly Widget	Smart Operation Panel – CPU board	M2a_WEcoInfo
Engine	BiCU	GRIC2a_eplot
Fax	Controller Board	GRIC2a_fax
Fax RX File Widget	Smart Operation Panel – CPU board	M2a_WFaxInfo
FCU	BiCU	GW1 a_efax_fcu1 U
ID Card Copy	Smart Operation Panel – CPU board	M2a_IDCardCopy

Firmware type	Firmware position	Message display
iWnn IME	Smart Operation Panel – CPU board	M2a_iWnn
Change Languages Widget	Smart Operation Panel – CPU board	M2a_WEcoInfo
LegacyUI type-1	Smart Operation Panel – CPU board	M2a_LegacyUI
Network Support	Smart Operation Panel – CPU board	GRIC2a_net
NetworkDocBox	Smart Operation Panel – CPU board	GRIC2a_netfile
ProgramInfoService	BiCU	M2a_ProgramInfo
Standard IC Card Plugin	Smart Operation Panel – CPU board	M2a_QuickCdAuth
RFax	Smart Operation Panel – CPU board	GRIC2a_fax2
Scan to Me	Smart Operation Panel – CPU board	M2a_ScanToMe
Scanner	Smart Operation Panel – CPU board	GRIC2a_scn
Quick Copy	Smart Operation Panel – CPU board	M2a_SimpleCopy
Quick Fax	Smart Operation Panel – CPU board	M2a_SimpleFax
Quick Scanner	Smart Operation Panel – CPU board	M2a_SimpleScan
Stop Widget	Smart Operation Panel – CPU board	M2a_WStopKey



• Even when not using a RPCS driver, the XPS driver requires RPCS firmware.

### Procedure

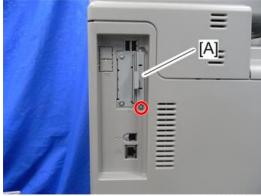


- A SD card is a precision device, so when you handle an SD card, respect the following.
- When the power is switched ON, do not insert or remove a card.
- During installation, do not switch the power OFF.
- Since the card is manufactured to high precision, do not store it in a hot or humid location, or in direct sunlight.
- Do not bend the card, scratch it, or give it a strong shock.

- Before downloading firmware on an SD card, check whether write-protection of the SD card is canceled. If write-protection is enabled, an error code (error code 44, etc.) will be displayed during download, and the download will fail.
- Before updating firmware, remove the network cable from this machine.
- If SC818 is generated during software update, switch the power OFF -> ON, and complete the
  update which was interrupted.
- During software update, network cables, remove interface cables, wireless boards, etc., (so that
  they are not accessed during update).

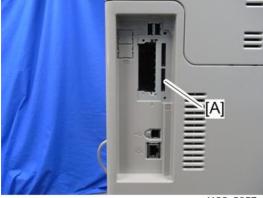
### Update procedure

- 1. First download the software to be updated to the SD card.
- 2. Switch the power OFF.
- 3. Remove the SD card slot cover [A]. (50°×1)



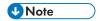
d196z2028

4. Insert the SD card [A] straight in slot 2.



d196z2057

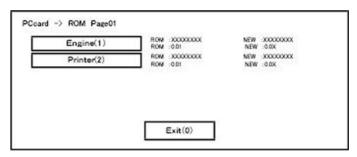




- Check whether the card is properly in the SD card slot. When a SD card is inserted, a click is heard, and it is locked.
- To remove the card, release by pressing once in the set state.
- 5. Switch the power ON.
- 6. Wait until the update screen starts (about 45 seconds).

When it appears, "Please Wait" is displayed.

7. Check whether a program installation screen is displayed. (English display) When two or more software modules are contained in the SD card, they are displayed as follows.



#### When two or more software names are displayed

- 1. Press the module selection button or 10 keypad [1] [5].
- 2. Choose the appropriate module. (If already selected, cancel the selection)

### Operation of keys or buttons

Keys or buttons to press	Contents
[Exit] or 10 key [0]	Returns to normal screen.
[Start] Key	Select all modules.
[Clear/Stop] key	Cancel all selection states.

#### **Display contents**

On the above screen, two programs, i.e., engine firmware and printer application are displayed. (The screen may change depending on the firmware or application).

The display contents are as follows:

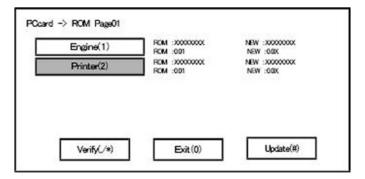
Display	Contents
ROM:	Display installed module number / version information.
NEW:	Display module number / version information in the card.

5

- \* The upper row corresponds to the module number, the lower row corresponds to the version name.
- 8. Select the module with the module selection button or 10 key operation. The selected module is highlighted, and [Verify] and [Update] are displayed.



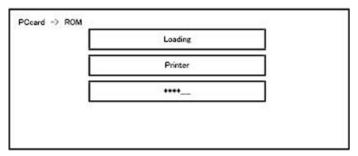
 Depending on the combination of update software, it may not be possible to select simultaneously.



### Key or button operations

Keys or buttons to press	Contents
[Update] or [#] key	Update the ROM of the selected module.
[Verify] button or [./*] key	Perform verification of the selected module.

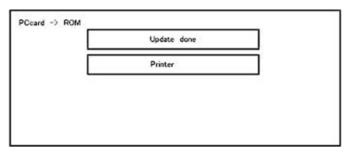
- 9. Press the [Update] or [#] key, and perform software update.
- 10. During firmware update, a "firmware update/ verification progress screen" is displayed. When firmware update is complete, a "firmware update end screen" is displayed.



- In the middle row, the name of the module currently being updated is displayed. (in this case, the printer is being updated)
- In the lower row, a progress bar is displayed in ten steps. (The more \*, the more the progress.)

 When updating the control unit program, since progress cannot be displayed on the screen, the ROM update process is determined when the LED of the [Start] key changes from red to green.

#### Firmware update end screen

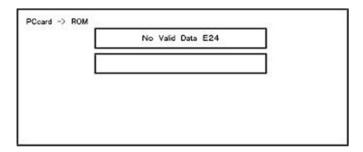


- This screen is displayed when all selected firmware modules are to be updated. "printer" in the second row shows that the module updated last is the printer. (When more than one are updated simultaneously, only what was updated last is displayed.)
- When Verify has completed normally, the Update done display of the above screen is "Verify done." If "Verify Error" is displayed, reinstall the software of the application displayed in the lower row.
- 11. After switching power OFF, remove the SD card.
- 12. Again, switch the power ON, and check whether the machine is operating normally.
- 13. Return the SD card slot cover to the original position.



- When the power supply is switched OFF during firmware update, update is interrupted, and the power is switched ON again, normal operation cannot be guaranteed.
- To guarantee operation, an update error continues to be displayed until update is successful.
- In this case, insert the SD card again, switch the power ON, and continue download of firmware from the SD card automatically.
- Web access card software: EXJS (EXtended Java Script) is a Type-C ESA application, and like a conventional Web access card, update using an sdk folder is required.
- The PS3 firmware program is included in the preinstalled PDF firmware.
- In the default state, although the PS3 firmware program is hidden in the disabled state, the function is enabled by installing the PS3 card.
- (The program installed in the PS3 card is a dongle (key) for enabling PS3 function).
- Due to the above specification, the self-diagnosis result report shows the ROM module number / software version of the PDF firmware at the PS location.

### **Error Screens During Updating**



EXX shows an error code.

(This error is generated if update was performed when a printer application startup card is removed after system startup. An error indicating failure of card access is displayed on the screen.)

For error codes, refer to the following table:

### **Error Code List**

Code	Contents	Solutions
20	Physical address mapping cannot be performed.	<ul> <li>Switch the main power supply off and on to try again.</li> <li>Re-insert the SD card to reboot it.</li> <li>Replace the controller board if the above solutions do not solve the problem.</li> </ul>
21	Insufficient memory for the download	<ul> <li>Switch the main power supply off and on to try again.</li> <li>Replace the controller board if the updating cannot be done by switching the power off and on.</li> </ul>
22	Decompression of compressed data failed.	<ul> <li>Switch the main power supply off and on to try again.</li> <li>Replace the SD card used for the update.</li> <li>Replace the controller board if the above solutions do not solve the problem.</li> </ul>

Code	Contents	Solutions
24	SD card access error	<ul> <li>Re-insert the SD card.</li> <li>Switch the main power supply off and on to try again.</li> <li>Replace the SD card used for the update.</li> <li>Replace the controller board if the above solutions do not solve the problem.</li> </ul>
32	The SD card used after download suspension is incorrect.  SD cards are different between the one which was inserted before power interruption and the one which was inserted after power interruption.	<ul> <li>Insert the SD card containing the same program as when the firmware update was suspended, and then switch the main power supply off and on to try again.</li> <li>There is a possibility that the SD card is damaged if the update cannot be done after the correct SD card has been inserted. In this case, try again with a different SD card.</li> <li>Replace the controller board if the above solutions do not solve the problem.</li> <li>Replace all relevant boards if the update is done for the BCU and FCU.</li> <li>Replace the operation panel unit if the update is done for the operation panel.</li> </ul>
33	Card version error. The wrong card version is downloaded.	Install the correct ROM update data for each version in the SD card.
34	Destination error. A card for the wrong destination is inserted.	Install the correct ROM update data for each destination (JPN/ EXP/ OEM) in the SD card.
35	Model error. A card for the wrong model is inserted.	Install the correct ROM update data for each model in the SD card.

Code	Contents	Solutions
36	Module error.  The program to be downloaded does not exist on the main unit.  The download destination specified by the card does not match up to the destination for the main unit's program.	<ul> <li>Install the program to be updated in advance.</li> <li>There is a possibility that the SD card containing the program to be updated has not been mounted. Check to confirm that the SD card has been correctly mounted.</li> <li>The SD card is incorrect if the program to be updated has been correctly installed. In this case, insert the correct SC card.</li> </ul>
38	The version of the downloaded program has not been authorized for the update.	<ul> <li>Make sure that the program to be overwritten is the specified version.</li> </ul>
40	Engine download fails.	<ul> <li>Switch the main power supply off and on to try again.</li> <li>If the download fails again, replace the controller board and the BCU.</li> </ul>
41	Fax download fails.	<ul> <li>Switch the main power supply off and on to try again.</li> <li>If the download fails again, replace the controller board and the FCU board.</li> </ul>
42	Control panel / language download fails.	<ul> <li>Switch the main power supply off and on to try again.</li> <li>If the download fails again, replace the controller board and the operation panel unit.</li> </ul>
43	Printing download fails.	<ul> <li>Switch the main power supply off and on to try again.</li> <li>The SD card media is damaged if the update fails again. Replace the SD card media.</li> </ul>

Code	Contents	Solutions
44	The data to be overwritten cannot be accessed when controller-related programs are downloaded.	<ul> <li>Switch the main power supply off and on to try again.</li> <li>Install the correct ROM update data in the SD card.</li> <li>Replace the controller board if the data to be overwritten is contained on the controller board.</li> </ul>
49	Firmware updates are currently prohibited.	The setting of Update Firmware in the Administrator Tools has been set to [Prohibit] by an administrator. Amend the setting to [Do not Prohibit] and try again.
50	The results of the electronic authorization check have rejected the update data.	Install the correct ROM update data in the SD card.
57	@Remote is not connected at the date/time reserved for receiving the package firmware update from the network.	Check the @Remote connection.
58	Update cannot be done due to a reception route problem.	Check the @Remote connection.
59	HDD is not mounted.	Check the HDD connection.
60	HDD could not be used during the package firmware update.	Try again. Replace the HDD if the download fails again.
61	The module ID for the package firmware update is incorrect.	Prepare the correct package files.
62	The configuration of the package firmware update files is incorrect.	Prepare the correct package files.
63	Reception fails due to the power off at the reserved date/time of the remote firmware update from the network.	Update is to be done automatically when the next reception time has elapsed.

Code	Contents	Solutions
64	Reception fails due to the power off at the reserved date/time of the package firmware update from the network.	Reset the reservation date/time for the remote update.
65	Reception fails due to the status error of the machine at the reserved date/time of the remote firmware update from the network.	Update is to be done automatically when the next reception time has elapsed.
66	Reception failed due to the status error of the machine at the reserved date/time of the package firmware update from the network.	Reset the reservation date/time for the remote update.
67	Acquisition of the latest version information from the Gateway fails at the reserved date/time of the remote firmware update from the network.	Check that the network is connected correctly.
68	Acquisition of the latest version information from the Gateway fails.	Check that the network is connected correctly.
69	Download fails at the reserved date/time of the remote firmware update from the network.	Check that the network is connected correctly.
70	Package firmware download from the network fails.	Check that the network is connected correctly.
71	Network communication error occurs at the reserved date/time of the package firmware update from the network.	Check that the network is connected correctly.
72	The setting of @Remote is invalid at the reserved date/time of the package firmware update from the network.	Set the setting of @Remote Service in the Administrator Tools to [Do not Prohibit].

Code	Contents	Solutions
57	@Remote is not connected at the date/time reserved for receiving the package firmware update from the network.	Check the @Remote connection.
58	Update cannot be done due to a reception route problem.	Check the @Remote connection.
59	HDD is not mounted.	Check the HDD connection.
60	HDD could not be used during the package firmware update.	<ul><li>Try again.</li><li>Replace the HDD if the download fails again.</li></ul>
61	The module ID for the package firmware update is incorrect.	Prepare the correct package files.
62	The configuration of the package firmware update files is incorrect.	Prepare the correct package files.
63	Reception fails due to the power off at the reserved date/time of the remote firmware update from the network.	Update is to be done automatically when the next reception time has elapsed.
64	Reception fails due to the power off at the reserved date/time of the package firmware update from the network.	Reset the reservation date/time for the remote update.
65	Reception fails due to the status error of the machine at the reserved date/time of the remote firmware update from the network.	Update is to be done automatically when the next reception time has elapsed.
66	Reception failed due to the status error of the machine at the reserved date/time of the package firmware update from the network.	Reset the reservation date/time for the remote update.

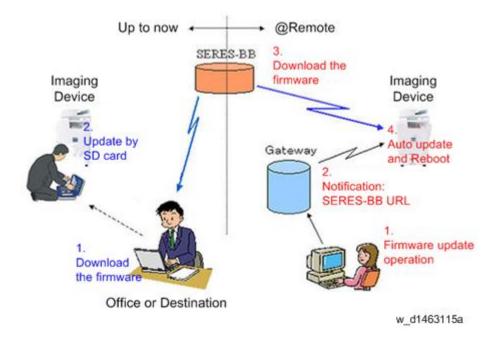
Code	Contents	Solutions
67	Acquisition of the latest version information from the Gateway fails at the reserved date/time of the remote firmware update from the network.	Check that the network is connected correctly.
68	Acquisition of the latest version information from the Gateway fails.	<ul> <li>Check that the network is connected correctly.</li> </ul>
69	Download fails at the reserved date/time of the remote firmware update from the network.	Check that the network is connected correctly.
70	Package firmware download from the network fails.	<ul> <li>Check that the network is connected correctly.</li> </ul>
71	Network communication error occurs at the reserved date/time of the package firmware update from the network.	Check that the network is connected correctly.
72	The setting of @Remote is invalid at the reserved date/time of the package firmware update from the network.	Set the setting of @Remote Service in the Administrator Tools to [Do not Prohibit].

# **U** Note

- The PDF firmware installed as standard contains a program required to print PS3 data as default.
   However, this PS3 program is normally disabled.
- The PS3 firmware is a dongle (key) which enables PS3 data printing functions. When the PS3 firmware is installed, the PS3 program in the PDF firmware is enabled. Due to this specification, the self-diagnosis result report shows the ROM part number/software version of the PDF firmware contained in the PS3 program.

# **RFU Updating the Firmware**

In this machine, software can be updated by remote control using @Remote.



# **RFU Performable Condition**

RFU is performable for a device which meets the following conditions.

- 1. The customer consents to the use of RFU.
- 2. The devise is connected to a network via TCP/IP for @Remote.

# Package Firmware Update

## **ACAUTION**

 The HDD unit must be installed on the machine to enable the SFU or the package firmware update via SD card.

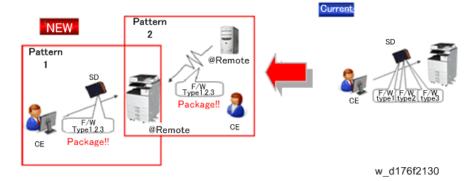
#### Overview

Each firmware module (such as System/Copy, Engine, etc) used to be updated individually. However, an all-inclusive firmware package (package\_ALL) is now available.

There are two ways to update using the firmware package.

RTB 63: Modified

- Package Firmware Update via a network: SFU (Smart Firmware Update)
- Package Firmware Update with an SD card



#### Package Firmware Update via a network: SFU (Smart Firmware Update)

- There are two methods for SFU.
  - Immediate Update: To update the firmware when visiting
  - Update at the next visit: To set the date and time for downloading. The firmware will be automatically downloaded beforehand and updated at the following visit.
- "Update at the next visit" is recommended since firmware download may take some minutes
  due to the network condition.



SFU requires the connection to @Remote via a device which has the embedded @Remote
communicating function. When a machine is connected to @Remote via an intermediate
device (RC Gate), the SFU function is disabled.

#### Package Firmware Update via an SD Card

Package firmware update can also be performed using the conventional SD card method by writing the package firmware directly to the SD card.

#### Types of firmware update files, supported update methods:

	SFU	SD	RFU
Individual firmware	N/A	Available	Available
Package firmware	Available	Available	N/A RTB 63

# **Immediate Update**

Enter the [Firmware Update] menu in the SP mode and update the package firmware.



- The [Firmware Update] button will appear even when a machine is connected to @Remote with a device which does not have an embedded @Remote communicating function.
- If an error code is displayed, refer to Error Screens During Updating (page 392).
- 1. Enter the SP mode.
- 2. Touch [Firmware Update].



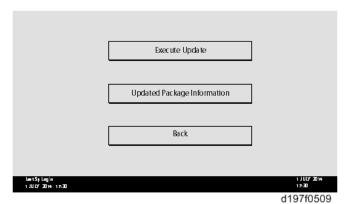
d197f0507

#### 3. Touch [Update].



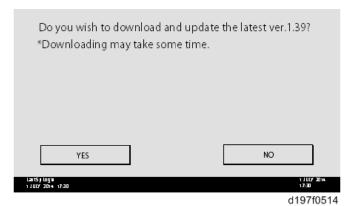
d197f0508

#### 4. Touch [Execute Update].

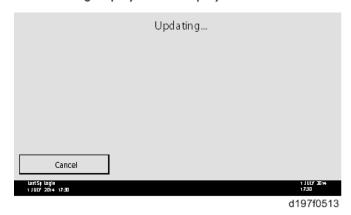


### 5. Touch [YES].

**U** Note

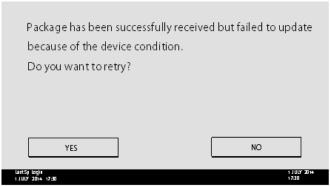


6. The following display will be displayed.



• If the error code E66, which indicates that the download of the firmware has failed, is displayed, implement this procedure from step 1.

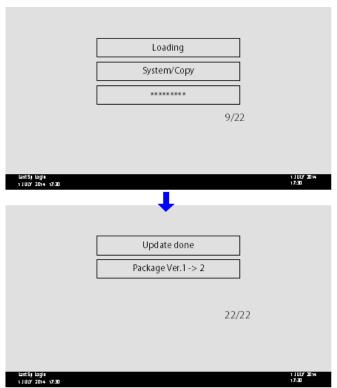
- Update will be started automatically after the download is finished.
- When the machine is in the update mode, the automatic update is suspended if a print job is implemented. After the print job is finished, touch [YES] on the display shown with the following picture to restart updating.



d197f0515

#### 7. [Update done] is displayed.

• The machine will automatically reboot itself.



d197f0518



• The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".

### Update at the Next Visit (Reserve)

It is possible to set the machine to download the package firmware which is necessary for SFU in advance, and then perform the actual installation at the next service visit. This saves waiting time for the firmware to download at the service visit.

#### How to Set the Machine to Download Firmware Later (RESERVE)

Enter the [Firmware Update] menu in the SP mode and update the package firmware.

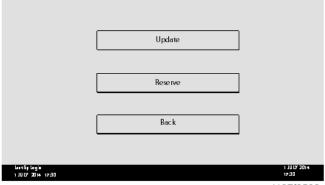


- The [Firmware Update] button will appear even when a machine is connected to @Remote with a device which does not have an embedded @Remote communicating function. If an error code is displayed, refer to Error Screens During Updating (page 392).
- 1. Enter the SP mode.
- 2. Touch [Firmware Update].



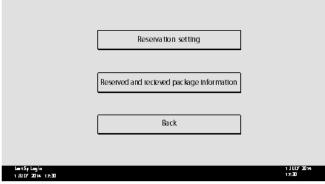
d197f0507

# 3. Touch [Reserve].



d197f0508

### 4. Touch [Reservation setting].



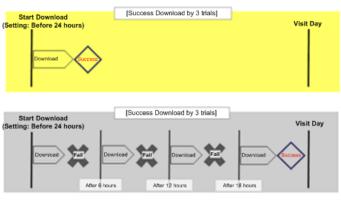
d197f0510

- 5. Enter the dates and times of next visit and start of receiving data.
  - "Next time to visit this customer": The package firmware will be automatically downloaded by this time/date.
  - "When to receive? (1-7)": The download of the package firmware will begin this number of days before the next visit.



d197f0512

In the two diagrams below, the firmware is set to be downloaded by the day before the next scheduled visit. In the first diagram, the download is successful on the first try. In the second diagram, the download fails three times and is successful on the fourth try.



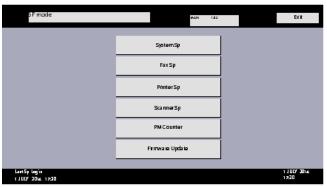
w\_d197f0507

- If the firmware download fails or cannot be completed due to the network settings/condition, no
  power to the machine, or other reason, the machine will continue retrying every six hours until the
  scheduled deadline (up to a maximum of four tries). For example, if the download is set for the day
  before the next visit, the machine will attempt the download at 24 hours before the visit, and then
  continue trying every six hours (max. four tries total).
- The retry is only performed in cases when the firmware download has failed.
- If the machine is in Energy Saver mode when the download is scheduled to begin, the download will be performed in the background and the machine/panel will stay in Energy Saver mode.
- The download will continue uninterrupted even if the customer initiates a print job, copy job, fax receiving or other operation while the download is in progress.
- The download will be terminated if the customer turns the power off while the download is in progress.
- If the download cannot be completed successfully by the time of the next scheduled visit, the
  machine will stop trying to download the firmware.

#### How to Check if the Firmware Downloaded with RESERVE

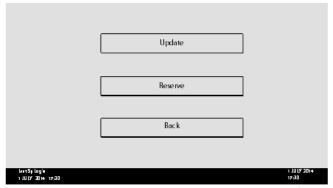
#### 1. Enter the SP mode.

### 2. Touch [Firmware Update].



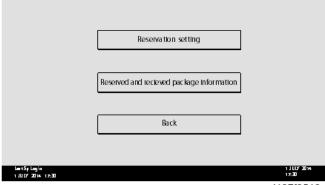
d197f0507

#### 3. Touch [Reserve].



d197f0508

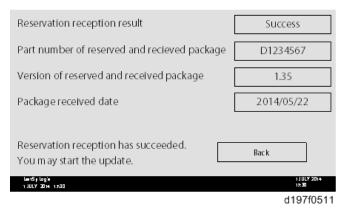
#### 4. Touch [Reserve and received package information].



d197f0510

# 5. Check the information displayed.

When the package firmware is downloaded successfully, the details of the download result are displayed as the following picture shows.

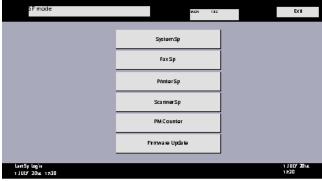




• This information will only be displayed if the reserved firmware has already been downloaded. If not, all the data items are indicated with "-".

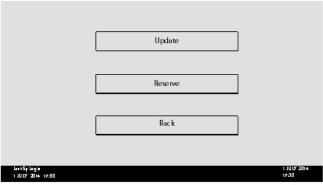
#### How to Install Firmware Downloaded with RESERVE

- 1. Enter the SP mode.
- 2. Touch [Firmware Update].



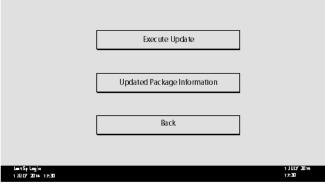
d197f0507

# 3. Touch [Update].



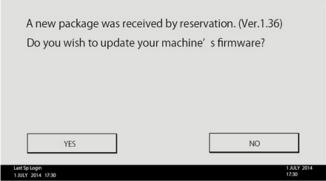
d197f0508

4. Touch [Execute Update].



d197f050

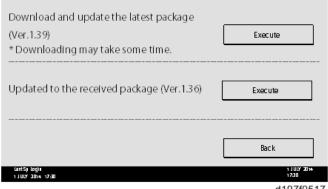
- 5. Check the version of the received package firmware, and then touch [YES].
  - Update is started.



d197f0516

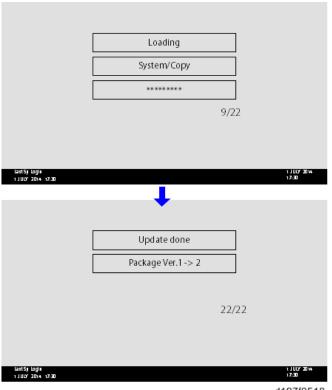


• If the version of the reserved package in the HDD is older than the latest version, the messages shown in the following picture are displayed.

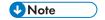


d197f0517

- If you wish to download the latest version, touch [Execute] beside the message "Download and update the latest package." Then update of the package firmware will be started.
- If you wish to update using the firmware in the HDD (old version), touch [Execute] beside the
  message "Update to the received package."
- 6. [Update done] message is displayed.
  - The machine will automatically reboot itself.



d197f0518



• The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".

# Update via SD card

Update with an SD card, which is the conventional method, is available if you write the package firmware to the SD card.



- If an error code is displayed, refer to Error Screens During Updating (page 392).
- 1. Create a new folder in the SD card, and then name it "package".

2. Copy the package firmware (xxxxxxxx.pkg) to this folder.



d197f0504



- If you copy the package firmware into the conventional "romdata" folder, the update will not
  work.
- Only one version of the package firmware should be copied into the folder. If you copy
  multiple versions of package firmware to the SD card, the machine will select only one version
  of the firmware randomly.
- 3. Turn the power OFF.
- 4. Insert the SD card which contains the package into SD card slot 2 (for service).
- 5. Turn the power ON and touch [Update].

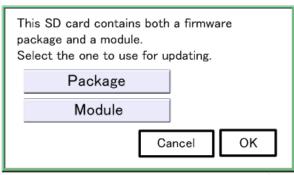


d176f2127



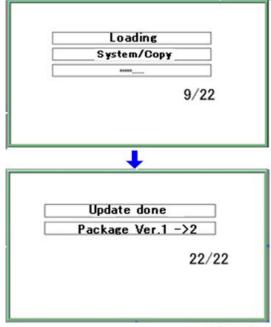
 When the SD card contains both a firmware package and one or more modules, the following display may show up. Select [Package] and touch [OK] to move to step 4 above.





d176f2128

- **6.** Update is started automatically after the package firmware download to the HDD has been completed.
- 7. When update is completed, "Update done" is displayed.



w\_d177z0021a



- The figures at the lower right of the display indicate "Number of updated items/ All items to be updated".
- 8. Turn the main power switch OFF, and then pull out the SD card from SD card slot 2.
- 9. Turn the power ON.

# **Updating JavaVM**

RTB 54
This section was modified

### Creating an SD Card for Updating

- Download the update modules from Firmware Download Center. As one of the model modules, "Java VM v11 UpdateTool" is available for download. (The version differs depending on the model.)
- Unzip the downloaded file. Copy the whole "sdk" folder to the root of the SD card directly below.



• When unzipping the downloaded file, two subfolders ("update" and "sdk") exist in the "sdk" folder. Rather than just copying the subfolder "sdk", copy the whole folder "sdk".

#### **Updating Procedure**

# **CAUTION**

- SD card can be inserted with the machine power off.
- During the updating process, do not turn off the power.
- If you turn off the power during the updating, the machine performance is not guaranteed. (There is a possibility that an SC and boot failure occurs.)
- If you accidentally turn off the power during the updating, retry the updating procedure from the beginning. (If the update fails again, you will need to replace the controller board.)
- If the boot priority application is set to the ESA application, switch to the copy application. ([System Settings]-[General Features]-[Function Priority])
- 2. Insert the SD card you created into the service slot, and then turn ON the main power switch.
- Take a note of the current Heap size. ([Extended Feature Settings] [Administrator Tools]
   [Heap/Stack Size Settings])

The Heap size setting is changed to the initial setting when updating.

- 4. Turn OFF the main power.
- 5. Insert the SD card for update into the service slot.
- 6. Turn ON the main power.

7. After booting Java VM, update of the application is started. "Updating SDK/J" appears in the banner message of the touch panel display. (Estimated time: about 2 minutes)



- After completing the update and starting the Java VM, "Update SDK / J done SUCCESS"
  appear in the banner message of the touch panel display. After turning off the power,
  remove the SD card from the slot.
  - When you fail to update, "Update SDK/J done FAIL" is displayed. You can confirm the cause of the error message below.
- 9. Turn ON the main power.
- Reconfigure the Heap size. ([Extended Feature Settings]-[Administrator Tools]-[Heap/ Stack Size Settings]).
  - See the manual for the ESA application to know what value to set for the heap size.
- 11. Return to the previous setting for the boot priority application.

#### List of Error Messages

Update results are output as a text file on the SD card called "sdkjversionup.log" in the "\sdk \update" folder.

Result	File contents	Description of the output
Success	script file = /mnt/sd0/sdk/update/ bootscript 2012/08/22 17:57:47 start 2012/08/22 17:59:47 end SUCCESS	Boot script path Boot scripts processing start time End time boot script processing, the results
Failure	script file = /mnt/sd0/sdk/update/ bootscript 2012/08/22 17:57:47 start XXXX Error 2012/08/22 17:57:57 end FAIL	Boot script path  Boot scripts processing start time  Error message (Possibly multiple)  End time boot script processing, the results

Error Message	Cause	Remedy
PIECEMARK Error,machine=XXXXX	Applied the wrong updating tool (Using the updating tool of a different model)	Use the correct updating tool for this model.
pasePut() - error : The file of the copy origin is not found Put Error!	Inadequacy with the SD card for updating (Files are missing in the updating tool)	Re-create the SD card for updating.
paseCopy() - error : The file of the copy origin is not found. Copy Error!	Inadequacy SD card for updating (Files in the updating tool are missing)	Inadequacy SD card for updating (Files in the updating tool are missing)
[file name: XX] error, No space left on device pasePut() - error : The destination directory cannot be made. pasePut() - error : fileCopy Error. Put Error!	Writing destination is full. (The NAND flash memory on the controller board is full.)	Uninstall the unnecessary SDK applications.  If you can not uninstall it, implement escalation, stating the "model name, application configuration, SMC sheet (SP5-990-006/024/025), and error file."
[file name: XX] error, No space left on device paseCopy() - error : The destination directory cannot be made. paseCopy() - error : fileCopy Error. Copy Error!	Writing destination is full. (The NAND flash memory on the controller board is full.)	Uninstall the unnecessary SDK applications.  If you can not uninstall it, implement escalation stating the "model name, application configuration, SMC sheet (SP5-990-006/024/025), and error file."

	-	
п		

Error Message	Cause	Remedy
Put Error! * 1	Error, not normally expected to	If you cannot uninstall it,
Copy Error! * 1	occur	implement escalation stating the model name, application
Delete Error!		configuration, SMC sheet (SP5-990-006/024/025),
[XXXXX] is an unsupported		and error file."
command.		*1
Version Error		Without the foregoing error message, only "Put Error / Copy Error" will be displayed

# Capturing the Debug Logs

#### Overview

With this feature, you can save debug logs that are stored in the machine (HDD or operation panel) on an SD card. It allows the Customer Engineer to save and retrieve error information for analysis.

The Capturing Log feature saves debug logs for the following four.

- Controller debug log including operation log
- Engine debug log
- FCU debug log
- Operation panel log

#### Mportant !

- In older models, a technician enabled the logging tool after a problem occurred. After that, when
  the problem had been reproduced, the technician was able to retrieve the debug log.
- However, this new feature saves the debug logs at the time that problems occur. Then you can
  copy the logs to an SD card.
- You can retrieve the debug logs using a SD card without a network.
- Analysis of the debug log is effective for problems caused by the software. Analysis of the debug log is not valid for the selection of defective parts or problems caused by hardware.

#### Types of debug logs that can be saved

Туре	Storage Timing	Destination (maximum storage capacity)
Controller debug log including operation log	Saved at all times	HDD (4 GB) or SD card connected to the service slot.  When the data gets over 4.0 GB, the older data is deleted.
Engine debug log	<ul> <li>When an engine SC occurs</li> <li>When paper feeding/output stop by jams</li> <li>When the machine doors are opened during normal operation</li> </ul>	HDD or SD card connected to the service slot (Up to 300 times)

Туре	Storage Timing	Destination (maximum storage capacity)
FCU debug log	<ul> <li>When a specified amount of FCU debug log is stored in the FCU. If fax application is unavailable (e.g. not installed), the machine does not transfer the log.</li> </ul>	HDD or SD card connected to the service slot
Operation panel log	When an error related to the operation panel occurs.	Memory in the operation panel.



- Debug logs are not saved in the following conditions:
- While erasing all memory
- While data encryption equipment is installed
- While changing the firmware configuration
- Forced power OFF (accidentally disconnecting the outlet)
- Engine debug log in shutdown
- When the power supply to the HDD is off because of energy saving (engine OFF mode / STR mode)
- When one of the following SC occurs: SC672, SC816, SC819, SC878, SC899, SC859, SC860, SC861, SC863, or SC864



- Following logs are not saved:
- Log related to the energy saver mode (Engine-off, suspend-mode, or other cases)
   Network communication log
   Logs related to NRS
   IP-FAX log
   Access log for unauthorized user (guest)
- HTTP session timeout log
- · Auto log-out log
- IC card related log
- Authorization for Fax

# Security of the Operation Log

The following operation logs related to security are not saved.

- User ID
- Password
- IP address
- · Telephone number
- · Encryption key
- Transition to SP mode

### Retrieving the Debug Logs



- Retrieve debug logs to identify the date of occurrence of the problems and to find details of the problems
- e.g.: At around 8:00 am on March 10, an engine stall occurred. The operation panel does not respond. Turn the main power supply off / on.
- Analysis of the debug log is effective for problems caused by the software. Analysis of the debug log is not valid for the selection of defective parts or problems caused by hardware.

# Procedure for Retrieving the Debug Log with SD Card

This procedure was replaced

1. Insert the SD card into the slot on the side of the operation panel or the service slot.

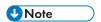


- It is recommended to use the SD card provided as a service part. This is because the log data
  can be acquired much faster than when using commercially available SD cards.
- 2. Enter SP mode.
- Execute SP5-858-141 (Get a debug log of all) to write the debug log to the SD card.
   If the transfer is finished successfully, 'completed' is displayed on the touch panel display.



- The approximate time it takes to transfer the debug log is as follows. Transfer time may be
  affected by the type or format of the SD card. (It is recommended that you format the SD card
  using the Panasonic SD Formatter (freeware)).
- Controller debug log (GW debug log): 2 20 minutes
- Engine debug log: 2 minutes
- Operation panel debug log: 2 20 minutes

4. Make sure that the SD card access LED is off, then remove the SD card.



• If 'failed' appears on the touch panel display, turn the power off, and then recover from step 1 again.

The debug logs are saved with the following file names.

Controller debug log (GW debug log)	/LogTrace/[Machine Serial]/watching/ [yyyymmdd_hhmmss]_[UniqueID].gz
Engine debug log	/LogTrace/[Machine Serial]/engine/ [yyyymmdd_hhmmss].gz
FCU debug log	/LogTrace/[Machine Serial]/fculog/ [yyyymmdd_hhmmss].gz

RTB 48
Procedure added
Procedure for Retrieving the Debug Log via Web Image Monitor

# **Reboot/System Setting Reset**

#### Software Reset

You can reboot the software with one of the following two procedures:

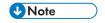
- 1. Turn the main power switch off and on.
- 2. Press and hold down and and together for over 10 seconds. When the machine beeps once, release both buttons. After "Now loading. Please wait" shows for a few seconds, the copy window will open. The machine is ready for normal operation.

# 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 <sup>(1)</sup> and then press System Settings.



Press 

first.



- 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.

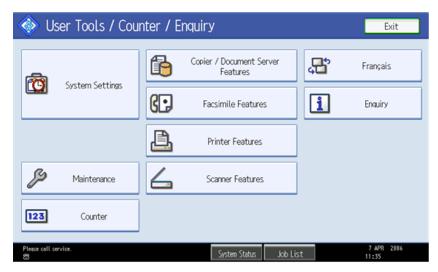
## **Copier Setting Reset**

Use the following procedure to reset the copy settings in the UP mode to their defaults.

- 1. Press User Tools/Counter 🐠 ...
- 2. Hold down <sup>(1)</sup> and then press Copier/Document Server Settings.



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.

# **NVRAM Data Upload/Download**

# Uploading Content of NVRAM to an SD card

Do the following procedure to upload SP code settings from NVRAM to an SD card.



- 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.
- Do SP5-990-001 (SP Print Mode: All(Data List)) before you switch the machine off. You
  will need a record of the NVRAM settings if the upload fails.
- 2. Switch the copier main power switch off.
- 3. Remove the SD slot cover [A]. ( × 1)



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4. Insert the SD card into SD card slot 2 (lower) [A].



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5. Switch the copier on.

- 6. Execute SP5-824-001 (NVRAM Data Upload) and then press the "Execute" key.
- 7. The following files are coped to an NVRAM folder on the SD card when the upload procedure is finished. The file is saved to the path and the following filename:

#### NVRAM\<serial number>.NV

Here is an example with Serial Number "K5000017114":

NVRAM\K5000017114.NV

8. In order to prevent an error during the download, be sure to mark the SD card that holds the uploaded data with the number of the machine from which the data was uploaded.



• You can upload NVRAM data from more than one machine to the same SD card.

# Downloading an SD Card to NVRAM

Do the following procedure to download SP data from an SD card to the NVRAM in the machine.

- The NVRAM data 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. ( × 1)
- 3. Insert the SD card with the NVRAM data into SD Card Slot 2 (lower).
- 4. Switch the copier main power switch on.
- 5. Do SP5-825-001 (NVRAM Data Download) and press the "Execute" key.



 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

# Address Book Upload/Download

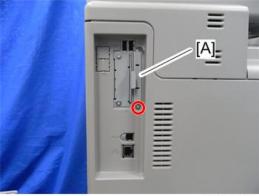
# Information List

The following information is possible to be uploaded and downloaded.

Information		
Registration No.	Select Title	
User Code	• Folder	
• E-mail	Local Authentication	
Protection Code	Folder Authentication	
Fax Destination	Account ACL	
Fax Option	New Document Initial ACL	
Group Name	LDAP Authentication	
Key Display		

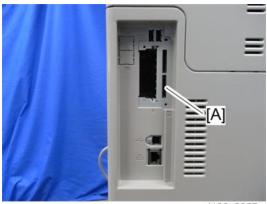
# Download

- 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 [A] at the left rear side of the machine (0° × 1).



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5. Install the SD card into the SD card slot 2 (lower) [A] (for service use).



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- 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 (lower).
- 11. Install the SD slot cover.



- If the capacity of SD card is not enough to store the local user information, an error message is displayed.
- Carefully handle the SD card, which contains user information. Do not take it back to your location.

### Upload

- 1. Turn off the main power switch of the main machine.
- 2. Remove the SD slot cover at the left rear side of the machine (3° × 1).
- 3. Install the SD card, which has already been uploaded, into the SD card slot 2 (lower).
- 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 (lower).
- 9. Install the SD slot cover.



- 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.

# **SMC List Card Save Function**

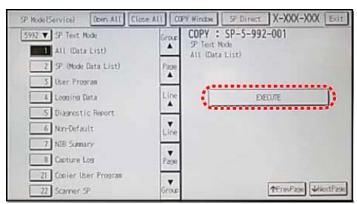
#### Overview

#### **SMC List Card Save**

 The SMC List Card Save (SP Text Mode) function is used to save the SMC list as CSV files to the SD-card inserted into the operation panel SD-card slot.

#### **Procedure**

- 1. Turn the main power switch OFF.
- 2. Insert the SD card into the operation panel SD-card slot. Then turn the power ON.
- 3. Enter SP mode.
- 4. Select "Copy SP".



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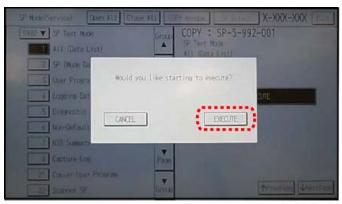
- 5. Select SP-5992 "SP Text Mode".
- 6. Select a detail SP number shown below to save data on the SD card.

SP-5992-xxx (SP Text Mode)

Detail No.	SMC Categories to Save
001	All (Data List)
002	SP (Mode Data List)
003	User Program

Detail No.	SMC Categories to Save
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
026	Printer SP

# 7. Press [EXECUTE].



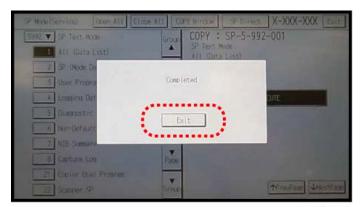
d1440128

8. Press [EXECUTE] again to start. Press [CANCEL] to cancel the saving.



d1440130

9. "It is executing it" is shown on the screen while executing.



d1440129

10. Wait for 2 to 3 minutes until "Completed" is shown.

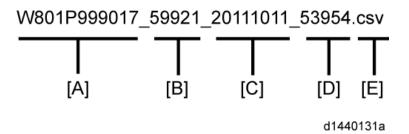


- The SMC list saving may take from 2 to 3 minutes to complete.
- Press [CANCEL] to abort executing.
- 11. Press [Exit] to exit from SP mode.

# File Names of the Saved SMC Lists

The SMC list data saved on the SD-card will be named automatically. The file naming rules are as follows.

Example:



A:

Machine serial number (fixed for each machine)

B:

### SP number saved in this file.

First four digits (5992) in this part are fixed. The other one or two digits are the detail SP number(s). In this case, it is one digit. Therefore, this file is of SP5-992-001 (All data list). See the upper SP table for the correspondence between SP detail numbers and the contents.

C:

#### File creation date

Year/Month/Day ("Zero" will be omitted if each is one digit.)

D:

#### File creation time

Hour/Minute/Second ("Zero" will be omitted if each is one digit.)

E:

### File Extension CSV (Comma Separated Value)

This part is fixed.



- A folder named by the machine serial number will be created on the SD card when this function is executed.
- This function can save the SMC list data only to an SD card inserted into the operation panel SD card slot.

### **Error Messages**

SMC List Card Save error message:

Failed:

FACTOR: Read-only file system, No space left on device.

If an error occurs, pressing "Exit" will cause the device to discard the job and return to the ready state.

### 5

# **UP/SP Data Import/Export**

### Overview

### Import/export conditions

Import/export is possible between devices only if their model type, region of use, and the following device configurations match.

- Input Tray
- Output Tray
- ARDF
- Whether or not equipped with a hard disk
- Whether or not equipped with a finisher and the type of finisher

### **UP Data Import/Export**

### Data that can be imported and exported

- Copier / Document Server Features
- Printer Features
- Scanner Features
- Facsimile Features
- Browser Features
- Extended Feature Settings
- Program (Document Server)
- Program (Copier)
- Program (Scanner)
- Web Image Monitor Setting
- Web Service Settings
- System Settings

### Data that cannot be imported or exported

Some System Settings \*1 \*2

- \* 1 The setting for the date, settings that require the device certificate, and settings that need to be adjusted for each machine (for example, image adjustment settings) cannot be imported or exported.
- \*2 Settings only for executing functions and settings only for viewing cannot be imported or exported.
- Extended Feature Settings
- Address book
- Programs (fax function)
- Programs (printer function)
- User stamp in Copier / Document Server Features
- Settings that can be specified via telnet
- @Remote-related data
- Counters
- EFI printer unit settings
- Settings that can only be specified via Web Image Monitor or Web Service (for example, Bonjour, SSDP setting)

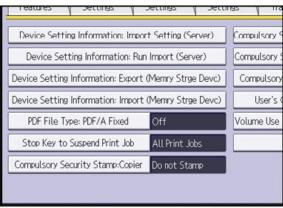
### **Exporting Device Information**

This can be exported / imported by an administrator with all privileges.

When exporting SP device information from the control panel, the data is saved on an SD card.

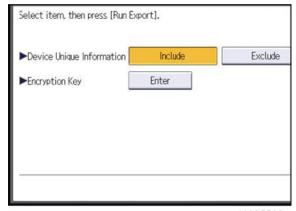
- 1. Insert an SD card into the media slot on the side of the control panel.
- 2. Log in from the control panel as an administrator with all privileges.
- 3. Press [System Settings].
- 4. Press [Administrator Tools].
- 5. Press [Next] four times.

### 6. Press [Device Setting Information: Export (Memry Strge Devc)].



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### 7. Set the export conditions.



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- Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.
- Specify an encryption key.
- 8. Press [Run Export].
- 9. Press [OK].
- 10. Press [Exit].
- 11. Log out.



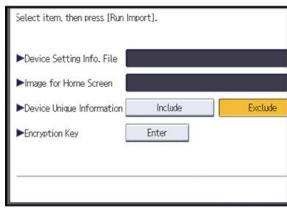
- If data export fails, the details of the error can be viewed in the log.
- When device Information is periodically imported, it is necessary to create the device setting information file with special software and store it on the web server.

# Importing Device Information

This can be exported / imported by an administrator with all privileges.

Import device information saved on an SD card.

- 1. Insert an SD card into the media slot on the side of the control panel.
- 2. Log in from the control panel as an administrator with all privileges.
- 3. Press [System Settings].
- 4. Press [Administrator Tools].
- 5. Press [Next] four times.
- 6. Press [Device Setting Information: Import (Memry Strge Devc)].
- 7. Configure the import conditions.



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- Press [Select] of the "Device Setting Info. File" to select the file(s) to import.
- When inserting a file into a home screen, press [Select] for the Image for Home screen and select the file. You cannot use this setting when using the Smart Operation Panel.
- Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.
- Enter the encryption key that was specified when the file was exported.
- 8. Press [Run Import].
- 9. Press [OK].
- 10. Press [Exit].

The machine restarts.



• If data export fails, the details of the error can be viewed in the log.

5

#### 5

## **SP Data Import/Export**

### Data that can be imported and exported

- System SP
- Printer SP
- Fax SP
- Scanner SP

# **Exporting Device Information**

When exporting SP device information from the control panel, the data is saved on an SD card.

- 1. Insert an SD card into the media slot on the side of the control panel.
- 2. Enter SP mode.
- 3. Press SP5-749-001 (Import/Export: Export)
- 4. Select "Target" SP settings (System/Printer/Fax/Scanner) to be exported.
- 5. Select "Option" settings (Unique/Secret).

Item	Specification	Note
Unique	Unique information of the machine is included in the exported file if you select "Unique" setting.	Unique information that can be updated #1. Items that are to be used to identify the machine. Example: Network Information/ Host name / Information related to fax number / Mail address assigned to the machine #2. Items for specifying the options equipped on the machine. Example: Lot number for developer Unique information that cannot be updated #1. Items that may cause a problem if imported Example: Serial number / Information related to @Remote #2. Items for managing the history of the machine Example: Time and date / Counter information / Installation date #3. Setting values for the Engine

Item	Specification	Note
Secret	Secret information is exported if you select "Secret" setting.	Secret information #1. Data that cannot be exported without being encrypted. (Exported data is encrypted.) Example: Password / Encryption key / PIN code #2. Confidential information for the customer Example: User name / User ID / Department code / Mail address / Phone number #3. Personal information Example: Document name / Image data #4. Sensitive information for the customer Example: MAC address / Network parameters

<sup>\*</sup> The IP address is exported when both 'Unique' and 'Secret' are selected.

### 6. Select "Crpt config" setting (Encryption).

Encryption	Select whether to encrypt or not when exporting.  If you push the "Encryption" key, you can export secret information.	If the encryption function is used, setting of an encryption key is required by direct input.  Type the arbitrary password using the soft keyboard  Can enter up to 32 characters
------------	------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- 7. Press [Execute].
- 8. Press [OK].



• If data export fails, the details of the error can be viewed in the log.

# **Importing Device Information**

Import device information saved on an SD card.

- 1. Insert an SD card into the media slot on the side of the control panel.
- 2. Enter SP mode.
- 3. Press SP5-749-101(Import/Export: Import)
- 4. Select a unique setting.

- 5. Press [Encryption Key], if the encryption key was created when the file was exported.
- 6. Select an encryption setting.

Unique	If you want to apply the unique information to the target machine, select the "Unique" key.	Refer to the above information.
Encryption	If an encrypted file is selected as the import file, this setting is required.	

- 7. Press [Execute].
- 8. Press [OK].



• If data export fails, the details of the error can be viewed in the log.

## Possible solutions for import/export problems

The access log file is created when export/import is executed. The file is stored in the same location as the exported device setting information file.

If an error occurs, check the log's result code in the access log file first. Values other than 0 indicate that an error occurred.

The result code will appear in the circled area illustrated below.

- Example of a log file

```
"1.0.0"

"ExecType", "Date", "SerialNo",PnP", "Model", "Destinaion","IP","Host", "Storage","FileNam e","FileID", "Totalitem", "NumOfOkitem", "ResultCode", "ResultName", "Identifier"

"IMPORT"

"2012-07-05T15:29:16+09:00"

"3C35-7M0014"

"Brand Name"

"Product Name"

"0"

"10"

"10.250.155.125"

"RNP00267332582D"

"SD"

"201207051519563C35-710220.csv"

"201207051519563C35-710220.csv"

"201207051519563C35-710220"

"0"

"TargetID", "ModuleID", "PrefiD", "Item", "NgCode", "NgName"
```

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If you cannot solve the problem or do not know how to solve it after checking the code, note down the error log entry, then contact your supervisor.

Result Code	Cause	Solutions
2 (INVALID REQUEST)	A file import was attempted between different models or machines with different device configurations.	Import files exported from the same model with the same device configurations.
4 (INVALID OUTPUT DIR)	Failed to write the device information to the destination device.	Check whether the destination device is operating normally.
7( MODULE ERROR)	An unexpected error occurred during import or export.	Switch the power off and then back on, and then try the operation again. If the error persists, contact your supervisor.
8 (DISK FULL)	The available storage space on the external medium is insufficient.	Execute the operation again after making sure there is enough storage space.
9 (DEVICE ERROR)	Failed to write or read the log file.	Check whether the path to the folder for storing the file or the folder in which the file is stored is missing.
10 (LOG ERROR)	The hard disk is faulty.	Contact your supervisor.

Result Code	Cause	Solutions
		The reason for the failure is logged in "NgCode". Check the code.
		Reason for the Error (Ng-Name)
		2. INVALID VALUE
		The specified value exceeds the allowable range.
		3. PERMISSION ERROR
		The permission to edit the setting is missing.
		4. NOT EXIST
		The setting does not exist in the system.
		5. INTERLOCK ERROR
		The setting cannot be changed because of the system status or interlocking with other specified settings.
		6. OTHER ERROR
		The setting cannot be changed for some other reason.
21 (INVALID FILE)	Failed to import the file	Check whether the file format is correct.
	because it is in the wrong format in the external medium.	The import file should be a CSV file.
22 (INVALID KEY)	The encryption key is not valid.	Use the correct encryption key.



- When exporting device information from the control panel, the data can be saved only on an SD card.
- The file format for exports is CSV.

### 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.



- 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.



- 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.).



- 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 (1 dot)	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

**Card Save Function** 

### Overview

### Card Save:

- The Card Save function is used to save print jobs received by the printer on an SD card with no
  print output. Card Save mode is toggled using printer Bit Switch #1 bit number 4. Card Save will
  remain enabled until the SD card becomes full, or until all file names have been used.
- Captures are stored on the SD card in the folder /prt/cardsave. File names are assigned sequentially from PRT00000.prn to PRT99999.prn. An additional file PRT.CTL will be created. This file contains a list of all files created on the card by the card save function.
- Previously stored files on the SD card can be overwritten or left intact. Card Save SD has "Add" and "New" menu items.
  - Card Save (Add): Appends files to the SD Card. Does not overwrite existing files. If the card
    becomes full or if all file names are used, an error will be displayed on the operation panel.
    Subsequent jobs will not be stored.
  - Card Save (New): Overwrites files in the card's /prt/cardsave directory.

#### Limitation:

Card Save cannot be used with PJL Status Readback commands. PJL Status Readbacks will not
work. In addition they will cause the Card Save to fail.

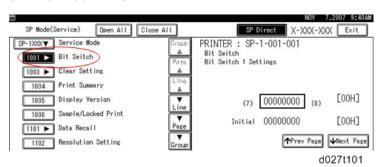
### **Procedure**

- 1. Turn the main power switch OFF.
- 2. Insert the SD card into slot 2 (lower). Then turn the power ON.
- 3. Enter SP mode.
- 4. Select the "Printer SP".

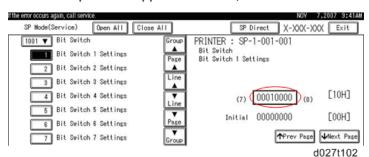
5



5. Select SP-1001 "Bit Switch".

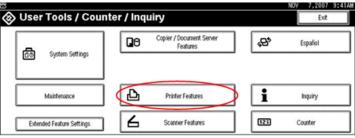


6. Select "Bit Switch 1 Settings" and use the numeric keypad to turn bit 4 ON and then press the "#" button to register the change. The result should look like: 00010000. By doing this, Card Save option will appear in the "List/Test Print" menu.



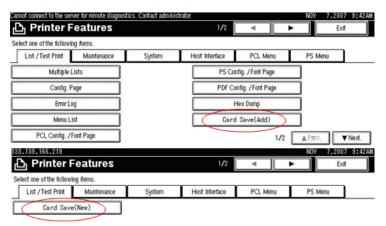
ao

- 7. Press "Exit" to exit SP Mode.
- 8. Press the "User Tools/Counter" button.
- 9. Select "Printer Features".



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 Card Save (Add) and Card Save (New) should be displayed on the screen. Select Card Save (Add) or Card Save (New).



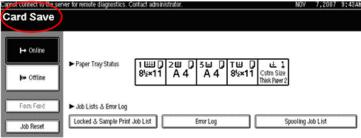
2/2	▲ Prev.	₹Next
	4	027:106

11. Press "OK" and then exit the "User Tools/Counter" menu.



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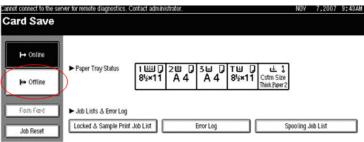
- 12. Press the "Printer" button.
- 13. Card Save should be displayed in the top left of the display panel.



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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.



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- 17. Change the Bit Switch Settings back to the default 0000000. Press the "#" button in the numeric keypad to register the changes.
- 18. Remove the SD card after the main power switch is turned off.

### **Error Messages**

Card Save error messages:

- Init error: A card save process (e.g. card detection, change to kernel mode) failed to initialize.
- Card not found: Card cannot be detected in the slot.
- No memory: Insufficient working memory to process the job.
- Write error: Failed to write to the card.
- Other error: An unknown error occurred.

If an error occurs, pressing "OK" will cause the device to discard the job and return to the ready state.

# 6. Troubleshooting

# Self-Diagnostic Mode

# Service Call Codes

### **Service Call Conditions**

Pattern	Display	How to reset	SC call or SC alarm in customer support system
A	The SC is displayed on the operation panel, and the machine cannot be used (safety-related SC).	Execute CE reset SP mode, and switch main power from OFF to ON.  • When canceling a fusing unit SC, (SC544-00/SC554-00/SC574-00), perform part replacement in accordance with the above procedure.	Occurrence & alarm count ↓ Immediate alarm
В	When a function is selected, the SC is displayed on the operation panel, and the machine cannot be used (downtime mitigation).	Switch main power from OFF to ON.	Occurrence & alarm count  ↓  Power OFF → ON  ↓  Alarm count and alarm only  if recurrence
С	No display on the operation panel, and use is permitted.	Count only logging.	Occurrence  ↓  Logging count & alarm  count

Pattern	Display	How to reset	SC call or SC alarm in customer support system
D	The SC is displayed on the operation panel, and the machine cannot be used (machine-error SC).	Switch main power from OFF to ON.	Occurrence & alarm count  ↓  Power OFF → ON  ↓  Alarm count and alarm only  if recurrence



- When an ordinary SC (type D) is generated, an automatic reboot is performed. When an event is reported by the customer support system, even in the event of an ordinary SC, reboot is not performed. During automatic reboot, a confirmation screen is displayed after the reboot.
- When automatic reboot occurs twice continuously, an SC is displayed without rebooting, and logging count is performed. Also, when an SMC print is output, an \* mark is added alongside the SC number for clarity.
- Automatic reboot can be enabled or disabled with SP5-875-001 (SC automatic reboot setting) (default value: ON).

## **SC Logging**

When an SC is generated, the "total count value when the SC is generated" and the "SC code" are logged. However, if the total count value during the SC is the same as last time, logging is not performed.

Logged data can be checked by outputting an administrative report (SMC print). The SC history is logged up to the last 10 entries, and if there are more than 10 entries, data are progressively deleted starting from the oldest.

### SC Automatic Reboot

When an ordinary SC (pattern D) is generated, automatically reboot is performed. Automatic reboot or reboot by user operation can be set by SP5-875-001 (SC automatic reboot setting out) (default value: 0 "Automatic reboot").

When a type D occurs, automatic reboot is done or the machine display asks the customer if it can reboot. However, when the SC occurs twice in a short time, the machine sends a report to the @Remote server without rebooting. This is because just rebooting may not be a good solution if an SC occurs twice.

When an automatic reboot is performed, a confirmation screen is displayed after reboot. The confirmation screen can be cancelled by pressing the [OK] key (display is not cancelled only when the main power switch is switched OFF to ON).

### Screen display during reboot

- Status display on the current screen
  - Post-processing ..... Post-processing during printing, etc.
  - Automatic reboot .... After operation end

Post-processing



Until automatic reboot

• Reset key (Reboot key)

Key to perform reboot

# Cancel key is not displayed.

• Turn on spanner LED (same as when an SC is generated).

### **Operation during SC reboot**

· Timing of SC reboot

When @Remote is enabled, and when a NRS alarm\*1 is not generated, the corresponding SC is the object of an automatic reboot.

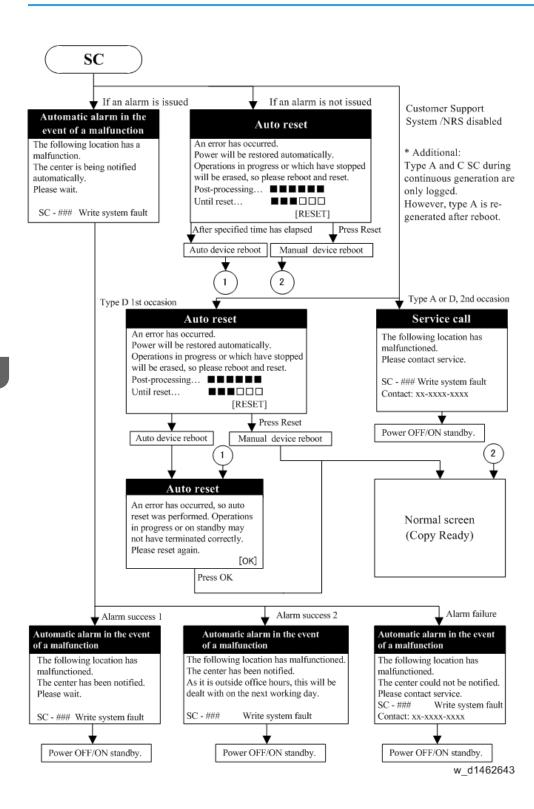
- \* 1 NRS alarm: Issued when an ordinary SC (type D) is generated twice while the total counter counts 10 times
- Time to automatic reboot

Reboot is performed 30 seconds after an engine reboot is possible, after the end of post-processing during printing, etc.

At that time, a reboot is performed even if the MFP is operating. The engine does not start process control when a reboot is possible.

Automatic reboot

See the flowchart below.



# **SC Tables**

### 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
Controll er errors	CTL	The error has occurred in the controller.	See "Troubleshooting Procedure" in the table.
	A	The error involves the fusing unit. The machine operation is disabled. The user cannot reset the error.	Cycle the main power off and on. Reset the SC (set SP5-810-1). Cycle the main power off and on.
	The error involves one or some specific  B units. The machine operates as usual, excluding the related units.		Turn the operation switch off and on.
errors  C is updated. The machine operatusual.  The machine operation is disablated can reset the machine by turning operation switch or main switch	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.



- 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	Section
SC1xx	Scanning
SC2xx	Exposure
SC3xx	Image Processing 1
SC4xx	Image Processing 2
SC5xx	Paper feed and Fusing
SC6xx	Communication
SC7xx	Peripherals
SC8xx	Overall System
SC9xx	Others

6

# SC1xx: Scanning

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
101	D	LED error
-00		The peak white level is less than the prescribed value.
		This SC is detected when:
		The scanner power is on or returning from energy saver mode
		ARDF/Book scanning
		White plate scan finishes
		Shading
		Condensation in the scanner unit
		Connector failure
		Defective scanner carriage
		BiCU failure
		Harness failure
		Dirty or defective white plate
		1. Check if the SC occurs by turning the power off then on.
		If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step.
		2. Reconnect the following connectors.
		SBU-BiCU harness (FFC) connector
		SBU-LEDB harness (FFC) connector (SBU)
		3. Check the white plate (Exposure glass).
		Replace the scanner upper cover if the plate is dirty or damaged.
		4. Replace the scanner carriage
		5. Replace the BiCU.
		6. Replace the harness (FFC).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
102	D	LED intensity adjustment error
-00		The peak white level cannot be in the prescribed value even though adjusting several times.
		This SC is detected when the machine adjusts the LED's light intensity.
		Connection failure
		Scanner carriage failure
		BiCU failure
		Harness failure
		1. Check if the SC occurs by turning the power off then on.
		If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step.
		2. Reconnect the following connectors.
		SBU-BiCU harness (FFC) connector
		SBU-LEDB harness (FFC) connector (SBU)
		3. Check the white plate (Exposure glass).
		Replace the exposure glass, if dirty or damaged.
		4. Replace the scanner carriage.
		5. Replace the BiCU.
		6. Replace the harness (FFC).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
120	D	Scanner home position (HP) error 1
-00		Scanner HP sensor cannot be off when the carriage is homing, auto- adjustment and/or DF/Book scanning are being performed.
		Scanner HP sensor cannot be off even though the scanner carriage moves 30 mm or more during homing.
		Scanner HP sensor is ON when FGATE is asserted or when shading around the white plate.
		Scanner HP sensor is ON even when the carriage is returning.
		Defective motor driver
		Defective motor
		Defective HP Sensor
		Harness failure
		Timing belt, pulley, wires or carriage failure
		Cycle the power off/on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
121	D	Scanner home position (HP) error 2
-00		<ul> <li>Scanner HP sensor cannot be off when the carriage is homing, auto-adjustment and/or DF/Book scanning are being performed.</li> <li>Scanner HP sensor cannot be off even though the scanner carriage moves</li> </ul>
		30 mm or more during homing.
		<ul> <li>Scanner HP sensor is ON when FGATE is asserted or when shading around the white plate.</li> </ul>
		Scanner HP sensor is ON even when the carriage is returning.
		Defective motor driver
		Defective motor
		Defective HP Sensor
		Harness failure
		Timing belt, pulley, wires or carriage failure
		Cycle the power off/on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
141	D	Black level detection error
-00	Black level is not less than the prescribed value.  This SC is detected when: the scanner power is turned on and the machine returns from the energy saver mode.	
		Connection failure Scanner Carriage failure BiCU failure
		Harness failure
		Check if the SC occurs by turning the power off then on.  If the SC occurs again, do the following steps. Check if the SC reoccurs by
		cycling the power after each step.
		2. Reconnect the SBU-BiCU harness (FFC) connector
		3. Replace the scanner carriage.
		4. Replace the BiCU.
		5. Replace the harness (FFC)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
142	D	White level detection error
-00		The white peak level cannot be in the prescribed value when adjusting the scanner gain.
		This SC is detected when the scanner power is turned on and the machine returns from the energy saver mode.
		Dirty exposure glass or optics section
		SBU defective
		Exposure lamp defective
		Lamp stabilizer defective
		Scanner motor defective
		Check if the SC occurs by turning the power off then on.
		If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step.
		2. Reconnect the following connector.
		SBU-BiCU harness (FFC) connector
		SBU-LEDB harness (FFC) connector (SBU)
		3. Check the white plate (Exposure glass)
		Replace the exposure glass, if dirty or damaged.
		4. Replace the scanner carriage.
		5. Replace the BiCU.
		6. Replace the harness (FFC).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
144	D	SBU communication error (SBU)
-01		The machine cannot detect that the SBU is connected.
		This SC is detected when the scanner power is turned on and the machine returns from the energy saver mode.
		Scanner carriage failure     BiCU failure
		Harness failure
		Check if the SC occurs by turning the power off then on.
		If the SC occurs again, do the following steps. Check if the SC reoccurs by cycling the power after each step.
		2. Reconnect the SBU-BiCU harness (FFC) connector
		3. Replace the scanner carriage.
		4. Replace the BiCU.
		5. Replace the harness (FFC).
-02	D	SBU communication error (AFE)
		Cannot communicate with AFE on the BiCU, or the communication data is incorrect.
		This SC is detected when the scanner power is turned on and the machine returns from the energy saver mode.
		BiCU failure
		Cycle the main power off and on.
		2. Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
165	D	Copy Data Security Unit error
-00		The copy data security board is not detected or a device check error occurs when the copy data security function is set "ON" with the initial setting.
		<ul> <li>Incorrect installation of the copy data security board</li> <li>Defective copy data security board</li> </ul>
		Reinstall the copy data security board.      Replace the copy data security board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
195	D	Serial Number Mismatch
-00		Serial number stored in the memory does not have the correct code.
		EEPROM defective
		BiCU replaced without original EEPROM
		1. Check the serial number with SP5-811-002.
		2. If the stored serial number is incorrect, contact your supervisor.

# SC 2xx: Exposure

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
202	D	Polygon motor error 1: ON timeout: Bk, Cy
-01		
-03	D	Polygon motor error 1: ON timeout: Ma, Ye

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Polygon mirror motor cannot rotate correctly.
		This SC is detected when the polygon mirror motor starts rotating, or its rotating speed is changed.
		Polygon mirror motor failure
		Defective motor driver
		Polygon mirror motor harness is defective, disconnected, or short-circuited
		BiCU failure (Incorrect polygon motor control signal, damaged Laser ASIC)
		Defective PSU or power supply part for polygon motor
		Fuse blown out
		Incorrect AC voltage
		Cycle the power OFF/ON.
		2. Check the harness between LD unit and BiCU.
		3. Check CN300 (a connector with five pins) for the polygon mirror motor from the PSU.
		There is no problem if your multimeter indicates 24±2V.
		4. Replace the LD unit (Polygon mirror motor).
		5. Replace the harness between the LD unit and BiCU.
		6. Replace the BiCU.
		7. Replace the fuse.
		8. Replace the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
203	D	Polygon motor error 2: OFF timeout: Bk, Cy
-01		
-03	D	Polygon motor error 2: OFF timeout: Ma, Ye

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Polygon mirror motor cannot stop correctly.
		This SC is detected when the polygon mirror motor is deactivated.
		Polygon mirror motor failure
		Defective motor driver
		Polygon mirror motor harness is defective, disconnected, or short-circuited
		BiCU failure (Incorrect polygon motor control signal, damaged Laser ASIC)
		Defective PSU or power supply part for polygon motor
		Fuse blown out
		Incorrect AC voltage
		Cycle the power OFF/ON.
		2. Check the harness between LD unit and BiCU.
		3. Check CN300 (a connector with five pins) for the polygon mirror motor from the PSU.
		*There is no problem if your multimeter indicates 24±2V.
		4. Replace the LD unit (Polygon mirror motor).
		5. Replace the harness between the LD unit and BiCU.
		6. Replace the BiCU.
		7. Replace the fuse.
		8. Replace the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
204	D	Polygon motor error 0: XSCRDY signal error: Bk, Cy
-01		
-03	D	Polygon motor error 1: XSCRDY signal error: Ma, Ye

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Polygon mirror motor cannot rotate correctly.
		This SC is detected when the polygon mirror motor is deactivated.
		Polygon mirror motor failure
		Defective motor driver
		Polygon mirror motor harness is defective, disconnected, or short-circuited
		BiCU failure (Incorrect polygon motor control signal, damaged Laser ASIC)
		Defective PSU or power supply part for polygon motor
		Fuse blown out
		Cycle the power OFF/ON.
		2. Check the harness between LD unit and BiCU.
		<ol> <li>Check CN300 (a connector with five pins) for the polygon mirror motor from the PSU.</li> </ol>
		*There is no problem if your multi meter indicates 24±2V.
		4. Replace the LD unit (Polygon mirror motor).
		5. Replace the harness between the LD unit and BiCU.
		6. Replace the BiCU.
		7. Replace the fuse.
		8. Replace the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
220	D	Laser synchronizing detection error: start position LD1: Bk/C
-01		
-03	D	Laser synchronizing detection error: start position LD1: M/Y

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Synchronizing detection signal cannot be received.
		This SC is detected when:
		The machine starts up.
		The machine is copying.
		Defective LD unit (Synchronizing mechanism or LDB failure)
		BiCU failure (Damaged laser ASIC)
		Disconnected LDB harness
		Cycle the power off/on.
		Check for condensation on the LDB.
		Check the harness between LDB (Synchronizing mechanism) and BiCU.
		Replace the LD unit.
		Replace the BiCU.
		Replace the harness between LDB and BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
230	D	FGATE ON error: Bk
-01		
-02	D	FGATE ON error: Cy
-03	D	FGATE ON error: Ma
-04	D	FGATE ON error: Ye
		FGATE signal cannot be received even when the laser is ready to emit.
		This SC is detected when the machine is copying.
		Connection error between BiCU and Controller
		BiCU failure (Damaged laser ASIC)
		Cycle the power off/on.
		Check the connection between BiCU and Controller.
		Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
231	D	FGATE OFF error: Bk
-01		
-02	D	FGATE OFF error: Cy
-03	D	FGATE OFF error: Ma
-04	D	FGATE OFF error: Ye
		FGATE signal is not OFF even when the laser is ready to end.
		This SC is detected when the machine is copying.
		Connection error between BiCU and Controller
		BiCU failure (Damaged laser ASIC)
		1. Cycle the power off/on.
		2. Check the connection between IPU and Controller.
		3. Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
240	D	LD error: Bk or Cy
-01		
-03	D	LD error: Ma or Ye

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The LD current is more than the prescribed current during emitting light.
		LD driver cannot be initialized correctly.
		Disconnected LDB harness.
		This SC is detected when:
		The machine starts up.
		The machine is copying.
		LDB harness connection error
		Deteriorated LD (LD broken)
		LDB (LD driver) failure
		LDB harness failure
		1. Cycle the power off/on.
		2. Check the harness between LDB and IPU.
		3. Replace the LD unit.
		4. Replace the harness between LDB and BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
272	D	LD driver communication error
-10		Power source for LD driver is incorrect.  This SC is detected when:  The machine starts up.  The machine returns from energy saver mode.  Covers are closed.
		<ul> <li>BiCU failure (LD5V Power error)</li> <li>LDB failure (LD drive error)</li> <li>LDB harness failure</li> <li>Interlock switch failure</li> </ul>
		<ol> <li>Cycle the power off/on.</li> <li>Check the harness between LDB and BiCU.</li> <li>Replace the BiCU.</li> <li>Replace the LD unit.</li> <li>Replace the harness between LDB and BiCU.</li> <li>Replace the interlock switch.</li> </ol>

# SC3xx: Image Processing – 1

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
312	D	Charge roller feed back voltage error: Bk
-01		
-02	D	Charge roller feed back voltage error: Cy
-03	D	Charge roller feed back voltage error: Ma
-04	D	Charge roller feed back voltage error: Ye

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The feedback voltage of the charge AC for each color is 0.3V or less for consecutive 200ms after the charge AC is activated in the standard or half line speed.
		Disconnected/incorrect harness for the power pack
		Damaged/incorrect PCU
		Power pack failure
		Disconnected harness/connector
		Troubleshooting procedure:
		1. Check the drum condition:
		Check the terminal to see if there is dust, damage, or deformation. Check the continuity as well.
		If not good, replace the PCDU. If the SC reoccurs, go to the next step.
		2. Check all the related connectors are firmly connected:
		If not good, reconnect the connector. Check if the SC reoccurs by cycling the power off/on. If the SC reoccurs, go to the next step.
		3. Check the mainframe condition:
		Check if there is dust on the terminal for charging, or any damage/deformation. Check the continuity between the power packs and charging terminal.
		If the SC reoccurs, go to the next step.
		4. Check the Power pack:
		Try installing a new power pack to determine whether the power pack is the cause. If the SC does not occur with the new one, the old power pack was defective.
		5. Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
325	D	Color development motor error
-00		The motor LOCK signal is not detected for more than 2 seconds while the motor START signal is on.
		PCDU overload     Defective development motor
		Replace the PCDU
		Replace the development motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
396	D	Bk drum motor error
-00		
397	D	Color drum motor error
-00		Color drum motor error
		The motor LOCK signal is not detected for more than 2 seconds while the motor START signal is on.
		PCDU overload
		Drum motor (K) failure (SC396)
		Drum motor (CMY) failure (SC397)
		Replace the PCDU.
		Replace the drum motor (K) (SC396)
		Replace the drum motor (CMY) (SC397)

## SC3xx: Image Processing – 2

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
360	D	TD sensor (Vt high) error 1: Bk
-01		
-02	D	TD sensor (Vt high) error 1: Cy
-03	D	TD sensor (Vt high) error 1: Ma

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-04	D	TD sensor (Vt high) error 1: Ye
		<ul> <li># count is higher than the threshold which detects no developer</li> <li># count is lower than the upper/lower target thresholds three consecutive times.</li> </ul>
		<ul> <li>TD sensor (mu sensor, # sensor) failure</li> <li>Harness loose or disconnected</li> <li>An old PCDU may be installed</li> </ul>
		Troubleshooting procedure:
		1. Check all the related connecters are connected.
		If not good, reconnect the connectors. Check if the SC reoccurs by cycling the power off/on. If the SC reoccurs, go to next step.
		<ol> <li>Check the development unit (e.g. Gear/harness disconnected? Heat protection seal removed? Using an old PCDU?).</li> </ol>
		If not good, replace the development unit. If the SC reoccurs, go to the next step.
		<ol> <li>Check whether the TD sensor is deformed, scratched, damaged or has dust sticking to it.</li> </ol>
		If not good, replace the PCDU. If the SC reoccurs, go to the next step.
		4. Check the TD sensor harnesses, and the harness between the mainframe and PCDU.
		If not good, replace the harness. If the SC reoccurs, go to the next step.
		5. Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
361	D	TD sensor (Vt) upper limit error: Bk
-01		
-02	D	TD sensor (Vt) upper limit error 1: Cy
-03	D	TD sensor (Vt) upper limit error 1: Ma
-04	D	TD sensor (Vt) upper limit error 1: Ye

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
140.	туре	
		The machine detects that Vt (TD sensor output, SP3-210-001) is higher than the upper limit threshold (specified in SP3-211-002) for the specified consecutive times in SP3-211-003.
		TD sensor connector is disconnected
		To check if the issue is resolved:
		1. Cycle the power off/on.
		2. Feed one sheet of paper.
		3. Check Vt with SP3-210-001 through -004.
		4. Check if Vt is higher than the upper threshold (specified in SP3-211-002).
		Incorrect: Vt is higher than the upper threshold
		Correct: Vt is equal to or lower than the upper threshold
		Troubleshooting procedure:
		1. Check all the connectors are firmly connected.
		If not, reconnect the connectors. Check if the SC reoccurs by cycling the power off/on. If the SC reoccurs, go to the next step.
		<ol> <li>Check the development unit (e.g. Gear/harness disconnected? Heat protection seal removed? Using an old PCDU?).</li> </ol>
		If not good, replace the PCDU. If the SC reoccurs, go to the next step.
		3. Check the TD sensor.
		If not good, replace the TD sensor. If the SC reoccurs, go to the next step.
		<ol> <li>Check the parameters (e.g. SP3-030-061 through -064 should be changed from its initial value, but could be not changed due to possible NVRAM clearing).</li> </ol>
		If not good, replace the PCDU and initialize the developer. This corrects the TD sensor settings.
		5. Check the toner supply unit, especially if the image density is too low.
		If the toner bottle is empty, the toner supply route is clogged, and/or the toner supply motor operates incorrectly, then correct the problem. If the SC reoccurs, go to the next step.
		6. Check the harness connection.
		If not good, replace the harness between BiCU and PCDU.
		7. Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
362	D	TD sensor (Vt) lower limit error: Bk
-01		
-02	D	TD sensor (Vt) lower limit error 1: Cy
-03	D	TD sensor (Vt) lower limit error 1: Ma
-04	D	TD sensor (Vt) lower limit error 1: Ye
		The value of Vt (SP3-210-003) is lower than the threshold (SP3-211-004) for times specified in SP3-211-005.
		TD sensor connector is disconnected.
		Check the connection of the TD sensor connector.
		Check if the TD sensor harness is connected firmly.
		Replace the TD sensor if any abnormality is found.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
370	D	ID sensor calibration error
-00		The reflection light output voltage of the ID sensor (Vsg_reg) is not adjusted within the target range.
		Upper limit: SP3320-013 (default: 4.5 V)
		Lower limit: SP3320-014 (default: 3.5 V)
		Disconnected ID sensor connectors
		Dirty or defective ID sensor
		Defective image transfer belt
		To check if the issue is resolved:
		Do Vsg adjustment (SP3-320).
		Check the result in SP3-323-001.
		Correct: The result is "1"
		Incorrect: The result is not "1"
		Troubleshooting procedure:
		1. Check all the connectors are firmly connected.
		If not, reconnect the connectors. Check if the SC reoccurs by cycling the power off/on. If the SC reoccurs, go to the next step.
		2. Clean the detecting part of the ID sensor
		<b>↓</b> Note
		<ul> <li>Do not wipe with a dry cloth. (page 193 "Maintenance Tables")</li> </ul>
		If the SC reoccurs, go to the next step.
		3. Check the ID sensor shutter.
		If the shutter does not move correctly, replace the shutter solenoid. If the SC reoccurs, go to the next step.
		4. Replace the drum and/or ITB if the following is found:
		Scratches, toner filming, wavy belt, or insufficient cleaning
		5. Replace the ID sensor.
		If the SC reoccurs, go to the next step.
		6. Check and connect the related harness if it is disconnected.
		7. Replace the BiCU.

### SC4xx: Image Processing - 2

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
442 -00	D	Image transfer belt contact motor error  ITB contact HP sensor cannot detect the sensor feeler condition within a specified time even when the ITB contact motor rotates.
		<ul> <li>Contact/Release: 5000 msec</li> <li>Homing: 10000 msec</li> <li>Sampling interval: 10 msec</li> </ul>
		<ul> <li>Broken harness or defective connectors</li> <li>Disconnected connector of image transfer belt contact sensor or motor</li> <li>Defective image transfer belt contact motor</li> <li>Image transfer belt unit not installed</li> </ul>
		<ol> <li>Set the ITB unit firmly.</li> <li>Replace the ITB unit.</li> <li>Clean the ITB contact HP sensor.</li> </ol>
		<ul><li>4. Check the harnesses.</li><li>5. Replace the ITB contact HP sensor.</li><li>6. Replace the ITB contact motor.</li></ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
491	С	High voltage power: Charge/Development bias output error
-00		Incorrect PWM signal is detected 10 times for consecutive 20 seconds.
		Hardware related causes:
		Contact failure
		Loose connector (Controller side)
		Grounding, open-circuit in the high voltage route
		Arc discharge due to lack of space
		Shorted harness (Controller side)
		BiCU malfunction (Signal error)
		Power pack (Development/Transfer) failure
		Load related causes:
		Short-circuit
		Arc discharge due to lack of space
		Deteriorated drum (overcurrent)
		Condensated drum (overcurrent)
		Incorrect gap between drum and charge roller (incorrect PCDU)
		PCDU not installed firmly

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		First, cycle the main power off/on to check if this SC occurs again.
		If this SC reoccurs, do the following:
		<ol> <li>Remove and install the PCDU again to make sure that the PCDU is firmly set.</li> <li>Cycle the main power off/on to check if this SC occurs again. If the SC occurs again, go to the next step.</li> </ol>
		2. Check if there are scratches on the drum surface. If you can see the internal element of the drum (plain pipe) on the surface, go to the next step, because too much electricity can flow at this point, which caused the SC.
		Replace the PCDU and cycle the main power off/on to check if this SC occurs again.
		<ol> <li>Reconnect the connector (CN561) on the BiCU and cycle the main power off/on. Be careful not to bend the connector pins when reconnecting. If the SC occurs again, go to the next step.</li> </ol>
		<ol> <li>Reconnect the connector (CN801) on the power pack (charge/ development) and cycle the main power off/on. If the SC occurs again, go to the next step.</li> </ol>
		6. Remove and install the power pack (charge/development) again and cycle the main power off/on. Check if the spring near the power pack terminal bends and comes in contact with other contacts. Cycle the main power off/on to check if this SC occurs again.
		7. Replace the power pack (charge/development) and cycle the main power off/on to check if the SC occurs again.
		8. Replace the BiCU and cycle the main power off/on to check if the SC occurs again.
		<ol> <li>Make sure that the harnesses on the power pack (charge/development) are not shorted. If not good, replace the harness and cycle the main power off/on.</li> </ol>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
492	С	High voltage power: Transfer bias output error
-00		Incorrect PWM signal is detected for 200ms.
		Hardware related causes:
		Contact failure
		Loose connector (Controller side)
		Grounding, open-circuit in the high voltage route
		Shorted harness (Controller side)
		BiCU malfunction (Signal error)
		Power pack (Transfer) failure
		Load related causes:
		Increased impedance in the paper transfer roller
		Increased impedance in the ITB
		Open-circuit
		Transfer unit not installed firmly
		This is a logging SC (No action required).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
497	С	Image creation temperature sensor error 1
-00		The thermistor output of the temperature sensor is not within the prescribed range (more than 0.5 V to less than 3.0 V).
		-
		Cycle the main power off/on to check if this SC occurs again.
		If this SC reoccurs, do the following:
		<ol> <li>Reconnect all the related connectors, and cycle the main power off/on to check if the SC reoccurs.</li> </ol>
		Replace the image creation temperature sensor, and cycle the main power off/on to check if the SC reoccurs.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
498	С	Temperature/humidity sensor error
-00		The thermistor output of the temperature sensor is not within the prescribed range (more than 3.0V to less than 0.5V.
		The thermistor output of the humidity sensor is not within the prescribed range (2.4V or more).
		Damaged or loose connector
		Defective temperature/humidity sensor
		Cycle the main power off/on to check if this SC occurs again.
		If this SC reoccurs, do the following:
		Reconnect all the related connectors, and cycle the main power off/on to check if the SC reoccurs.
		Replace the temperature/humidity sensor, and cycle the main power off/on to check if the SC reoccurs.

## SC5xx: Paper Feed and Fusing

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
501	В	1st paper tray lift motor malfunction
-00		This SC occurs if no paper is detected within the prescribed time when the tray is set correctly, and the tray lift motor starts rotating CW or CCW.
		<ul> <li>Incorrect/disconnected tray lift motor connector</li> <li>Loose, disconnected or damaged tray lift sensor connector</li> <li>An obstruction such as jammed paper scraps blocks the motor operation</li> </ul>
		Replace the transport motor.      Reconnect the connector.
		3. Replace the harness.
		4. Replace the BiCU (IOB).

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
502 -00	В	2nd paper tray lift motor malfunction (optional paper feed unit)
503 -00	В	3rd paper tray lift motor malfunction (optional paper feed unit)
		When the tray is lifted up, the tray lift motor error, or sensor error is detected.
		Tray Lift Motor disconnection or loose harness
		Tray Bottom Plate Pressure Sensor disconnection or loose harness
		Tray Bottom Plate HP Sensor disconnection or loose harness
		Other defective mechanical parts
		Do the following steps. Cycle the power off/on after doing each step to check if the SC occurs.
		1. Reconnect the connector of the Tray Bottom Plate HP Sensor.
		2. Reconnect the connector of the Tray Bottom Plate Pressure Sensor.
		<ol> <li>Replace the Lift Lever Encoder, gear encoder for tray lift unit ('rising unit' in the parts catalog), and the tension spring for paper feed.</li> </ol>
		4. Replace the tray lift motor.
		5. Replace the harness.
		6. Replace the board in the tray.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
508	В	Bypass bottom plate error
-00		The signal from the bypass tray HP sensor does not change for 2 seconds after the bypass bottom plate clutch was activated.
		If this condition occurs three consecutive times, this SC is generated.
		Disconnected or defective connectors of the bypass bottom plate clutch
		Disconnected or defective bypass HP sensor
		Defective bypass bottom plate detection filler
		1. Check or replace the connectors of the bypass bottom plate clutch.
		2. Check or replace the bypass HP sensor.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
524	D	Transport motor error
-00		The machine detects a LOCK signal from Transport motor for 2 seconds when the motor is activated.
		Paper exit unit overload     Defective transport motor
		Replace the paper exit unit.     Replace the transport motor.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
525	В	Transport motor error: bank 1
-00		The machine detects a Lock signal from a bank 1 transport motor after the motor turned on.
526	В	Transport motor error: bank 2
-00		The machine detects a Lock signal from a bank 2 transport motor after the motor turned on.
		<ul> <li>Motor overload</li> <li>Defective motor</li> <li>Disconnected connectors</li> <li>Damaged harness</li> <li>Do the following steps. Check if the SC reoccurs by cycling the power after each step.</li> <li>1. Reconnect the connector.</li> <li>2. Replace the harness.</li> <li>3. Replace the transport motor.</li> </ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
530	D	Fusing heater exhaust fan motor error
-00		

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
531	D	Development cooling fan motor error
532 -00	D	Writing cooling fan motor error
533	D	PSU fan motor error
		The motor lock signal error is detected 50 consecutive times (5 seconds) after the motor lock signal was first detected.
		<ul> <li>Defective fan motor</li> <li>Disconnected or defective harness</li> <li>Defective BiCU</li> </ul>
		Check or replace the harness.     Replace the fan motor.     Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
540	D	Fusing motor error
-00		The machine detects a High signal from the fusing motor 20 consecutive times after the motor turned on.
		Motor overload
		Defective fusing motor
		Shorted +24 fuse on the PSU
		1. Check or replace the harness.
		2. Replace the fusing motor.
		3. Replace the +24 fuse on the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
541	Α	Fusing thermopile error
-01		

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-11	D	Fusing thermopile error (Low power)
		This SC occurs when the machine detects the value of AD is the prescribed value for 0.2 consecutive seconds after the fusing lamp is activated.
		Broken thermopile     Connector contact failure
		Reconnect the connector between the fusing unit and the BiCU.      Replace the fusing thermopile
		Replace the harness between the fusing unit and the BiCU.
		Replace the BiCU.
		Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
542	А	Fusing thermopile reload error
-02 -03		The heating roller temperature does not reach a temperature of 80 degrees C within the prescribed time.
		The center temperature of the heating roller does not reach the target reload permit temperature within the prescribed time.
		<ul> <li>The center temperature of the heating roller does not reach the target temperature after starting the heater control in warm up with low temperature.</li> </ul>
		<ul> <li>Dirty or defective thermopile lenses</li> <li>Defective thermistor</li> <li>Input voltage out of specification (out of warranty)</li> </ul>
		Check and clean the thermopile lenses.     Check that the fusing thermopile is firmly connected.     Replace the thermopile.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
542	D	Fusing thermopile cannot reload (low power)
-12		This SC is detected if the temperature does not reach a temperature of 80 degrees C after passing seven seconds when:  • The machine starts warming up.  • The machine returns from energy saver mode.  • The fusing lamp is activated.
-13	D	Fusing thermopile cannot reload (low power)
		This SC is detected if the temperature does not reach the reload permit temperature (center) after passing eight seconds when:  The machine starts warming up.  The machine returns from energy saver mode.  The fusing lamp is activated.
		Dirty or defective thermopile lenses
		<ul><li>Input voltage out of specification (out of warranty)</li><li>Fuse blown out.</li></ul>
		Check the power supply voltage (change the power cord).
		2. Replace the fusing thermostat.
		3. Replace the fusing lamp.
		4. Replace the fusing thermopile.
		5. Replace the BiCU.
		6. Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
543	А	Fusing thermopile overheat (software error)
-00		Fusing thermopile detects a temperature of 240 degrees C or more for 10 seconds after the relay is activated.
		Triac short
		IOB failure
		BiCU failure
		Reconnect the connector between the fusing unit and BiCU.
		2. Replace the fusing thermopile.
		3. Replace the harness between the fusing unit and BiCU.
		4. Replace the BiCU.
		5. Replace the AC controller board.
		6. Replace the fusing unit (if the problem cannot be resolved).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
544	Α	Fusing thermopile overheat (hardware error)
-00		The fusing thermopile detects a temperature of 250 degrees C.
		Defective BiCU
		Defective fusing control system
		Related SC code: SC 543
		1. Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
545	A	Fusing lamp consecutive full power
-01		The fusing lamp runs at full power for consecutive four seconds after reloading he machine
		Defective thermistor
		Broken heater
		Thermostat blown out
		Check there is paper remaining in the fusing unit.
		2. Replace the power cord.
		3. Replace the fusing thermostat.
		4. Replace the fusing lamp.
		5. Replace the fusing thermopile.
		6. Replace the AC controller board, or the BiCU.
-11	D	Fusing lamp consecutive full power (low power)
		The fusing lamp runs at full power for consecutive four seconds after reloading the machine
		Defective thermistor
		Broken heater
		Thermostat blown out.
		Check there is paper remaining in the fusing unit.
		2. Replace the power cord.
		3. Replace the fusing thermostat.
		4. Replace the fusing lamp.
		5. Replace the fusing thermopile.
		6. Replace the AC controller board, or the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
547	D	Zero cross error: fusing lamp relay contact welding
-01		Zero cross signal is detected when the fusing relay is deactivated.
		This SC is detected when:
		<ul> <li>The main power is turned on.</li> <li>The machine returns from the engine-off mode.</li> </ul>
		The interlock switch is deactivated.
		Damaged fusing relay     Fusing relay drive circuit failure
		,
		Make sure that the harness between the AC controller board and BiCU is firmly connected.
		Replace the AC controller board.
		3. Replace the BiCU.
-02	D	Zero cross error: fusing lamp relay contact defective
		Zero cross signal cannot be detected if the fusing relay is activated.
		This SC is detected when:
		The main power is turned on.
		The machine returns from the engine-off mode.
		The interlock switch is turned off or on.
		Broken fusing relay (open circuit)
		Fusing relay circuit failure
		PSU fuse (24VS) worn out
		<ol> <li>Make sure that the harness between the AC controller board and BiCU is firmly connected.</li> </ol>
		2. Replace the AC controller board.
		3. Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-03	D	Zero cross error: low frequencies error
		The frequency of the power source is lower than 44Hz.
		This SC is detected when the main power is ON.
		Unstable frequency
		1. Check the frequency is 45Hz or more.
		If not, the power supply from the wall socket may be the cause. Ask for your supervisor or the electrician in charge at the site.
		2. Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
549	D	Fusing Center Low Temperature
-00		After passing 60 seconds when FGATE is On, thermopile 1 (thermistor 1) detects a temperature of -100 degrees C from the compensated target temperature for consecutive 60 seconds.
		<ul> <li>Fusing lamp disconnection during paper passing</li> <li>Loose connector</li> </ul>
		Check the input voltage and replace the power plug.
		Replace the fusing thermostat
		Replace the fusing lamp.
		Replace the fusing thermopile
		Replace the AC controller board or BiCU,.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
554	Α	Fusing thermistor (NC sensor) detects high temperature (Hard)
-00		Fusing thermistor (NC sensor) detects the prescribed temperature.
		Shorted triac
		IOB failure
		BiCU failure
		Fusing unit: out of control
		Do the following steps:
		1. Reconnect the connector between the fusing unit and the BiCU.
		2. Replace the thermistor.
		3. Replace the harness between the fusing unit and the BiCU.
		4. Replace the BiCU.
		5. Replace the AC controller board.
		Replace the fusing unit if all the above steps cannot solve the issue.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
557	С	Zero cross frequency error
-00		The frequency of the power source is 66Hz or more.  This SC is detected just after the main power is turned ON.
		Noise (High frequency)     Defective PSU
		Check the power supply source.      Replace the PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
559	Α	Consecutive fusing jam
-00		The paper jam counter for the fusing unit reaches three consecutive times (the fusing exit sensor does not detect the paper).
		Paper jam in the fusing unit.
		1. Replace the separation plate.
		2. Replace the gear (fusing unit).
		3. Replace the fusing unit.
		4. Replace the fusing motor.
		5. Replace the gear (mainframe), if damaged.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
561	Α	Pressure roller thermistor (center) disconnection
-01		Pressure roller thermistor (center) detects a temperature of -11 degrees C for 20 consecutive seconds after the fusing lamp is activated when the main power is turned on or during feeding paper or low power.
		Thermopile disconnection Loose connector
		Reconnect the connectors between the fusing drawer connector, the BiCU, and the pressure roller thermistor.
		Replace the thermistor.
		Replace the fusing unit.
		Replace the harnesses between the BiCU and the pressure roller thermistor.
		Replace the BiCU.
		Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-11	Α	Pressure roller thermistor (center) disconnection (low power)
		Pressure roller thermistor (center) detects a temperature of -11 degrees C for 20 consecutive seconds after the fusing lamp is activated when the machine starts, or during feeding paper or in low power.
		Thermistor disconnection Loose connector
		Reconnect the connectors between the fusing drawer connector, the BiCU, and the pressure roller thermistor.
		Replace the thermistor.
		Replace the fusing unit.
		Replace the harnesses between the BiCU and the pressure roller thermistor.
		Replace the BiCU.
		Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
562	A	Heating roller warm-up error (sensor 3)
-02		Pressure roller thermistor (Center) detects that the temperature does not reach a temperature of 40 degrees C for 25 consecutive seconds when the main power is turned on.
		<ul> <li>Dirty or deformed thermistor</li> <li>Input voltage out of specification (out of warranty)</li> <li>Fuse blown out</li> </ul>
		<ul> <li>Check the input voltage and replace the power plug.</li> <li>Replace the fusing thermostat.</li> <li>Replace the fusing lamp.</li> <li>Replace the thermistor.</li> <li>Replace the BiCU.</li> <li>Replace the AC controller board.</li> </ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-12	Α	Pressure roller thermistor (center) cannot be reloaded (low power)
		Pressure roller thermistor (center) detects that the temperature does not reach a temperature of 40 degrees C for 25 consecutive seconds when the main power is turned on.
		<ul> <li>Dirty or deformed thermistor</li> <li>Input voltage out of specification (out of warranty)</li> <li>Fuse blown out</li> </ul>
		<ul> <li>Check the input voltage and replace the power plug.</li> <li>Replace the fusing thermostat.</li> <li>Replace the fusing lamp.</li> <li>Replace the thermistor.</li> <li>Replace the BiCU.</li> </ul>
		Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
563	Α	Pressure roller overheat (software error): Center
-00		Pressure roller thermistor (center) detects a temperature of 230 degrees C 10 times after the fusing relay is ON.
		Shorted triac
		IOB error
		BiCU error
		Reconnect the connectors between the fusing drawer connector, BiCU, and the pressure roller thermistor.
		2. Replace the thermistor.
		3. Replace the harnesses between the BiCU and pressure roller thermistor.
		4. Replace the BiCU.
		5. Replace the fusing unit if all the above steps cannot resolve the issue.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
564	Α	Pressure roller overheat (hardware error): Center
-00		Pressure roller thermistor (center) detects the prescribed temperature.
		Shorted triac
		IOB error
		BiCU error
		Fusing unit: out of control
		Reconnect the connectors between the fusing drawer connector, BiCU, and the pressure roller thermistor.
		2. Replace the thermistor.
		3. Replace the harnesses between the BiCU and pressure roller thermistor.
		4. Replace the BiCU.
		5. Replace the fusing unit if all the above steps cannot resolve the issue.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
571	Α	Pressure roller thermistor (rear) disconnection
-01		Pressure roller thermistor (Rear) detects a temperature of -11 degrees C or less for 20 consecutive seconds after the fusing lamp is activated in a specified condition.
		Thermistor disconnection Loose connector
		Reconnect the connectors between the fusing drawer connector, the BiCU, and the pressure roller thermistor.
		Replace the thermistor.
		Replace the fusing unit.
		Replace the harnesses between the BiCU and the pressure roller thermistor.
		Replace the BiCU or the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-11	Α	Pressure roller thermistor (rear) disconnection (low power)
		Pressure roller thermistor (rear) detects a temperature of -11 degrees C or less for 20 consecutive seconds after the fusing lamp is activated in a specified condition.
		Thermistor disconnection
		Loose connector
		Check the input voltage and replace the power plug.
		<ul> <li>Reconnect the connectors between the fusing drawer connector, the BiCU, and the pressure roller thermistor.</li> </ul>
		Replace the thermistor.
		Replace the fusing unit.
		Replace the harnesses between the BiCU and the pressure roller thermistor.
		Replace the BiCU or the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
572	Α	Pressure roller thermistor (rear) cannot be reloaded
-02		The machine temperature does not reach a temperature of 50 degrees C when 100 seconds passes after starting a job where the paper width is wider than 206 mm AND is equal to or smaller than 216 mm.
		<ul> <li>Dirty or deformed thermistor</li> <li>Input voltage out of specification (out of warranty)</li> <li>Fuse blown out</li> </ul>
		<ul> <li>Check the input voltage and replace the power plug.</li> <li>Replace the fusing thermostat.</li> <li>Replace the fusing lamp.</li> <li>Replace the thermistor.</li> <li>Replace the BiCU.</li> <li>Replace the AC controller board.</li> </ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-12	D	Pressure roller thermistor (rear) cannot be reloaded (low power)
		The machine temperature does not reach a temperature of 50 degrees C when 100 seconds passes after starting a job where the paper width is wider than 206 mm AND is equal or smaller than 216 mm.
		Dirty or deformed thermistor     Input voltage out of specification (out of warranty)     Fuse blown out
		<ul> <li>Check the input voltage and replace the power plug.</li> <li>Replace the fusing thermostat.</li> <li>Replace the fusing lamp.</li> <li>Replace the thermistor.</li> <li>Replace the BiCU.</li> </ul>
		Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
573	Α	Pressure roller overheat (software error): End
-00		Pressure roller thermistor (rear) detects a temperature of 230 degrees C for 10 consecutive times in a specific machine condition.
		Shorted triac
		IOB error
		BiCU error
		Reconnect the connectors between the fusing drawer connector, the BiCU, and the pressure roller thermistor.
		2. Replace the thermistor.
		3. Replace the harnesses between the BiCU and the pressure roller thermistor.
		4. Replace the BiCU.
		Replace the fusing unit if all the above steps cannot resolve the issue.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
574	Α	Pressure roller overheat (hardware error): End
-00		Pressure roller thermistor detects the prescribed temperature.
		Shorted triac
		IOB error
		BiCU error
		Fusing unit: out of control
		Reconnect the connectors between the fusing drawer connector, the BiCU, and the pressure roller thermistor.
		2. Replace the thermistor.
		3. Replace the harnesses between the BiCU and the pressure roller thermistor.
		4. Replace the BiCU.
		Replace the fusing unit if all the above steps cannot resolve the issue.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
581	Α	
-01		Fusing thermistor disconnection
-02	А	Shorted fusing thermistor
-11	D	Fusing thermistor disconnection (low power)
-12	D	Shorted fusing thermistor (low power)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		These SCs are detected if the machine detects the prescribed timing when:
		The machine starts up.
		The machine returns from the energy saver mode.
		The machine stays in low power mode.
		Thermopile disconnection (SC581-01)
		Shorted fusing thermistor (SC581-02)
		Loose connector
		1. Check the input voltage and replace the power plug (SC581-11/-12).
		Reconnect the connectors between the fusing unit, fusing drawer connector, and BiCU.
		3. Replace the fusing thermistor.
		4. Replace the fusing unit.
		5. Replace the harnesses between the BiCU and the fusing drawer connector.
		6. Replace the BiCU.
		7. Replace the AC controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
591 -01	А	Pressure roller thermistor (front) disconnection
-11	D	Pressure roller thermistor (front) disconnection (low power)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
592 -02	Α	Pressure roller thermistor (front) cannot be reloaded
-12	D	The machine temperature does not reach a temperature of 50 degrees C when 100 seconds passes after starting a job where the paper width is wider than 206 mm AND is equal or smaller than 216 mm.
		<ul> <li>Dirty or deformed thermistor</li> <li>Input voltage out of specification (out of warranty)</li> <li>Fuse blown out</li> </ul>
		<ul> <li>Check the input voltage and replace the power plug.</li> <li>Replace the fusing thermostat</li> <li>Replace the fusing lamp.</li> <li>Replace the thermistor.</li> <li>Replace the BiCU.</li> <li>Replace the AC controller board.</li> </ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
593	Α	Pressure roller thermistor (front) high temperature (soft)
-00		Pressure roller thermistor (front) detects a temperature of 230 degrees C for consecutive 10 times when the fusing lamp is activated.
		Shorted triac
		IOB error
		BCU error
		Reconnect the connectors between the fusing unit, fusing drawer connector, and BiCU.
		Replace the thermistor.
		Replace the harnesses between the BiCU and the fusing drawer connector.
		Replace the BiCU.
		Replace the fusing unit if all the above steps cannot resolve the issue.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
594	Α	Pressure roller thermistor (front) High temperature (hard)
-00		Pressure roller thermistor (front) detects the prescribed temperature.
		Shorted triac
		IOB error
		BCU error
		Fusing unit: out of control
		Reconnect the connectors between the fusing unit, fusing drawer connector, and BiCU.
		Replace the thermistor.
		Replace the harnesses between the BiCU and the fusing drawer connector.
		Replace the BiCU.
		Replace the fusing unit if all the above steps cannot resolve the issue.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
622	D	Paper tray unit communication error
-00		While the BiCU 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
		BiCU problems
		PSU problems in the machine
		Main board problems in the peripherals
		Replace the controller board for the 1st paper feed tray.
		Replace the BiCU.
		Replace the IOB.
		Set the harness between the mainframe and 1st paper feed tray again.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
623	D	2nd Paper Bank communication error
-00		This SC is not issued for this machine.  When a communication error signal between the 1st paper bank and 2nd paper bank is received.
		<ul> <li>Loose or disconnected connector</li> <li>Replace the controller board for the 2nd paper feed tray.</li> <li>Incorrect controller board for 1st paper feed tray: Reconnect the connection harness for 1st and 2nd feed tray.</li> </ul>

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
632	В	Counter Device Error 1
-00		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.
		Cycle the main power off and on.     Check the serial communication line.

No	э.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
633 -00	33	В	Counter Device Error 2
	-00		After communication was established, the controller received 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.
			Cycle the main power off and on.     Check the serial communication line.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
634	В	Counter Device Error 3
-00		A backup RAM error was returned by the counter device.
		Counter device control board or the backup battery of counter device defective
		Replace the counter device control board.
		Replace the backup battery.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
636	D	IC Card Error (Version error)
-02		The version of the expanded authentication module is not correct.
		Incorrect module version
		Install the correct file of the expanded authentication module.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
637	D	Tracking Information notification Error (Tracking application error)
-01		Tracking information was lost.
		Tracking SDK application error
		Internal notification error
		Cycle the main power off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
637	D	Tracking Information notification Error (Management server error)
-02		Tracking information was lost.
		Communication with tracking management server failed.
		Network error
		tracking management server error
		Tracking SDK application error
		Cycle the main power off and on.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
641	D	Communication Error between Engine and Controller
-00		Although frame is sent from controller, engine does not reply to it.
		Controller Board soft error
		BCU soft error
		BCU and controller board connection error
		Cycle the main power off and on.
		Check the connection between the BiCU and the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650	С	Remote Service Modem Communication Error (Dialup authentication failure)
-01		An error related to communication (dialup connection, modem board etc.)     using the RC Gate Type M was detected or an error that prevents RC Gate     operation was detected at power on.
		Displayed only when an error is detected while RC Gate is operating.
		SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		SP settings invalid
		Modem connector disconnected
		Modem board disconnected
		Wireless LAN card disconnected
		Check the following SPs.
		SP5-816-156 (Remote Service: Dial Up User Name)
		SP5-816-157 (Remote Service: Dial Up Password)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650 -04	С	Remote Service Modem Communication Error (dialup failing because of incorrect modem configuration)
		An error related to communication (dialup connection, modem board etc.)     using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on.
		Displayed only when an error is detected while RC Gate is operating.
		SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		SP settings invalid
		Modem connector disconnected
		Modem board disconnected
		Wireless LAN card disconnected
		Software bug.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650 -05	С	Remote Service Modem Communication Error (insufficient current or connection fault)
		An error related to communication (dialup connection, modem board etc.)     using the RC Gate Type M was detected or an error that prevents RC Gate     operation was detected at power on.
		Displayed only when an error is detected while RC Gate is operating.
		SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		SP settings invalid
		Modem connector disconnected
		Modem board disconnected
		Wireless LAN card disconnected
		The line is not supported and nothing can be done.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650 -13	С	Remote Service Modem Communication Error (RC Gate Type M was installed but modem is not present (detected during operation))
		An error related to communication (dialup connection, modem board etc.)     using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on.
		Displayed only when an error is detected while RC Gate is operating.
		SC is not issued if an error occurs during RC Gate installation (because this error can be referred by using SP).
		SP settings invalid
		Modem connector disconnected
		Modem board disconnected
		Wireless LAN card disconnected
		If a modem board is not installed, install it.
		Check again if the modem driver configurations (SP5-816-160, SP5-816-165 to 171, and SP5-816-165 to 171) are correct.
		If the problem is not solved, replace the modem.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650 -14	С	Remote Service Modem Communication Error (RC Gate Type N was installed but modem is present or wired/wireless LAN is not working correctly)
		An error related to communication (dialup connection, modem board etc.)     using the RC Gate was detected or an error that prevents RC Gate operation     was detected at power on.
		Displayed only when an error is detected while RC Gate is operating.
		SC is not issued if an error occurs during RC Gate installation (because this error can be referred by using SP).
		SP settings invalid
		Modem connector disconnected
		Modem board disconnected
		Wireless LAN card disconnected
		<ul><li>If a modem board is attached, remove it.</li><li>Check if wired/wireless LAN works.</li></ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
651	С	Illegal Remote Service Dial-up (Chat program execution error)
-02		An unexpected error occurred when RC Gate dialed up the NRS Center.
		Software bug
		Logging only.

No. Туре Details (Symptom, Possible Cause, Troubleshooting Procedures) 652-Α Remote service ID2 mismatching 00 There was an authentication mismatch between ID2 for @Remote, the controller board, and NVRAM. Used controller board installed Used NVRAM installed (such action is not allowed.) • If this occurs during RC Gate installation: Check the validity of the certificate and the NVRAM, check the machine serial number, write the common certificate, and then begin installation again. If this occurs after RC Gate installation: Clear the RC Gate install status, check the validity of the certificate and the NVRAM, check the machine serial number, write the common certificate, and then begin installation again.

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
653	Α	Incorrect remote service ID2
-00		ID2 stored in the NVRAM has either of the following problems.
		Number of characters is not 17.
		Includes a character that cannot be printed.
		All spaces
		• NULL
		Replace the NVRAM.
		Clear the RC Gate install status, write the common certificate, and then begin installation again.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
664	-	ASIC – SRAM Communication error
-01		When the machine starts or returns from the energy saver mode, a connection error signal between ASIC and SRAM device is detected.
		Defective BiCU
		Cycle the power off/on.
		Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
665	-	Master control signal connection error
-05		Musier control signal confiection end
-06	-	IPU/IOB control signal connection error
-07	-	IPU control signal connection error
-11	D	ASIC connection error
-21	D	ASIC connection error
-31	D	ASIC connection error

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		When the machine starts or returns from the energy saver mode, a connection error signal between CPU and slave device is detected, or the machine cannot access all I/O IPU-ASICs correctly.
		SC665-11 through -031: When the machine starts or returns from the energy saver mode, a connection error between CPU and ASIC is detected.
		Incorrect FFC connection
		2. Damaged FFC (disconnection or dust)
		3. BiCU failure (Deteriorated board, sticking dust, or damaged parts)
		Cycle the power off/on.
		Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
667	D	Master device mode setting error
-01		When the machine starts or returns from the energy saver mode, a CPU mode setting error is detected.
		BiCU failure
		Cycle the power off/on.     Replace the BiCU.
-10	D	Slave device 1 mode setting error
		When the machine starts or returns from the energy saver mode, an error in the slave device 1 is detected.
		BiCU failure
		Cycle the power off/on.
		Replace the BiCU.
-20	D	ASIC operation mode setting error
		-
		BiCU failure
		Cycle the power off/on.
		Replace the BiCU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
669	D	EEPROM error
-00		The TD sensor cannot be recovered after retrying three times for EEPROM communication error.
		Corrupted data due to noise
		Incorrect EEPROM installation
		Defective EEPROM
		Defective BiCU
		1. Cycle the main power off/on.
		2. Turn the main power off and re-insert the EEPROM, then turn the main power
		on.
		Turn the main power off and replace the EEPROM, then turn the main power on.
		4. Turn the main power off and replace the BiCU, then turn the main power on.

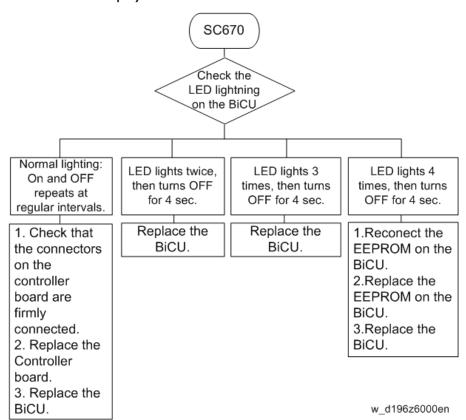
No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
670	D	Engine start up error (* Refer to "When SC670 Is Displayed" below)
-00		Case 1
		<ul> <li>/ENGRDY signal was not asserted when the machine was turned on or returned from energy saver mode.</li> </ul>
		<ul> <li>/IPURDY signal was not asserted when the machine was turned on or returned from energy saver mode.</li> </ul>
		EC response was not received within specified time from power on.
		PC response was not received within specified time from power on.
		SC response was not received within specified time from power on.
		Writing to Rapi driver failed (the other party not found through PCI).
		Case 2
		Unexpected down status was detected after /ENGRDY assertion.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Case 1
		Engine board does not start up.
		Case 2
		Engine board reset unexpectedly.
		Check the connection between the engine board and the controller board.
		<ul> <li>If it is always reproduced, replace the engine board. If the problem persists, consider replacing the controller board or other boards between them.</li> </ul>
		If reproducibility is low, multiple causes are to be considered, such as software, engine board, controller board, and PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
670 -01	D	Engine start up error when main power switch on (* Refer to "When SC670 Is Displayed" below)
		/ENGRDY signal was not asserted when the machine was turned on or returned from energy saver mode.
		EC response was not received within specified time from power on.
		PC response was not received within specified time from power on.
		SC response was not received within specified time from power on.
		Writing to Rapi driver failed (the other party not found through PCI).
		Engine board does not start up.
		Check the connection between the engine board and the controller board.
		<ul> <li>If it is always reproduced, replace the engine board. If the problem persists, consider replacing the controller board or other boards between them.</li> </ul>
		If reproducibility is low, multiple causes are to be considered, such as software, engine board, controller board, and PSU.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
670 -02	D	Engine is down when machine starts up (SC reboot can not be performed) (* See "When SC670 Is Displayed" below)
		Machine-down was detected after the /ENGRDY signal was not asserted.
		The engine board was reset at an unexpected time
		Check the connection between the engine board and the controller board.
		<ul> <li>If it is always reproduced, replace the engine board. If the problem persists, consider replacing the controller board or other boards between them.</li> </ul>
		If reproducibility is low, multiple causes are to be considered, such as software, engine board, controller board, and PSU.

#### When SC670 is Displayed



No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672	D	Controller start up error
-00		After the machine was powered on, communication between the controller and the operation panel was not established.
		Controller stalled
		Board installed incorrectly
		Controller board defective
		Operation panel connector loose, broken or defective
		Controller late
		Cycle the main power off and on.
		Check the connection of the controller board.
		Replace the controller board.
		Check the control panel harness.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672	D	Controller start up error
-10		After the machine was powered on, communication between the controller and the operation panel was not established.
		Controller stalled
		Board installed incorrectly
		Controller board defective
		Operation panel connector loose, broken or defective
		Controller late
		Cycle the main power off and on.
		Check the connection of the controller board.
		Replace the controller board.
		Check the control panel harness.

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### SC672-11 RTB 74

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672	D	Controller start up error
-11		After the machine was powered on, communication between the controller and the operation panel was not established, or communication with controller was interrupted after a normal startup.
		Controller stalled
		Board installed incorrectly
		Controller board defective
		Operation panel connector loose, broken or defective
		Controller late
		Incorrect Dip Switch Setting on Smart Operation Panel
		Cycle the main power off and on.
		Check the connection of the controller board.
		Replace the controller board.
		Check the control panel harness.
		Make sure that only DIP switch number 3 is ON.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672	D	Controller start up error
-12		Communication with controller was interrupted after a normal startup.
		Controller stalled
		Board installed incorrectly
		Controller board defective
		Operation panel connector loose, broken or defective
		Controller late
		Cycle the main power off and on.
		Check the connection of the controller board.
		Replace the controller board.
		Check the control panel harness.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672	D	Controller start up error
-13		The operation panel detects that the controller is down due to other reason shown in SC672-10, SC672-11, and SC672-12.
		Controller stalled
		Board installed incorrectly
		Controller board defective
		Operation panel connector loose, broken or defective
		Controller late
		Cycle the main power off and on.
		Check the connection of the controller board.
		Replace the controller board.
		Check the control panel harness.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672	D	Controller start up error
-99		The operation panel software ended abnormally.
		Controller stalled
		Board installed incorrectly
		Controller board defective
		Operation panel connector loose, broken or defective
		Controller late
		Cycle the main power off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
673	D	Operation panel Flair communication error (Smart Operation Panel)
-10		This SC is issued only for the machine that has the Smart Operation Panel installed.
		Communication between Smart Operation Panel and main machine (this is called "Flair communication") is not sent to Smart Operation Panel.
		SP setting (SP5-748-201) for Smart Operation Panel is not activated.
		The CATS module (controller) did not see the response to notification of monitoring service module (operation panel)
		Cycle the main power off and on.
		Set SP5-748-201 to "1: Connect" if the value is "0: Not connect"

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
681	D	Toner bottle: IDChip Communication error
_**		<ul> <li>Corrupted ID data</li> <li>Disconnected ID chip</li> <li>No ID chip</li> <li>Noise</li> </ul>
		<ul> <li>Clean the ID chip.</li> <li>Replace the communication board on the toner bottle.</li> <li>Replace the toner bottle.</li> <li>Cycle the power off/on.</li> <li>Replace the BiCU.</li> </ul>

SC681 D	GC681 Details				
N	0.	Detail	Causes		
	01 - 04	Invalid device ID	Noise, Incorrect connection, Malfunction		
	06 - 09	Channel error	Noise, Incorrect connection, Malfunction		
	11 - 14	Device Error	Noise, Incorrect connection		
401	16 - 19	Communication error (interrupted)	Noise, Incorrect connection		
681	21 - 24	Communication timeout	Noise, Incorrect connection, Malfunction		
	26 - 29	Device stops (logically)	Noise, Incorrect connection, Malfunction		
	31 - 34	Full of buffer (request)	Noise, Incorrect connection, Malfunction		
	36 - 39	Verification error	Noise, Incorrect connection		



- If the last digit of the SC's branch number (-\*\*) is:
  - 1 or 6, then do the above steps for K
  - 2 or 7, then do the above steps for M
  - 3 or 8, then do the above steps for C
  - 4 or 9, then do the above steps for Y

TD sensor communication error
TD sensor cannot be recovered after retrying three times for an ID chip communication error.
<ul> <li>Corrupted ID data</li> <li>Disconnected ID chip</li> <li>No ID chip</li> <li>Noise</li> </ul>
Turn the main power off, and then do the following.  1. Remove the PCU and check the connector condition.  2. Re-insert the harness (BiCU side) between the BiCU and the TD sensor.  3. Replace the PCDU (if the TD sensor works incorrectly)  4. Replace the harness between the BiCU and the TD sensor.  5. Replace the BiCU.  Check the SC's branch number (-** part) and do the above steps for the corresponding color.  • If the last digit of the SC's branch number (-**) is:  1 or 6, then do the above steps for M  3 or 8, then do the above steps for C

N	0.	Description	Cause
	01 - 04	Invalid device ID	Noise, Incorrect connection, Malfunction
	06 - 09	Channel error	Noise, Incorrect connection, Malfunction
	11 - 14	Device Error	Noise, Incorrect connection
	16 - 19	Communication error (interrupted)	Noise, Incorrect connection
682	21 - 24	Communication timeout	Noise, Incorrect connection, Malfunction
	26 - 29	Device stops (logically)	Noise, Incorrect connection, Malfunction
	31 - 34	Full of buffer (request)	Noise, Incorrect connection, Malfunction
	36 - 39	Verification error	Noise, Incorrect connection
	51	Verification error (during storing to EEPROM)	Noise
	52	Verification error (SRAM)	Noise

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
687	D	Memory address (PER) command error
-00		The BiCU 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 BiCU
		1. Check if the controller is firmly connected to the BiCU.
		2. Replace the controller
		3. Replace the BiCU

## SC7xx: Peripherals

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
790	D	Too many paper tray units
-00		An attachment identification code is other than "01H" or "02H".
		Number of paper tray units is more than the machine specification.
		1. Reduce the number of paper tray units within the machine specification.

# SC8xx: Overall System

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
816	[0x0000]	Energy save I/O subsystem error
-01	D	Subsystem error
-02	D	Sysarch (LPUX_GET_PORT_INFO) error
-03	D	Transition to STR was denied.
-04	D	Interrupt in kernel communication driver
-05	D	Preparation for transition to STR failed.
-07	D	Sysarch (LPUX_GET_PORT_INFO) error
-08	D	Sysarch (LPUX_ENGINE_TIMERCTRL) error
-09	D	Sysarch (LPUX_RETURN_FACTOR_STR) error
-10 to 12	D	Sysarch (LPUX_GET_PORT_INFO) error
-13	D	open() error
-14	D	Memory address error
-15 to	D	open() error
-19	D	Double open() error

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-20	D	open() error
-22	D	Parameter error
-23, 24	D	read() error
-25	D	write () error
-26 to 28	D	write() communication retry error
-29, 30	D	read() communication retry error
-35	D	read() error
-36 to 94	D	Subsystem error
		Energy save I/O subsystem detected some abnormality.
		<ul> <li>Energy save I/O subsystem defective</li> <li>Energy save I/O subsystem detected a controller board error (non-response).</li> <li>Error was detected during preparation for transition to STR.</li> <li>Cycle the main power off and on.</li> </ul>
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
817	В	Monitor error: File detection / Digital signature error
-00		Bootloader cannot read any of diagnostic module, kernel, or root filesystem.
		In a bootloader SD card, the digital signature checking for any of diagnostic module, kernel, or root filesystem is failed.
		Any of the following items does not exist or is broken OS Flash ROM,     Diagnostic module in SD card, Kernel, Root filesystem
		Any of the following items is revised fraudulently: Diagnostic module in SD card, Kernel, Root filesystem
		<ul> <li>ROM update for controller system</li> <li>Use another booting SD card having a valid digital signature</li> </ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
818	D	Watchdog timer error
-00		The system program fell into a bus-hold state or an endless loop of the program interruption occurred, causing other process to stop.
		System program defective
		Controller board defective
		Optional board defective
		Cycle the main power off and on.
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
819	D	Kernel halt error [xxxx]: Detailed error code
		Due to a control error, a RAM overflow occurred during system processing.  One of the following messages was displayed on the operation panel.
	[0x5032]	HAIC-P2 error
		HAIC-P2 decompression error (An error occurred in the ASIC compression/decompression module.)
		The code data saved in the HDD was broken for an unexpected reason. (HDD device defective)
		The code data saved to memory was broken for an unexpected reason. (Memory device defective)
		ASIC defective
		Data other than code data was unzipped due to a software malfunction.
		Cycle the main power off and on.
		Replace the HDD.
		Replace the memory
		Replace the controller board.
		Fix the software
	[0x6261]	HDD defective
		Received file system data was broken even if the initialization succeeds and there was no error reply from the HDD.
		Power supply disconnection during data writing to the HDD.
		Replace the HDD.
		This SC may occur when turning on the machine for the first time with a new HDD. In this case, turn the main power off/on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	[0x696e]	gwinit processing end
		If the SCS process is ended for some reason
		If an unexpected error occurs at SCS processing end, gwint processing also halts (this result is judged a kernel stop error, by gwinit specification)  "0x69742064" -> "init died"
		Cycle the main power off and on.
	[0x766d]	VM full error
		Occurs when too much RAM is used during system processing
		"vm_pageout: VM is full"
		Cycle the main power off and on.
	Console string	Other error (characters on operation panel)
		System detected internal mismatch error
		<ul> <li>Software defective</li> <li>Insufficient memory</li> <li>Hardware driver defective (RAM, flash memory)</li> </ul>
		Replace with a larger capacity RAM, or flash memory.      Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	С	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[0001]	TLB change (store) exception error
	[0002]	TLB miss (load) exception error
	[0003]	TLB miss (store) exception error
	[0004]	Read address exception error
	[0005]	Write address exception error
	[0006]	Instruction bus exception error
	[0007]	Data bus exception error
	[8000]	System call exception error
	[0009]	Break exception error
	[000A]	Invalid instruction exception error
	[000B]	Co-processor exception error
	[000C]	Overflow exception error
	[000D]	UTLB miss exception error
	[0010]	Interrupt line 0 error
	[0011]	Interrupt line 1 error
	[0012]	Interrupt line 2 error
	[0013]	Interrupt line 3 error
	[0014]	Interrupt line 4 error
	[0015]	Interrupt line 5 error

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Unexpected exception or interrupt occurred
		<ul> <li>CPU device error</li> <li>The boot monitor program or self-diagnostic program is broken.</li> </ul>
		Replace the controller board     Reinstall the controller system software.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	С	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[00FF]	Uninitialized interrupt error
		Cache error (such as a parity error) occurred.
		CPU device error
		Local bus defective
		Cycle the main power off and on.
		Reinstall the controller system software.
		Replace the controller board
		Replace the peripherals.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	С	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[0601]	Read address exception error
	[0602]	Write address exception error
	[0605]	System call exception error
	[0606]	Break exception error
	[0607]	Invalid instruction exception error
	[0609]	Overflow exception error
		Exception does not occur though executing exception by intention.
		CPU device error
		Replace the controller board

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	С	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[060A]	Interrupt line 0 mask exception error
	[060B]	Interrupt line 1 mask exception error
	[060C]	Interrupt line 2 mask exception error
	[060D]	Interrupt line 3 mask exception error
	[060E]	Interrupt line 4 mask exception error
		Interrupt does not occur though setting interrupt by timer.
		CPU device error
		ASIC device error
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820 -00	С	Self-diagnostics error: CPU [XXXX]: Detailed error code
	[0610]	CPU interrupt timer 2 set error
		Interrupt does not occur though setting interrupt by CPU interrupt timer.
		CPU device error
		Replace the controller board

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	С	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[0612]	ASIC interrupt error
		Interrupt occurs in an ASIC.
		ASIC device error
		Peripherals device error
		Replace the controller board
		Replace the peripherals

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	С	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[06FF]	CPU master clock error
		Pipeline clock frequency ratio of CPU is different from specified value.
		CPU device error
		Module bit that initializes the CPU is defective
		Replace the controller board.

Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
D	Self-diagnostics error: CPU
	[XXXX]: Detailed error code
[0702]	Instruction cache error
	The program executed in the instruction cache result was different from expected.
	CPU cache defective     Memory too slow
	Replace the controller board     Replace the memory device.
	D

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	D	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[0703]	Instruction uncache error
	[0704]	Instruction cache hit error
	[0705]	Instruction cache clear error
		Data in the instruction cache which is set in the primary instruction cache of the CPU is different from the contents of the pre-set
		-
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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	D	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[0706]	Data cache capacity error
	[0707]	Data cache error
	[0708]	Data uncache error
		Data in the data cache which is set in the primary data cache of the CPU is different from the contents of the pre-set
		-
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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	D	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[0801]	TLB virtual address error
	[0804]	TLB global error
	[0807]	UTLB miss error
	[8080]	TLB read miss error
	[0809]	TLB write miss error
	[A080]	TLB modify error
		Error occurred during TLB checking.
		CPU device error

Replace the controller board

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820	D	Self-diagnostics error: CPU
-00		[XXXX]: Detailed error code
	[4002]	Single precision arithmetic error
	[4003]	Double precision arithmetic error
	[4004]	Exception error
	[4005]	Exception mask error
		Error occurred during a calculation with the co-processor in the CPU.
		CPU device error
		Replace the controller board

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
821	D	Self-diagnostics error: ASIC
-00		[xxxx]: Detailed error code
	[OBOO]	ASIC register check error
		The write-&-verify check has occurred in the ASIC.
		Defective ASIC device
		Replace the controller board.
	[OBO6]	ASIC detection error
		Error in the I/O ASIC for system control detection
		Defective ASIC
		Defective North Bridge and PCII/F
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	[0D05]	Comparison error of CPU and ASIC timer
		The CPU checks if the ASIC timer works correctly compared with the CPU timer. If the ASIC timer does not function in the specified range, this SC code is displayed.
		Defective ASIC timer device     Defective CPU device
		Replace the controller board.
	[50A1]	Video bridge device detection error
		Video bridge device is not detected.
		Video bridge device ASIC (HARP or KLAVIER) defective.
		<ul> <li>Connection error between PCI I / F of the controller ASIC and video bridge device ASIC.</li> </ul>
		Replace the controller board
	[50A2]	Video bridge device (ASIC) register error
		The CPU detects the video bridge device, but detects error data from the video bridge device.
		Defective I/F between the video bridge device and the controller
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
822 -00	D	Self-diagnostic error: HDD [xxxx]: Detailed error code
	[3003]	HDD timeout
		Check performed only when HDD is installed:  • HDD device busy for over 31sec.
		After a diagnostic command is set for the HDD, but the device remains busy for over 6sec.
		HDD defective
		HDD harness disconnected, defective
		Controller board defective
		Replace the HDD.
		Replace the HDD connector.
		Replace the controller board.
	[3004]	Diagnostic command error
		No response to the self-diagnostic command from the ASIC to the HDD.
		HDD defective
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	[3013]	HDD timeout (first machine)
		HDD device busy for over 31 seconds.  A diagnostic command is set for the HDD, but the device remains busy for over 6 seconds.
		Defective HDD device
		Defective HDD connector
		Defective ASIC device
		Replace or remove the HDD device.
		Replace the HDD connector
		Replace the controller board
	[3014]	Diagnostics command error (First machine)
		Result of the issuance of diagnostic command is error.
		Defective HDD device
		Replace the HDD device.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
823	В	Self-diagnostics error: NIC
-00		[XXXX]: Detailed error code
	[6101]	MAC address check sum error
		The result of the MAC address check sum does not match the check sum stored in ROM.
		Defective SEEP ROM
		Defective I2C bus (connection)
		Replace the controller board.
	[6104]	PHY IC error
		The PHY IC on the controller cannot be correctly recognized.
		Defective PHY chip
		Defective ASIC MII I/F
		Replace the controller board.
	[6105]	PHY IC loop-back error
		An error occurred during the loop-back test for the PHY IC on the controller.
		PHY chip
		Defective MAC of ASIC (SIMAC/COMIC/CELLO)
		Defective I/F with the PHY board
		Defective solder on the PHY board
		Replace the controller board.

Details (Symptom, Possible Cause, Troubleshooting Procedures)

	82/	D	Selt-diagnostic error: RAM
	-00		[XXXX]: Detailed error code
		[0201]	Resident memory verification error
			Error detected during a write/verify check for the standard RAM*1 on controller board.
			*1 Standard RAM on controller (2GB) in this machine is divided into the resident RAM (1GB) and the optional RAM (1GB).
			Defective memory device (on the controller board).
			Replace the controller board.
		[0202]	Resident memory structure error
			The SPD values in all RAM DIMM are incorrect or unreadable.
			Defective RAM DIMM
			Defective SPD ROM on RAM DIMM

• Defective 12C bus

Replace the controller board.

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Туре

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
828	D	Self-diagnostic error: ROM
-00		[xxxx]: Detailed error code
	[0101]	Check sum error 1
		The boot monitor and OS program stored in the ROM DIMM is checked. If the check sum of the program is incorrect, this SC code is displayed.
		Defective flash ROM device     Defective CPU device
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
829	D	Self-diagnostic error: Optional RAM
-00		[XXXX]: Detailed error code
	[0401]	Optional RAM 1: verify error
		In this machine, the standard RAM on the controller (2GB) is divided into the resident RAM (1GB) and the optional RAM (1GB).
		Defective memory device (on the controller board).
		Replace the controller board.
	[0402]	Optional RAM 1: structure error
		Every time the main power turns on, structures of the optional RAM are checked. If an error is detected at this time, the self-diagnostic module will not check the optional RAM.
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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
833	D	Self-diagnostic error: Engine I/F ASIC
-00		[XXXX]: Detailed error code
	[OF30]	Engine I/F ASIC detection error
		ASIC (Mandolin) for engine control could not be detected.
		ASIC (Mandolin) error
		Replace the Engine I/F board (mother board).
	[50B1]	Video device: clock generator detection error
		Could not initialize or read the bus connection.
		Defective connection bus
		Defective SSCG
		Replace the Engine I/F board (mother board).
	[50B2]	Video device: clock generator verify error
		Value of the SSCG register is incorrect.
		Defective connection bus
		Defective SSCG
		Replace the Engine I/F board (mother board).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
834	D	Self-diagnostic error: Optional memory
-00	[5101]	Engine I/F optional memory verify error
		An error occurs after write/verify check for optional RAM on the engine I/F board (mother board).
		Defective memory device
		Replace the Engine I/F board (mother board).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
835	В	Self-diagnostic error: Centronic device
-00		[xxxx]: Detailed error code
	[1102]	Verify error
		The loopback connector is connected but check results is an error.
		IEEE1284 connector error
		Centronic loopback connector defective
		Replace the controller board.
	[110C]	DMA verify error
		The loopback connector is connected but check results is an error.
		ASIC device error
		IEEE1284 connector error
		Centronic loopback connector is defective
		Replace the controller board.
	[1120]	Loopback connector not detected
		Centronic loopback connector is not connected for detailed self-diagnostic test.
		Centronic loopback connector not connected correctly
		Centronic loopback connector is defective
		ASIC device is defective
		Connect the centronic loopback connector
		Replace the centronic loopback connector
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
838	С	Self-diagnostic Error: Clock Generator
-00		[xxxx]: Detailed error code
	[2701]	Verify error
		A verify error occurred when setting data was read from the clock generator via the I2C bus.
		Defective clock generator
		Defective I2C bus
		Defective I2C port on the CPU
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
839	D	Self-diagnostic Error: Serial Flash [xxxx]: Detailed error code
	[9001]	Serial Flash access error
		USB NAND Flash ROM cannot be read.
		Defective controller board
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
840	D	EEPROM access error
-00		During the I/O processing, a reading error occurred. The 3rd reading failure causes this SC code.
		During the I/O processing, a writing error occurred.
		Defective EEPROM
		-

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
841	D	EEPROM read data error
-00		Mirrored data of the EEPROM is different from the original data in EEPROM.
		Data in the EEPROM is overwritten for some reason.
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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
842	D	Insufficient Nand-Flash blocks (threshold exceeded)
-01		At startup, or when machine returned from low power mode, the Nand-Flash status was read and judged that the number of unusable blocks had exceeded threshold, and then SCS generated the SC code.
		Number of unusable blocks exceeded threshold for Nand-Flash
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
842	D	Number of Nand-Flash block deletions exceeded
-02		At startup, or when the machined returned from low power mode, the Nand-Flash was read and judged that the number of deleted blocks had exceeded threshold, and then SCS generated this SC code.
		Number of blocks deleted exceeded threshold for Nand-Flash
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
853	В	Bluetooth device connection error
-00		The Bluetooth hardware (USB type) was connected after the machine was turned on.
		The Bluetooth hardware (USB type) was connected after the machine was turned on.
		Always connect the Bluetooth device (USB type) before the machine is turned on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
854	В	Bluetooth device disconnected
-00		The Bluetooth hardware (USB type) was disconnected after the machine was turned on.
		The Bluetooth hardware (USB type) was disconnected after the machine was turned on.
		Never remove Bluetooth (USB type) after machine starts

١	۷o.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	855	В	Wireless LAN board error (driver attachment failure)
	-01		Wireless LAN board error (wireless LAN card: 802.11 is covered)
			Defective wireless LAN board
			Loose connection
			Cycle the main power off and on.
			Replace wireless LAN board

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
855	В	Wireless LAN board error (driver initialization failure)
-02		Wireless LAN board error (wireless LAN card: 802.11 is covered)
		Defective wireless LAN board
		Loose connection
		Cycle the main power off and on.
		Replace wireless LAN board

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
857	В	USB I/F Error
-00		The USB interface is unusable because of a driver error.
		USB driver error (There are three causes of USB error: RX error/CRC error/STALL. SC is issued only in the case of STALL.)
		Check USB connection.      Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
858	А	Data encryption conversion error (Key Setting Error)
-00		A serious error occurred during an attempt to update the encryption key.
		USB Flash, other data, corrupted
		Communication error caused by electrostatic noise
		Controller board defective
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
858	А	Data encryption conversion error (HDD Key Setting Error)
-01		A serious error occurred during an attempt to update the encryption key.
		USB Flash, other data, corrupted
		Communication error caused by electrostatic noise
		Controller board defective
		Cycle the main power off and on
		If the error persists, replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
858	Α	Data encryption conversion error (NVRAM Before Replace Error)
-30		A serious error occurred after data conversion during an attempt to update the encryption key.
		Software error such as conversion parameters being invalid.
		Cycle the main power off and on.
		If the error persists, replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
858	Α	Data encryption conversion error (Other Error)
-31		A serious error occurred after data conversion during an attempt to update the encryption key.
		Controller board defective
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)				
859	В	Data encryption conversion HDD conversion error				
-00		When the data encryption key was updated, HDD data was converted, but not correctly. Image displayed at conversion only (this SC is not displayed), but SC is displayed after machine is cycled off/on.				
		HDD conversion was set with the data encryption key update function, but the HDD was removed.				
						Machine lost power during data encryption key update
			Electrostatic noise, or an HDD error occurred, during data encryption key update, and data was not encrypted.			
		Check HDD connection.				
		Format the HDD.				
		If there is a problem with the HDD, it has to be replaced.				

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
859	В	Data encryption conversion HDD conversion error (HDD check error)
-01		When the data encryption key was updated, HDD data was converted, but not correctly. Image displayed at conversion only (this SC is not displayed), but SC is displayed after machine is cycled off/on.
		HDD conversion was set with the data encryption key update function, but the HDD was removed.
		Machine lost power during data encryption key update
		Electrostatic noise, or an HDD error occurred, during data encryption key update, and data was not encrypted.
		Check HDD connection.
		Format the HDD.
		If there is a problem with the HDD, it has to be replaced.

	859 -10	В	Data encryption conversion HDD conversion error (Data read/write command error)
			When the data encryption key was updated, HDD data was converted, but not correctly. Image displayed at conversion only (this SC is not displayed), but SC is displayed after machine is cycled off/on.
			Details:
			Abnormal DMAC return value has been received two or more times (DMAC timeout, serial communication error etc.)
			HDD was not successfully converted during encryption key update due to HDD errors or cable noises.

• If there is a problem with the HDD, it has to be replaced.

Check HDD connection.

• Format the HDD.

Details (Symptom, Possible Cause, Troubleshooting Procedures)

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No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
860	В	HDD startup error at main power on (HDD error)
-00		The HDD is connected but the driver detected the following errors.
		<ul> <li>SS_NO.T_READY:/* (-2)HDD does not become READY*/</li> </ul>
		<ul> <li>SS_BAD_LABEL:/* (-4)Wrong partition type*/</li> </ul>
		<ul> <li>SS_READ_ERROR:/* (-5)Error occurred while reading or checking the label*/</li> </ul>
		<ul> <li>SS_WRITE_ERROR:/* (-6)Error occurred while writing or checking the label*/</li> </ul>
		SS_FS_ERROR:/* (-7)Failed to repair the filesystem*/
		<ul> <li>SS_MOUNT_ERROR:/* (-8)Failed to mount the filesystem*/</li> </ul>
		<ul> <li>SS_COMMAND_ERROR:/* (-9)Drive not responding to command*/</li> </ul>
		SS_KERNEL_ERROR:/* (-10)Internal kernel error*/
		SS_SIZE_ERROR:/* (-11)Drive size too small*/
		SS_NOPARTITION:/* (-12)The specified partition does not exist*/
		SS_NOFILE:/* (-13)Device file does not exist*/
		Attempted to acquire HDD status through the driver but there has been no response for 30 seconds or more.
		Unformatted HDD
		Label data corrupted
		HDD defective
		Format the HDD through SP mode.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
863	D	HDD data read failure
-01		The data written to the HDD cannot be read normally.
		Bad sectors were generated during operation.  (An error occurred in an area that does not belong to a partition, such as the disk label area.)
		Guide for when to replace the HDD
		1. When SC863 has occurred ten times or more
		The interval is short.
		<ul> <li>Repeatedly occurs in the same situation (At power-on, etc.).</li> </ul>
		Startup takes a long time when the main power is turned on.
		It takes a long time after main power on for the operation panel to become ready.
		HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
863	D	HDD data read failure
-02		The data written to the HDD cannot be read normally.
to 23		Bad sectors were generated during operation.  (An error occurred in partition "a" (SC863-02) to partition "v" (SC863-23)).
		Guide for when to replace the HDD  1. When SC863 has occurred ten times or more
		The interval is short.
		<ul> <li>Repeatedly occurs in the same situation (At power-on, etc.).</li> </ul>
		<ul> <li>Startup takes a long time when the main power is turned on.</li> </ul>
		It takes a long time after main power on for the operation panel to become ready.
		HDD access may be consuming time. Normal HDD access time after main power on is about 5 seconds. If the machine is not waiting for the engine to be ready and it still takes 20 to 30 seconds or more, the HDD may be the cause. If there is a problem with the HDD, HDD-related SCs such as SC860 and SC863 will occur frequently. Print the SC log data and check them.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
864	D	HD data CRC error
-00		During HD operation, the HD cannot respond to a CRC error query. Data transfer did not execute normally while data was being written to the HD.
		HD defective
		-

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
864	D	HDD data CRC error
-01		During HDD operation, the HDD cannot respond to a CRC error query. Data transfer did not execute normally while data was being written to the HDD.
		Bad sectors were generated during operation.  (An error occurred in an area that does not belong to a partition, such as the disk label area.)
		Format the HDD.     Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
864	D	HDD data CRC error
-02		During HDD operation, the HDD cannot respond to a CRC error query. Data
to 23		transfer did not execute normally while data was being written to the HDD.
		Bad sectors were generated during operation.
		(An error occurred in partition "a" (SC864-02) to partition "v" (SC864-23)).
		Format the HDD.
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
865	D	HD access error
-00		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error).
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
865-0	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error).
		(An error occurred in an area that does not belong to a partition, such as the disk label area.)
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
865 -02 to 23	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error).
		(An error occurred in partition "a" (SC865-02) to partition "v" (SC865-23)).
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
865	D	HDD time-out error
-50		The machine does not detect a reply from the HDD during the HDD operation.
to 73		The HDD does not respond to the read/ write command from the machine.
		Check the harness connections between the controller board and HDD.
		Replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
866	В	SD card authentication error
-00		A license error of an application that is started from the SD card was detected.
		Invalid program data is stored on the SD card.
		Store a valid program data on the SD card.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
867	D	SD card removed
-01		The SD card was removed while the machine is on.
		An application SD card has been removed from the slot (mount point of /mnt/sd1).
		Cycle the main power off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
867	D	SD card removed
-02		The SD card was removed while the machine is on.
		An application SD card has been removed from the slot (mount point of /mnt/sd2).
		Cycle the main power off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
868		SD card access error
868	D	The SD controller returned an error during operation.
-00		(An error occurred at the mount point of /mnt/sd0)
868	_	The SD controller returned an error during operation.
-01	D	(An error occurred at the mount point of /mnt/sd1)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		SD card defective
		SD controller defective
		Slot number is displayed on the sub code.
		Detail code is described in SMC print can confirm the details of the error.
		• -13 to -3: File system check error
		Otherwise (no code, -2) : Device access error
		SD card that starts an application
		<ol> <li>Turn the main power off and check the SD card insertion status.</li> </ol>
		<ol><li>If no problem is found, insert the SD card and turn the main power on.</li></ol>
		3. If an error occurs, replace the SD card.
		<ol><li>If the error persists even after replacing the SD card, replace the controller board.</li></ol>
		SD card for users
		<ol> <li>In case of a file system error, reformat the SD card (using the "SD Formatter" made by Panasonic).*</li> </ol>
		In case of a device access error
		1. Turn the main power off and check the SD card insertion status.
		If no problem is found, insert the SD card and turn the main power on.
		3. If an error occurs, use another SD card.
		<ol> <li>If the error persists even after replacing the SD card, replace the controller board.</li> </ol>

\* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
870 -00	В	Address Book data error (Anytime: Address Book Error.)
-01	В	Address Book data error (On startup: Media required for storing the Address Book is missing.)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-02	В	Address Book data error (On startup: encryption is configured but the module required for encryption (DESS) is missing.)
-03	В	Address Book data error (Initialization: Failed to generate a file to store internal Address Book.)
-04	В	Address Book data error (Initialization: Failed to generate a file to store delivery sender.)
-05	В	Address Book data error (Initialization: Failed to generate a file to store delivery destination.)
-06	В	Address Book data error (Initialization: Failed to generate a file to store information required for LDAP search.)
-07	В	Address Book data error (Initialization: Failed to initialize entries required for machine operation.)
-08	В	Address Book data error (Machine configuration: HDD is present but the space for storing the Address Book is unusable.)
-09	В	Address Book data error (Machine configuration: Inconsistency in the NVRAM area used for storing settings required for Address Book configuration.)
-10	В	Address Book data error (Machine configuration: Cannot make a directory for storing the Address Book in the SD/USB FlashROM.)
-11	В	Address Book data error (On startup: Inconsistency in Address Book entry number.)
-20	В	Address Book data error (File I/O: Failed to initialize file.)
-21	В	Address Book data error (File I/O: Failed to generate file.)
-22	В	Address Book data error (File I/O: Failed to open file.)
-23	В	Address Book data error (File I/O: Failed to write to file.)
-24	В	Address Book data error (File I/O: Failed to read file.)
-25	В	Address Book data error (File I/O: Failed to check file size.)
-26	В	Address Book data error (File I/O: Failed to delete data.)
-27	В	Address Book data error (File I/O: Failed to add data.)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-30	В	Address Book data error (Search: Failed to obtain data from cache when searching in the machine Address Book. delivery destination/sender.)
-31	В	Address Book data error (Search: Failed to obtain data from cache during LDAP search.)
-32	В	Address Book data error (Search: Failed to obtain data from cache while searching the WS-Scanner Address Book.)
-41	В	Address Book data error (Cache: failed to obtain data from cache.)
-50	В	Address Book data error (On startup: Detected abnormality of the Address Book encryption status.)
-51	В	Address Book data error (Encryption settings: Failed to create directory required for conversion between plaintext and encrypted text.)
-52	В	Address Book data error (Encryption settings: Failed to convert from plaintext to encrypted text.)
-53	В	Address Book data error (Encryption settings: Failed to convert from encrypted text to plaintext.)
-54	В	Address Book data error (Encryption settings: Detected data inconsistency when reading the encrypted Address Book.)
-55	В	Address Book data error (Encryption settings: Failed to delete file when changing encryption setting.)
-56	В	Address Book data error (Encryption settings: Failed to erase the file that records the encryption key during an attempt to change the encryption setting.)
-57	В	Address Book data error (Encryption settings: Failed to move a file during an attempt to change the encryption setting.)
-58	В	Address Book data error (Encryption settings: Failed to delete a directory during an attempt to change the encryption setting.)
-59	В	Address Book data error (Encryption settings: Detected a resource shortage during an attempt to change the encryption setting.)
-60	В	Address Book data error (Unable to obtain the on/off setting for administrator authentication (06A and later).)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		When an error related to the Address Book is detected during startup or operation.
		Software bug
		<ul> <li>Inconsistency of Address Book source location (machine/delivery server/ LDAP server)</li> </ul>
		<ul> <li>Inconsistency of Address Book encryption setting or encryption key (NVRAM or HDD was replaced individually without formatting the Address Book)</li> </ul>
		Address Book storage device (SD/HDD) was temporarily removed or hardware configuration does not match the application configuration.
		Address Book data corruption was detected.
		Install the device that contains address book information properly, and turn the main power off/on. If SC occurs again, do the following steps.
		1. After installing the HDD, or SD/USB ROM, execute SP5-846-046.
		2. Wait more than 3 seconds, thenexecute SP5-832.
		3. Cycle the main power off and on.
		Procedure after SC870 is cleared
		If there is backup data in SD card or Web Image Monitor, restore the address book data. (To restore from SD card, enter the encryption password which is the same as when you enter to backup.)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
871	D	FCU error
-00		An error occurred when FCS detects FCU defective.
		Time-out error
		Abnormal Parameter
		Cycle the main power off and on.
		Update the firmware if more recent firmware was released.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
872	В	HDD mail reception error
-00		An error was detected on the HDD immediately after the machine was turned on.
		HDD defective
		Power was turned off while the machine used the HDD.
		• Format the HDD (SP5-832-007).
		Replace the HDD.
		When you do the above, the following information will be initialized.
		Partly received partial mail messages.
		<ul> <li>Already-read statuses of POP3-received messages (All messages on the mail server are handled as new messages).</li> </ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
873	В	HDD mail reception error
-00		An error was detected on the HDD immediately after the machine was turned on.
		HDD defective
		Power was turned off while the machine used the HDD.
		• Format the HDD (SP5-832-007).
		Replace the HDD.
		When you do the above, the following information will be initialized.
		Sender's mail text
		Default sender name/password (SMB/FTP/NCP)
		Administrator mail address
		Scanner delivery history

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
874	D	Delete all error (Delete data area) : Read error
-05		
-06	D	Delete all error (Delete data area) : Write error
-09	D	Delete all error (Delete data area) : No response from HDD

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-10	D	Delete all error (Delete data area) : Error in Kernel
-12	D	Delete all error (Delete data area) : No designated partition
-13	D	Delete all error (Delete data area) : No device file
-14	D	Delete all error (Delete data area) : Start option error
-15	D	Delete all error (Delete data area) : No designated sector number
-16	D	Delete all error (Delete data area) : failure in performing hdderase
-41	D	Delete all error (Delete data area) : Other fatal errors
-42	D	Delete all error (Delete data area) : End by cancellation
-61	D	Delete all error (Delete data area) : library error
to -65		
-66	D	Delete all error (Delete data area) : Unavailable
-67	D	Delete all error (Delete data area) : Erasing not finished
-68	D	Delete all error (Delete data area) : HDD format failure (Normal)
-69	D	Delete all error (Delete data area) : HDD format failure (Abnormal)
-70	D	Delete all error (Delete data area) : Unauthorized library
-99	D	Delete all error (Delete data area) : other errors
		An error occurred while data was being erased on HDD or NVRAM.
		Error detected in HDD data delete program
		Error detected in NVRAM data delete program
		The "Delete All" option was not set
		<ul> <li>Turn the main power switch off and back on, and then execute "Erase All Memory" under UP mode again. (However, if there is a defective sector or other problem with the hard disk, the error will persist even after trying the above.)</li> </ul>
		If the "Delete All" option is not installed when this error occurs, install the option.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
875	D	
-01		Delete all error (HDD erasure) (hddchack –i error)
02	D	Delete all error (HDD erasure) (Data deletion failure)
		An error was detected before HDD/data erasure starts. (Failed to erase data/failed to logically format HDD)
		HDD logical formatting failed.
		The modules failed to erase data.
		Cycle the main power off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876	D	Log Data Error
-00		An error was detected in the handling of the log data at power on or during machine operation.
		<ul> <li>Damaged log data file.</li> <li>Log encryption is enabled but encryption module is not installed.</li> <li>Inconsistency of encryption key between NV-RAM and HDD.</li> <li>Software bug.</li> </ul>
		Try the SC876-01 to -99 solutions listed below. If it is not solved, do the following steps (for when only an HDD is replaced):
		Disconnect the HDD and turn on the main power.
		2. Execute SP5-801-019.
		3. Turn off the main power.
		4. Connect the HDD and turn on the main power.
		5. Execute SP5-832-004.
		6. Turn off the main power.
		* The following step is to configure the logging/encryption setting again.
		7. Turn on the main power.
		8. Set SP9-730-002 through -004 to 1.
		9. Cycle the main power off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876 -02	D	Log Data Error 2
		An error was detected in the handling of the log data at power on or during machine operation.
		Log encryption is enabled but encryption module is not installed.
		<ul><li>Replace or set again the encryption module.</li><li>Disable the log encryption setting.</li></ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876	D	Log Data Error 3
-03		An error was detected in the handling of the log data at power on or during machine operation.
		Inconsistency of encryption key between NV-RAM and HDD.
		Disable the log encryption setting.
		Initialize LCS memory (SP5801-019).
		Initialize the HDD (SP5-832-004).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876	D	Log Data Error 4
-04		An error was detected in the handling of the log data at power on or during machine operation.
		Log encryption key is disabled but the log data file is encrypted. (NVRAM data corruption)
		Log encryption key is enabled but the log data file is not encrypted. (NVRAM data corruption)
		Initialize the HDD (SP5-832-004).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876	D	Log Data Error 5
-05		An error was detected in the handling of the log data at power on or during machine operation.
		Only the NV-RAM has been replaced with one previously used in another machine.
		Only the HDD has been replaced with one previously used in another machine.
		Attach the original NV-RAM.
		Attach the original HDD.
		With the configuration that caused the SC, initialize the HDD (SP5-832-004).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876	D	Log Data Error 99
-99		An error was detected in the handling of the log data at power on or during machine operation.
		Other causes
		-

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
878	D	TPM authentication error
-00		TPM electronic recognition failure
		<ul> <li>Update of system module attempted without correct update path</li> <li>USB flash memory not operating correctly</li> </ul>
		Replace the controller board.

#### Trusted Platform Module

• In computing, Trusted Platform Module (TPM) is both the name of a published specification detailing a secure crypto processor that can store cryptographic keys that protect information, as well as the general name of implementations of that specification often called the "TPM chip" or "TPM Security Device" (as designated in certain Dell BIOS settings).

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
878	D	USB flash error
-01		There is a problem in the file system of the USB flash memory.
		USB Flash system files corrupted
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
878	D	TPM error
-02		An error occurred in either TPM or the TPM driver
		TPM not operating correctly
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
878	D	TCSD error
-03		An error occurred in the TPM software stack.
		TPM, TPM software cannot start
		A file required by TPM is missing
		Replace the controller board.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
880	D	MLB error
-00		Reply to MLB access was not returned within a specified time.
		MLB defective
		Replace the MLB.
		Remove the MLB.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
881	D	Management area error
-01		<ul> <li>A problem was detected in the software</li> <li>This error may even occur is an IC card option is not installed.</li> </ul>
		This is caused by accumulation of abnormal authentication information in the software. (User operation will not directly cause it.)
		At login
		Example: When a job is sent to the printer/when logged on from the operation panel/when logged on from a Web browser
		Cycle the main power off and on.

### SC9xx: Others

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
920	В	Printer application error (no response within determined time in Printing)
-00		
-01	В	Printer application error (Timeout during Printing)
-02	В	Printer Error 1 (WORK memory not acquired)
-03	В	Printer application error (Filter process not started)
-04	В	Printer Error 1 (Filter processing ended abnormally)

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		When an error is detected in the application, which makes continued operation impossible.
		Software bug     Unexpected hardware configuration (such as insufficient memory)
		<ul> <li>Cycle the main power off and on.</li> <li>Increase the memory storage capacity.</li> </ul>

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
921	В	Printer application error (Resident font not found)
-00		Resident font was not found at printer startup.
		Preinstalled font files not found.
		Cycle the main power off and on.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)
925	В	NetFile function error
-00		TVEH HE TOTICION ETTO
-01	В	NetFile function error
		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:
		<ul> <li>HDD defective</li> <li>Power loss while data was writing to HDD</li> <li>Software bug</li> </ul>
		See the table and the procedure below.

Here is a list of HDD status codes:

Display	Meaning			
(-1)	HDD not connected			
(-2)	HDD not ready			
(-3)	No label			
(-4)	Partition type incorrect			
(-5)	Error returned during label read or check			
(-6)	Error returned during label read or check			
(-7)	"filesystem" repair failed			
(-8)	"filesystem" mount failed			
(-9)	Drive does not answer command			
(-10)	Internal kernel error			
(-11)	Size of drive is too small			
(-12)	Specified partition does not exist			
(-13)	Device file does not exist			

#### Recovery from SC 925

#### Procedure 1

1. If the machine shows SC codes for HDD errors (SC860 to SC865) with SC 925, do the recovery procedures for SC860 to SC865.

#### Procedure 2

- 1. If the machine does not show one of the five HDD errors (SC860 to SC865), turn the machine power off and on.
- 2. If this is not the solution for the problem, then initialize the NetFile partitionon the HDD with SP5-832-11 (HDD Formatting Ridoc I/F).

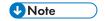
NetFiles: These are jobs printed from the document server using a PC and DeskTopBinder. Before you initialize the NetFile partitionon the HDD, tell the customer:

- Received faxes on the delivery server will be erased
- · All captured documents will be erased
- Desk Top Binder/Print Job Manager/Desk Top Editor job history will be erased
- Documents on the document server, and scanned documents, will not be erased.

- The first time that the network gets access to the machine, the management information must be configured again (this will use a lot of time).
- 3. Before you initialize the Netfile partition with SP5-832-11, do these steps:
- In the User Tools mode, do Document Management> Batch Delete Transfer Documents.
   Do SP5-832-11, and turn the machine off and on.

#### Procedure 3

- 1. If "Procedure 2" is not the solution for the problem, do SP5-832-1 (HDD Formatting All)
- 2. Cycle the machine off/on.



 SP5-832-001 erases all document and address book data on the hard disks. Consult with the customer before you do this SP code.

#### Procedure 4

1. If "Procedure 3" does not solve the problem, replace the HDD.

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)	
994	С	Application Item Error	
-00	The numbers of executed application items on the operation par maximum limit for the operation panel structure.		
Too many executed application items			
	Logging only		

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)			
997	D	Application function selection error			
The application has not responded to the within a certain period of time.		The application has not responded to the set command created by SCS within a certain period of time.			
		The application selected ended abnormally.			
		Software bug			
		Check whether an option required by the application (RAM, DIMM, board) is installed properly.			
		<ul> <li>Check whether downloaded applications are correctly configured. (Take necessary countermeasures specific to the application in which the error occurs. In some applications, the logs can be taken from the monitor. If this option is available, analyze the logs.)</li> </ul>			

No.	Туре	Details (Symptom, Possible Cause, Troubleshooting Procedures)																						
998	D	Application start error																						
-00		After power on, no application program is registered to the system within a predetermined period of time. (no application starts or ends normally.)																						
		<ul> <li>Even if they are started, all applications have become unable to be rendered due to an unknown defect.</li> </ul>																						
		Software bug																						
																								An option required by the application (RAM, DIMM, board) is not installed properly
			Turn the main power switch off and on.																					
		<ul> <li>Check whether an option required by the application (RAM, DIMM, board) is installed properly.</li> </ul>																						
		Check whether downloaded applications are correctly configured.																						
		Replace the Controller Board.																						

# **Process Control Error Conditions**

## **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.	<ul> <li>A cover was opened or the main switch was turned off during the initialization.</li> <li>Do the developer initialization again when done in SP mode. Reinstall the engine main firmware if the result is the same.</li> <li>Cycle the main power off and on when done at unit replacement.</li> </ul>
6	Vt error	Vt is more than 0.7V when Vcnt is 4.3V.	Make sure that the heat seal on the development unit is not removed.      Defective TD sensor
7	Vcnt error 1	Vcnt is less than 4.7V when Vcnt is Vt target ±0.2V.	<ol> <li>Defective TD sensor</li> <li>Vt target settings are not correct.</li> <li>Toner density error</li> </ol>
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.	<ol> <li>Make sure that the heat seal on the development unit is not removed.</li> <li>Defective TD sensor</li> </ol>
9	Vcnt error 3	Vcnt is less than 4.7V.	<ol> <li>Make sure that the heat seal on the development unit is not removed.</li> <li>Defective TD sensor</li> <li>Vt target settings are not correct.</li> <li>Toner density error</li> </ol>

• 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.

## Process Control Self-Check Result

Displayed number shows results of each color sensor check.

00000000 = YYCCMMKK

## SP3-012-001 to -010 (Process Control Execute 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 BICU board.  Vt minimum error:  1. Replace the development unit.  2. Replace the BICU board.
53	ID sensor coefficient (K5) detection error	Not enough data can be sampled.	<ul> <li>Solid image is not sufficient density:</li> <li>Retry the process control.</li> <li>Replace the ID sensors.</li> <li>Replace the BICU board.</li> <li>Solid image is O.K.</li> <li>Replace the ID sensors.</li> <li>Replace the BICU board.</li> <li>ID sensor is dirty:</li> <li>Clean the ID sensors.</li> <li>Retry the process control.</li> </ul>

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.	<ul> <li>ID sensor pattern density is too high or low.</li> <li>ID sensor or shutter is defective.</li> </ul> Same as 53
55	Gamma error: Maximum	Gamma is out of range. 5.0 < Gamma	<ul> <li>ID sensor pattern density is too high.</li> <li>Hardware defective.</li> </ul> Same as 53
56	Gamma error: Minimum	Gamma is out of range. Gamma < 0.15	<ul> <li>ID sensor pattern density is too low.</li> <li>Hardware defective.</li> <li>Same as 53</li> <li>Replace the toner supply pump unit.</li> </ul>
57	Vk error: Maximum	Vk is out of range. 150 < Vk	<ul> <li>ID sensor pattern density is too low.</li> <li>Hardware defective.</li> <li>Same as 53</li> </ul>
58	Vk error: Minimum	Vk is out of range. Vk < -150	<ul> <li>ID sensor pattern density is too high.</li> <li>Background dirty</li> <li>Hardware defective</li> <li>Same as 53</li> </ul>
59	Sampling data error during gamma correction	Not enough data can be sampled during the gamma correction.	<ul> <li>ID sensor pattern density is too high or low.</li> <li>Hardware defective</li> <li>Same as 53</li> </ul>
99	Unexpected error	Process control fails.	Power Failure Check the power source.

## SP3-323-001 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.	<ul> <li>Dirty ID sensor (toner, dust, or foreign material)</li> <li>Dirty transfer belt</li> <li>Scratched image transfer belt</li> <li>Defective ID sensor</li> <li>Poor connection</li> <li>Defective BICU</li> <li>Clean the ID sensor.</li> <li>Check the belt cleaning. Clean or replace the transfer belt.</li> <li>Replace the image transfer belt.</li> <li>Replace the ID sensor.</li> <li>Check the connection.</li> <li>Replace the BICU board.</li> </ul>
3	ID sensor output error	ID sensor output is more than "Voffset Threshold" (SP3-324-004)	<ul> <li>Defective ID sensor</li> <li>Poor connection</li> <li>Defective BICU</li> <li>Replace the ID sensor.</li> <li>Check the connection.</li> <li>Replace the BICU board.</li> </ul>
9	Vsg Adjustment error	Vsg adjustment has not been completed.	Other cases  Retry SP3-321-010.

## 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	Not done Line position adjustment has not been done.	
1	Completed successfully  Line position adjustment has correctly been done,		-
2	Cannot detect ID sensors have not detected the patterns for line patterns 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		-
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	-	-



• For details, see the "Troubleshooting Guide - Line Position Adjustment" section.

# **Troubleshooting Guide**

### **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).
- 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 bypass tray.



- When you print a test pattern, use the bypass 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	<ul> <li>Defective image processing unit</li> <li>Low density of test pattern</li> <li>Defective BiCU</li> <li>1. Replace the high voltage power supply unit.</li> <li>2. Do the forced process control (SP3-011-001) or supply some toner (SP3-030-xxx).</li> </ul>
	3. Replace the BiCU.
Normal image, but with color registration errors	<ul> <li>Defective ID sensor shutter</li> <li>Defective ID sensor</li> <li>Defective BiCU</li> </ul>
	<ol> <li>Replace the ID sensor shutter solenoid.</li> <li>Replace the ID sensor.</li> <li>Replace the BiCU.</li> </ol>

- Result: "1" in SP2-194-007
- One of results: "5" (Out of adjustable range) in SP2-194-010, -011, -012, -013

Test pattern check	Possible cause/Countermeasure	
The main scan registrations of M, C, Y, K are shifted by more than ±15.	Defective laser unit     Defective BiCU	
	<ol> <li>Perform the color skew adjustment (Image Adjustment).</li> <li>Replace the laser unit.</li> <li>Replace the BiCU.</li> </ol>	
The sub scan registrations of M, C, Y, K are shifted by more than ±20.	<ul> <li>Defective image transfer belt</li> <li>Defective drive units</li> <li>Defective BiCU</li> </ul>	
	<ol> <li>Replace the image transfer belt.</li> <li>Replace the drum motor.</li> <li>Replace the BiCU.</li> </ol>	

Test pattern check	Possible cause/Countermeasure
The main scan registration is shifted by more than ±0.66 mm, but only at the central area of the image on the output.	<ul> <li>Defective ID sensor at center</li> <li>Deformed center area on the image transfer belt</li> <li>Defective BiCU</li> </ul>
	<ol> <li>Replace the ID sensor.</li> <li>Replace the image transfer belt.</li> <li>Replace the BiCU.</li> </ol>
The skew for M, C, Y, K is more than ±0.75 mm.	<ul> <li>Defective PCDU</li> <li>Defective laser optics housing unit</li> <li>Defective BiCU</li> <li>1. Perform the color skew adjustment (Image Adjustment).</li> <li>2. Reinstall or replace the PCDU.</li> </ul>
	<ul><li>3. Replace the laser optics housing unit.</li><li>4. Replace the BiCU.</li></ul>
Others	<ul> <li>Skew correction upper limit error</li> <li>Defective BiCU</li> <li>Defective laser optics housing unit</li> </ul>
	<ol> <li>Perform the color skew adjustment (Image Adjustment).</li> <li>Replace the BiCU.</li> <li>Replace the laser optics housing unit.</li> </ol>

• Result: "1" in SP2-194-007

• Result: "0" in SP2-194-010, -011, -012, -013

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, -013

Test pattern check	Possible cause/Countermeasure
White image, Abnormal image, Low density	<ul> <li>Defective laser optics housing unit shutter</li> <li>Defective image processing unit</li> <li>Low density of test pattern</li> <li>Defective BiCU</li> <li>Replace the shutter motor.</li> <li>Replace the high voltage power supply unit.</li> <li>Do the forced process control (SP3-011-001) or supply some toner (SP3-030-xxx).</li> <li>Replace the BiCU.</li> </ul>
Normal image, but with color registration errors	<ul> <li>Defective ID sensor shutter</li> <li>Defective ID sensor</li> <li>Defective BiCU</li> <li>Replace the ID sensor shutter solenoid.</li> <li>Replace the ID sensor.</li> <li>Replace the BiCU.</li> </ul>

• 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 (SP3-030-xxx).	
The main scan registrations of M, C, Y, K are shifted by more than ±1.4.	<ul> <li>No defective component</li> <li>Defective laser optics housing unit</li> <li>Defective BiCU</li> </ul>	
	<ol> <li>Do SP2-111-003 again.</li> <li>Replace the laser optics housing unit.</li> <li>Replace the BiCU.</li> </ol>	

Test pattern check	Possible cause/Countermeasure
The sub scan registrations of M, C, Y are shifted by more than ±1.4mm from the sub scan registration of K.	<ul> <li>No defective component</li> <li>Defective image transfer belt</li> <li>Defective drive units</li> <li>Defective BiCU</li> <li>1. Do SP2-111-003 again.</li> <li>2. Replace the image transfer belt.</li> <li>3. Replace the drum motor.</li> <li>4. Replace the BiCU.</li> </ul>
The main scan registration is shifted by more than ±0.66 mm, but only at the central area of the image on the output.	<ul> <li>Defective ID sensor at center</li> <li>Deformed center area on the image transfer belt</li> <li>Defective BiCU</li> <li>Replace the ID sensor.</li> <li>Replace the image transfer belt.</li> <li>Replace the BiCU.</li> </ul>
The skew for M, C, Y, K is more than ± 0.75 mm at the end of the scan line?	<ul> <li>Defective PCDU</li> <li>Defective laser optics housing unit</li> <li>Defective BiCU</li> <li>1. Perform the color skew adjustment (Image Adjustment).</li> <li>2. Reinstall or replace the PCDU.</li> <li>3. Replace the laser optics housing unit.</li> <li>4. Replace the BiCU.</li> </ul>
Others	<ul> <li>Skew correction upper limit error</li> <li>Defective BiCU</li> <li>Defective laser optics housing unit</li> <li>Replace the BiCU.</li> <li>Perform the color skew adjustment (Image Adjustment).</li> <li>Replace the laser optics housing unit.</li> </ul>

• Result: "0" in SP2-194-007

• Result: Color registration errors in SP2-194-010, -011, -012, -013

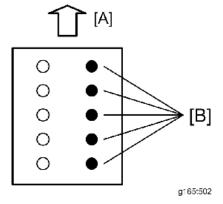
Test pattern check	Possible cause/Countermeasure
Low image density on the output	Low pattern density
	Do the forced process control (SP3-011-001) or supply some toner (SP3-030-xxx).
The main scan registration is shifted, but only at the central area of the image on the output.	<ul> <li>Defective ID sensor at center</li> <li>Deformed center area on the image transfer belt</li> <li>Defective BiCU</li> </ul>
	<ol> <li>Replace the ID sensor.</li> <li>Replace the image transfer belt.</li> <li>Replace the BiCU.</li> </ol>
The main scan registrations of M, C, Y, K are shifted.	<ul> <li>Defective laser optics housing unit</li> <li>Defective ID sensor</li> <li>Defective BiCU</li> <li>Incorrect SP value</li> <li>1. Perform the color skew adjustment (Image Adjustment).</li> <li>2. Replace the laser optics housing unit.</li> </ul>
	<ul><li>3. Replace the ID sensor.</li><li>4. Replace the BiCU.</li><li>5. Adjust the value with SP2-182-004 to -021.</li></ul>
The sub scan registrations of M, C, Y, K are shifted.	<ul> <li>Defective image transfer belt</li> <li>Defective drive units</li> <li>Defective ID sensor</li> <li>Defective BiCU</li> <li>Incorrect SP value</li> <li>1. Replace the image transfer belt.</li> </ul>
	<ol> <li>Replace the ID sensor.</li> <li>Replace the drum motor.</li> <li>Replace the BiCU.</li> <li>Adjust the value with SP2-182-022 to -039.</li> </ol>

Test pattern check	Possible cause/Countermeasure	
The skew of M, C, Y, K is different.	<ul> <li>Defective PCDU</li> <li>Defective laser optics housing unit</li> <li>Defective BiCU</li> </ul>	
	<ol> <li>Reinstall or replace the PCDU.</li> <li>Perform the color skew adjustment (Image Adjustment).</li> <li>Replace the laser optics housing unit.</li> <li>Replace the BiCU.</li> </ol>	
The sub scan lines are shifted. Shifted lines appear cyclically.	<ul> <li>Defective PCDU</li> <li>Defective drive unit</li> <li>Drum phase adjustment error</li> </ul>	
	<ol> <li>Reinstall or replace the PCDU.</li> <li>Check or replace the drive unit.</li> </ol>	

#### **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 33.6-mm intervals: Charge roller
  - Colored spots at 40.82-mm intervals: Image transfer roller

• Colored spots at 20.9-mm intervals: Development roller

• Abnormal image at 55.4 (center) or 55.0 (end)-mm intervals: Paper transfer roller

• Colored spots at 75.4-mm intervals: OPC drum

• Spots at 78.5-mm intervals: Pressure roller

• Spots at 78.5-mm intervals: Fusing belt

#### **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 BiCU	Replace the BiCU.

#### 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 BiCU	Replace the BiCU.
	Defective main board	Replace the main board.

#### 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 BiCU	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 BiCU	Replace the BiCU.

#### **Light Print**

Possible cause Symptom Necessary actions Printed images are too weak. Loose connection between Check the connection between paper transfer roller and HVPS the paper transfer roller and the HVPS. Dust in the laser beam path Clean the laser beam path. Image transfer belt not Check the image transfer belt contacting PCDU unit. Defective PCDU Replace the PCDU. Defective paper transfer roller Repair the paper transfer roller. Defective fusing unit Replace the fusing unit. Defective BiCU Replace the BiCU.

### Repeated Spots or Lines on Prints

The same spots or lines appear at regular intervals.

Interval	Possible cause	Necessary actions
At intervals of 33.6 mm (1.32 inches)	Defective charge roller	Replace the PCDU.
At intervals of 20.9 mm (0.82 inches)	Defective development roller	Replace the PCDU.
At intervals from 55.0 (end) to 55.4 (center) mm (from 2.16 to 2.18 inches)	Defective paper transfer roller	Replace the paper transfer roller unit.
At intervals of 75.4 mm (2.96 inches)	Defective OPC drum	Replace the PCDU.
At intervals of 78.5 mm (3.09 inches)	Defective pressure roller	Replace the pressure roller or fusing unit.
At intervals of 78.5 mm (3.09 inches)	Defective fusing belt	Replace the fusing unit.
At intervals of 40.82 mm (1.60 inches)	Defective image transfer roller	Replace the image transfer roller.

#### **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	Dust in the laser beam path	Clean the laser beam path.
parallel to the paper feed direction of any color (not C, M, or Y).	Defective image transfer belt unit	Replace the image transfer belt unit.
	Defective fusing unit	Replace the fusing unit.

#### White Horizontal Lines or Bands

Symptom	Possible cause	Necessary actions
White lines or bands appear in	Defective PCDU	Replace the PCDU.
images of all toner colors.	Defective image transfer belt unit	Replace the image transfer belt unit.
	Defective paper transfer roller	Replace the paper transfer roller.

# Missing Parts of Images

Symptom	Possible cause	Necessary actions
Some parts of images are	Defective PCDU	Replace the PCDU.
missing.	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.

# 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.

#### Partial CMY Color Dots

Symptom	Possible cause	Necessary actions
Unexpected dots of the same	Defective PCDU	Replace the PCDU.
color appear at irregular intervals.	Defective image transfer belt unit	Replace the image transfer belt unit.
	Defective fusing unit	Replace the fusing unit.

## 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.

# CMY Color Irregular Streaks

Symptom	Possible cause	Necessary actions
Unexpected streaks of the same	Defective PCDU	Replace the PCDU.
color appear at irregular intervals.	Defective image transfer belt unit	Replace the image transfer belt unit.

## Ghosting

Symptom	Possible cause	Necessary actions
The same or similar image	Defective PCDU	Replace the PCDU.
appears two or more times.  They get weaker and weaker.	Defective transfer unit	Replace the transfer unit.

# **Unfused or Partially Fused Prints**

Symptom	Possible cause	Necessary actions
Some parts of images are not	Non-standard paper in use	Use recommended paper.
fused very well.	Incorrect media type mode	Select an appropriate media mode.
	Defective fusing unit	Replace the fusing unit.

# 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.
		<b>U</b> Note
		<ul> <li>When adjusting the paper width, use the right side guide only, with the green clip. Do not hold</li> <li>the left side guide at this time, or skew will occur.</li> </ul>
	Defective registration roller	Repair the paper feed unit.
	Incorrect action of paper transfer roller	Check the paper transfer roller.
	Defective BiCU	Replace the BiCU.
	Incorrect installation of paper tray	Uninstall the paper tray units and re-install them.

## Background Stain

Symptom	Possible cause	Necessary actions
The reverse side of the paper is	Unclean paper transfer roller	Clean the paper transfer roller.
not clean.	Unclean paper path	Clean the paper path.
	Unclean registration roller	Clean the registration roller.
	Defective fusing unit	Replace the fusing unit.

# No Printing on Paper Edge

Symptom	Possible cause	Necessary actions
Images are not printed in the	Defective PCDU	Replace the PCDU.
areas around the paper edges.	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.

# Image Not Centered When It Should Be

Symptom	Possible cause	Necessary actions
Images do not come to the	Incorrect installation of paper	Install the paper correctly.
center.	Incorrect paper guide position	Adjust the paper guide correctly.
	Incorrect margin setting	Adjust the margin setting.
	Defective BiCU	Replace the BiCU.
	Incorrect installation of paper tray	Uninstall the paper tray units and re-install them.

## **Jam Detection**

#### **Paper Jam Display**

SP7-507 shows the paper jam history.

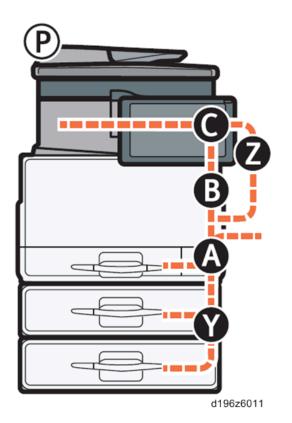
CODE :011 SIZE :05h TOTAL:000034

DATE :Fri Feb 15 11:44:50 2006

- CODE: Indicates the jam code.
- SIZE: Indicates the paper Size Code.
- TOTAL: Indicates the total counter (SP7-502-001).
- DATE: indicates the date when the jam occurred.

### Jam Codes and Display Codes

If a paper jam occurs, the machine displays the location where the jam occurs on the operation panel.

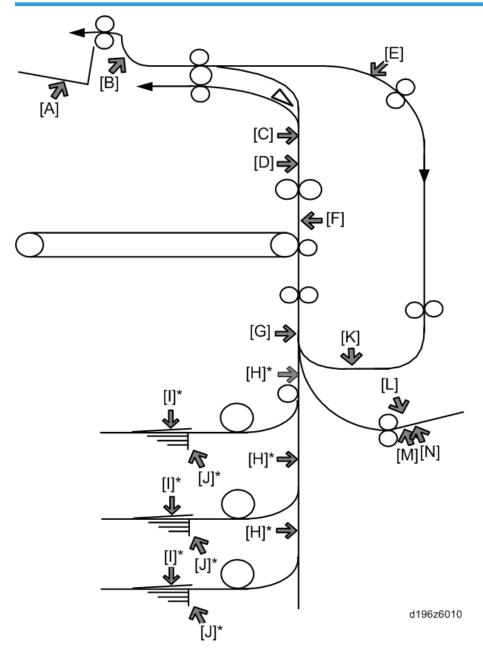


SP7-504 and SP7-505 (for ARDF) show how many jams occurred at each location.

Jam Code	Description	Indication on the operation panel
7504 003	Paper is not fed from 1 st tray.	A
7504 004	Paper is not fed from 2nd tray.	Y1
7504 005	Paper is not fed from 3rd tray.	Y2
7504 008	Paper is not fed from the bypass tray.	А
7504 009	Paper is jammed at the duplex unit.	Z
7504 012	Paper is not fed from the paper feed sensor	Y1
7504 017	Registration sensor does not detect paper, and paper exit sensor turns on.	А
7504 018	Fusing entrance sensor does not detect paper.	В
7504 019	Fusing exit sensor does not detect paper.	С

Jam Code	Description	Indication on the operation panel
7504 020	Paper exit sensor does not detect paper.	С
7504 021	Paper exit sensor (1-Bin tray unit) does not detect paper.	С
7504 025	Duplex exit sensor does not detect paper.	Z
7504 026	Duplex entrance sensor does not detect paper.	Z
7504 052	Paper feed sensor for 1st tray does not turn off.	Y1
7504 053	Paper feed sensor for 2nd tray does not turn off.	Y2
7504 057	Registration sensor does not turn off.	В
7504 060	Paper exit sensor does not turn off.	С
7504 061	Paper exit sensor (1-Bin tray unit) does not turn off.	С
7504 065	Duplex exit sensor does not turn off.	Z
7505 001	ARDF registration sensor does not turn off.	Р
7505 004	ARDF registration sensor does not detect paper (Single/Duplex).	Р
7505 054	ARDF registration sensor does not turn off.	Р
7505 100	ARDF transport motor is defective.	Р

#### **Sensor Layout**



Callout	Sensor	Callout	Sensor
[A]	Paper Sensor (1-Bin)	[H]*	Paper Feed Sensor (for standard/optional tray)

#### Paper Size Code

Size Code	Paper Size	Size Code	Paper Size
05	A4 LEF	141	B4 SEF
06	A5 LEF	142	B5 SEF
14	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

A

# **Electrical Component Defects**

#### Sensors

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
S1	Bypass Lift Sensor	Н	CN523/11	Open	• SC508
31	bypass till Sellsol	11	CN323/11	Shorted	30308
				Open	Paper is detected
S2	By-pass Paper End	L	CNE22 /5	Shorted	on the by-pass tray when no paper is set.
52	Sensor	L	CN523/5		Paper is not     detected on the by- pass tray when paper is set.
				Open	• A4/LT size is
\$3	By-pass Paper Size Sensor	L	CN523/2	Shorted	detected.  • A4/LT size is not detected.
S4	Duplex Entrance	L	CN523/14	Open	• Jam Z (Jam 65)
34	Sensor		CN323/ 14	Shorted	• Jam B (Jam 18)
S5	Fusing Entrance	L	CN523/20	Open	• Jam B (Jam 18)
33	Sensor	<u> </u>	CN323/ 20	Shorted	• Jam C
S6	Duplex Exit Sensor	L	CN523/23	Open	• Jam Z (Jam 25)
30	Duplex Exil Sellsol	<u> </u>	CN323/23	Shorted	• Jam Z
S7	Fusing Exit Sensor	L	CN525/8	Open	• Jam C (Jam 19)
3/	1 031119 EXII Jelisoi	L	C14323/0	Shorted	• Jam C
				Open	• SC541
S8	Fusing Thermopile	A	CN525/6	Shorted	PCU setting Error occurs.

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom																			
S9	TD Sensor (µ Sensor)	A	CN539/8	Open																				
39	(K)	A	CN339/6	Shorted																				
\$10	TD Sensor (µ Sensor)	A	CN540/8	Open																				
310	(C)	A	CN340/ 6	Shorted																				
S11	TD Sensor (µ Sensor)	A	CN540/16	Open																				
311	(M)	A	CN340/10	Shorted																				
S12	TD Sensor (µ Sensor)	Α	CN540/22	Open																				
312	(Y)	A	CN340/22	Shorted																				
S13	ID Sensor	٨	CN555/6,7,	Open	• SC370																			
313	ID Sensor	Α	10,11	Shorted	• 3C3/0																			
S14	ITB Contact HP Sensor	L	CNIE 42 /12	Open																				
314	TIB Confact Fir Sensor	L	CN543/12	Shorted	• SC442																			
				Open	Paper end is																			
S15	Tana Danas End Sansa	ı	CN559/12	Shorted	detected when there is paper in the paper tray.																			
313	Tray Paper End Sensor	L	_		<b>L</b>	<b>L</b>	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L CN337/12	dete	Paper end is not detected when
					there is no paper in the paper tray.																			
				Open	• Jam A.																			
S16	Paper Feed Sensor	L	CN559/14	Shorted	Normal operation																			
				Open	Platen cover open																			
S17	Platen Cover Sensor	L	CN404/2	Shorted	cannot be detected.																			
S19	Registration Sensor	L	CN559/17	Open	• Jam A (Jam 1 <i>7</i> )																			
017	registration sensor	Ĺ	C14337/17	Shorted	• Jam B																			

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
S20	Scanner HP Sensor	Н	CN404/5	Open	SC120, SC121
320	Scanner Hr Sensor	П	CN404/3	Shorted	3C120, 3C121
				Open	Printed image is
S21	Temperature/ Humidity Sensor	А	CN526/6,8	Shorted	wrong, such as rough image, dirty background or weak image. • SC498
600	T		CN 1500 /1 /	Open	50074
S22	Toner End Sensor (C)	A	CN539/16	Shorted	• SC374
S23	T	A	CN1520 /15	Open	. 50272
323	Toner End Sensor (M)	A	CN539/15	Shorted	• SC373
S24	Toner End Sensor (Y)	A	CN539/14	Open	• SC375
324	Toner End Sensor (1)	A	CN339/ 14	Shorted	• 303/3
				Open	Waste toner full is
				Shorted	detected when it is not near full.
S25	Waste Toner Full Sensor	Н	CN543/4		Waste toner full cannot be detected when the waste toner bottle is nearly full.
S26	Tray Lift Sensor	Н	CN543/7	Open	• SC501
S27	Paper Exit Sensor	L	CN525/11	Open	• Jam C (Jam 20)
527	Taper Exil Jelisol		C14323/11	Shorted	• Jam C (Jam 60)
TH1	Pressure Roller	A	CN525/19	Open	• SC571
1111	Thermistor (Rear)	^	C14020/ 17	Shorted	000/1

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom	
TH2	Pressure Roller	A	CN525/17	Open	• SC561	
	Thermistor (Center)		,	Shorted		
TH3	Pressure Roller	A	CN525/21	Open	• SC591	
	Thermistor (Front)		0. (0.20) 2.	Shorted		
TH4	Image Creation	Α	CN526/4	Open	• SC497	
1114	Temperature Sensor	,,	C11020/ 4	Shorted	004//	
TH5	Image Creation	A	CN525/23	Open	• SC581	
1113	Temperature Sensor		CN323/ 23	Shorted	30301	
				Open	• "Cover closed"	
SW4	Right Cover Sensor	L	CN559/19	Shorted	cannot be detected.  • "Open Cover" cannot be detected.	
				Open	Paper tray cannot	
SW5	Tray Set Sensor	L	CN543/15	Shorted	<ul> <li>Paper tray is     detected when the     paper tray is not     set.</li> </ul>	
				Open	Waste toner bottle	
SW6	Waste Toner Bottle Set Sensor	L	CN535/1	Shorted	cannot be detected.  • Waste toner bottle is detected when the waste toner bottle is not set.	
S27	Paper Evit Sanaar	L	CNI525 /11	Open	• Jam C (Jam 20)	
32/	Paper Exit Sensor	Ĺ	CN525/11	Shorted	• Jam C (Jam 60)	

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom	
TH1	Pressure Roller	A	CN525/19	Open	• SC571	
	Thermistor (Rear)	^	CN323/ 17	Shorted	- 303/1	
TH2	Pressure Roller	A	CN525/17	Open	• SC561	
	Thermistor (Center)	, ,	011020717	Shorted	0001	
TH3	Pressure Roller	A	CN525/21	Open	• SC591	
	Thermistor (Front)			Shorted		
TH4	Image Creation	A	CN526/4	Open	• SC497	
	Temperature Sensor		,	Shorted		
TH5	Image Creation	A	CN525/23	Open	• SC581	
	Temperature Sensor		,	Shorted		
				Open	"Cover closed"  cannot be	
SW4	Right Cover Sensor	L	CN559/19	Shorted	detected.  • "Open Cover" cannot be detected.	
				Open	Paper tray cannot	
SW5	Tray Set Sensor	L	CN543/15	Shorted	<ul> <li>Paper tray is         detected when the         paper tray is not         set.</li> </ul>	
				Open	Waste toner bottle	
	M . T . 5			Shorted	cannot be detected.	
SW6	Waste Toner Bottle Set Sensor	L	CN535/1	Shorted	Waste toner bottle     is detected when     the waste toner     bottle is not set.	

#### **Fuse Location**

#### 100V (Mainly NA)

Fuse Name	Connector (Out)	Capacity	Voltage	Part No.	Part Name	Replaceable
FU1	CN611-1 (24V)	10A	250V	11071363	51MS-100 H	Yes
FU2	CN610-1 (24VL)	10A	250V	11071363	51MS-100 H	Yes
FU3	CN610-2 (24VL_LPS)	4A	250V	11071360	SCT4A	No
FU4	CN611-3 (24V_LPS)	4A	250V	11071360	SCT4A	No
FU5	CN613-5 (5V)	5A	250V	11071351	SCT5A	No
FU102	N/A (Protecting the fusing circuit in the PSU)	10A	250V	11071347	FIH 250V 10A (EM/CR)	Yes
FU101	N/A (Protecting the fusing circuit in the PSU)	15A	250V	11071241	TLC-15A- N4	Yes
FU103	CN600-4,5 (Anti- condensation Heater)	2A	250V	11071362	SCT2A	No
FU104	N/A (Protecting the fusing circuit in the PSU)	2A	250V	11071362	SCT2A	No

#### 200V (Mainly EU)

Fuse Name	Connector (Out)	Capacity	Voltage	Part No.	Part Name	Replaceable
FU1	CN611-1 (24V)	10A	250V	11071363	51MS-100 H	Yes
FU2	CN610-1 (24VL)	10A	250V	11071363	51MS-100 H	Yes
FU3	CN610-2 (24VL_LPS)	4A	250V	11071360	SCT4A	No
FU4	CN611-3 (24V_LPS)	4A	250V	11071360	SCT4A	No
FU5	CN613-5 (5V)	5A	250V	11071351	SCT5A	No
FU102	N/A (Protecting the fusing circuit in the PSU)	8A	250V	11071346	FIH 250V 8A(EM/CR )	Yes
FU101	N/A (Protecting the fusing circuit in the PSU)	8A	250V	11071366	FIH 250V 8A(EM)8A 03	No
FU103	CN600-4,5 (Anti- condensation Heater)	1A	250V	11071367	SCT1A	No
FU104	N/A (Protecting the fusing circuit in the PSU)	2A	250V	11071362	SCT2A	No

## Scanner Test Mode

#### **SBU Test Mode**

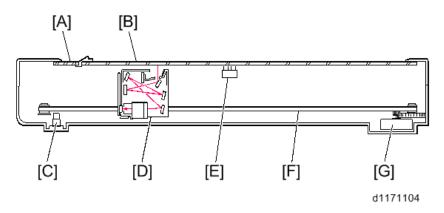
Output the SBU test pattern with SP4-807-001 to make sure the scanner SBU control operates correctly. The SBU test pattern prints out after you have set the SP mode settings and pressed the start key.

- 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 BiCU.
  - The BiCU or SBU board may be defective.

# 7. Detailed Descriptions

# **Scanner Unit**

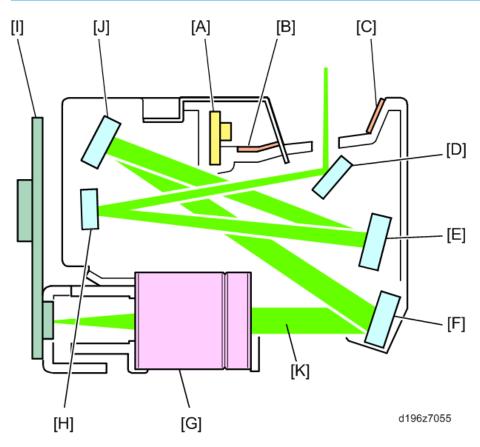
#### Overview



Callout	ltem	Callout	ltem
[A]	Exposure Glass (for ARDF)	[E]	ARDF/Platen Cover Sensor
[B]	Exposure Glass (for platen mode)	[F]	Scanner Carriage Drive Belt
[C]	Scanner HP Sensor	[G]	Scanner Motor
[D]	Scanner Carriage		



• Automatic paper size detection is not available because this model has no APS (sensor that detects original's paper size) in the scanner.



Callout	ltem	Callout	ltem
[A]	LED Array Board	[G]	Lens
[B]	Reflector	[H]	2nd Mirror
[C]	Reflector	[1]	CCD
[D]	1 st Mirror	[J]	4th Mirror
[E]	3rd Mirror	[K]	Light Path
[F]	5th Mirror		

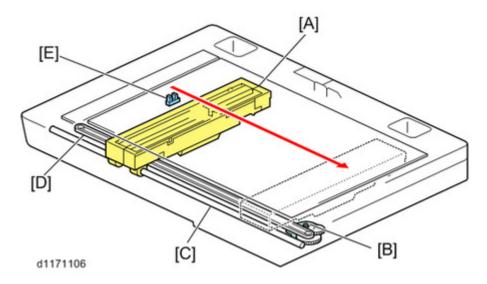
This model uses an LED for the light source. Light from the LED board goes to the original via the two reflectors. From the original, the light then follows the light path to the CCD.

To ensure that enough light reaches the left and right edges of the original, the elements in the array are more densely spaced at the ends than at the center.

The light reflected from the original travels as follows:

LED exposure -> 1st mirror -> 2nd mirror -> 3rd mirror -> 4th mirror -> 5th mirror -> Lens -> CCD

#### **Scanner Carriage Drive**



Callout		Callout	ltem
[A]	Scanner Carriage	[D]	Scanner Drive Belt
[B]	Scanner Drive Motor	[E]	Scanner HP Sensor
[C]	Carriage Guide Shaft		

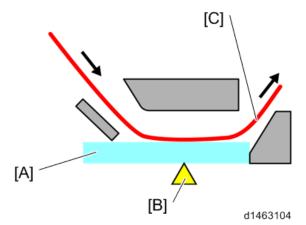
The scanner drive belt [D] drives the scanner carriage [A]. The scanner carriage moves along the carriage guide shaft [C]. Image scanning starts from the position of the scanner carriage HP sensor [E]. The carriage returns to its home position after scanning an image. The scanner HP sensor is located under the carriage.

#### Improved Tolerance to Black Lines When Paper Passes through ADF

This model uses a conventional mechanism in which paper comes in contact with the exposure glass during feeding. This is useful for dealing with adhesion of free dirt particles (paper scraps, etc.). (Self-cleaning mechanism using paper)

On the other hand, sticky dirt adhering to the document sticks to the exposure glass, and may cause black lines in scanned images.

#### ADF cross-section diagram



[A]: Exposure glass

[B]: Reading position

[C]: Original feed path

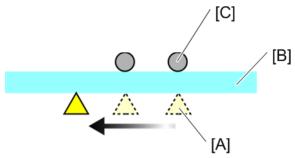


- If black lines due to free dirt particles appear for a short time, such as when users have documents with large amounts of paper dust, you can return to the original configuration.
- Reference (read position correction)

By changing SP4-020-001 (Dust Check > Dust Detect:On/Off), when dirt is detected at the reading position, the reading position may be changed to avoid the dirt.

(If it cannot be avoided, an alert is displayed on the operation panel advising the user to clean the exposure glass).

#### Image diagram



d1463105

[A]: Reading position

[B]: Exposure glass

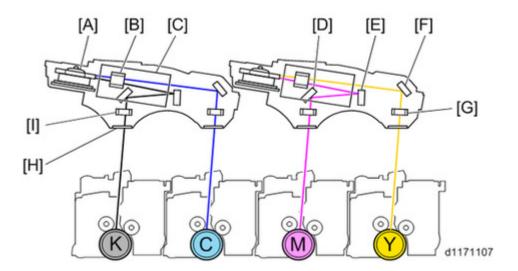
[C]: Dirt



- Dirt is detected when a document passes through, so the alert will not disappear until reading
  of the next document begins, even after exposure glass cleaning is performed.
- If dirt is detected not on the exposure glass but on the background guide plate, the alert will not disappear even if the glass is wiped.
- The time required for the first copy is slightly (almost imperceptibly) longer.
- The detection threshold can be changed using SP4-020-002 (Dust Check > Dust Detect:Lvl).
   (The larger the value is, the smaller the dirt particles that can be detected.)
- Do not change the setting of SP4-020-003 (Dust Check > Dust Reject:Lvl).

## **Laser Unit**

#### Overview

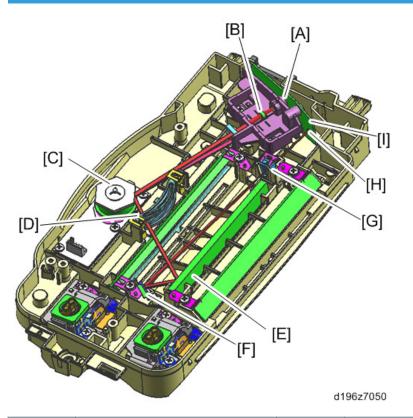


Callout	ltem	Callout	ltem
[A]	Polygon Motor	[F]	Mirror 3
[B]	Lens (L1)	[G]	Lens (L2)
[C]	LD Unit	[H]	Shield Glass
[D]	Mirror 2	[1]	Lens (L2)
[E]	Mirror 1		

This machine has two LD units. One is for yellow and magenta. Another is for cyan and black. Each LD unit produces laser beams for two colors.

Based on each model's line speed, this product uses two different types of LD unit: D196/D214/D236 uses two beams per color to achieve higher line speed, while D219/D220 uses one beam per color, which is the same as the previous model.

#### Laser Synchronizing System

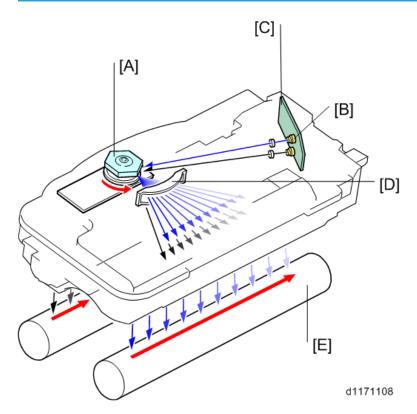


Callout	ltem	Callout	ltem
[A]	LD	[F]	Synchronization Mirror
[B]	Collimating Lens	[G]	Synchronization Lens
[C]	Polygon Motor	[H]	Synchronization Detector
[D]	Lens (L1)	[1]	LD Unit
[E]	Mirror 1		

The LD unit has a synchronization detector at the left side of each unit (for the optical paths for the K and M drums only). A laser beam coming from the LD [A] travels to the collimating lens [B]  $\Rightarrow$  polygon motor [C]  $\Rightarrow$  lens (L1) [D]  $\Rightarrow$  Mirror 1 [E]  $\Rightarrow$  Mirror 2  $\Rightarrow$  Mirror 3  $\Rightarrow$  Drum.

When the beam is at the beginning of the line, the synchronization mirror [F] reflects it to the synchronization lens. The synchronization detector [H] detects the beam reflected.

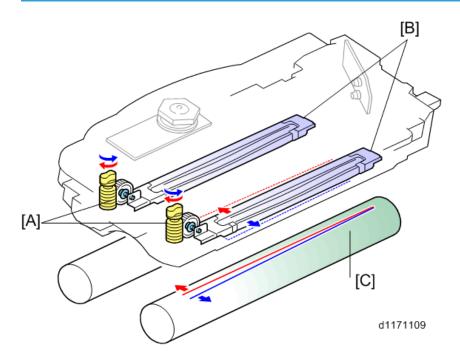
#### Line Scanning Mechanism



Callout	ltem	Callout	ltem
[A]	Polygon Motor (With Polygon Mirror)	[D]	Lens (L1)
[B]	Collimating Lens	[E]	OPC Drum
[C]	LD Unit		

The image read by the scanner is written on the OPC drum [E] with the laser beams. The direction of main scanning is from the front to the rear of the machine. The polygon motor [A] rotates counterclockwise.

#### Image Skew Adjustment



Callout	ltem	Callout	ltem
[A]	Adjustor	[C]	OPC Drum
[B]	Lens (L2)		

In this machine, you can adjust the image skew correction manually. When turning the adjuster [A] clockwise or counterclockwise, the front of the lens moves to the left or right, and this adjusts the image skew.

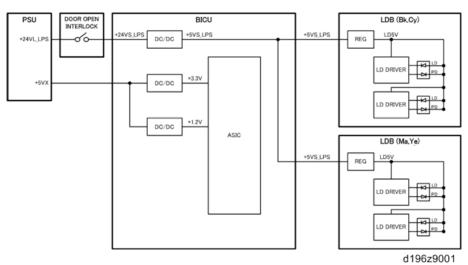
#### **Dust Shield Glass**

The laser unit is located between the upper side of toner bottle and PCDU. The LD unit emits a laser beam to above the OPC drum. This mechanism keeps the shield glass free from toner dropping and thus requires no cleaning tool.

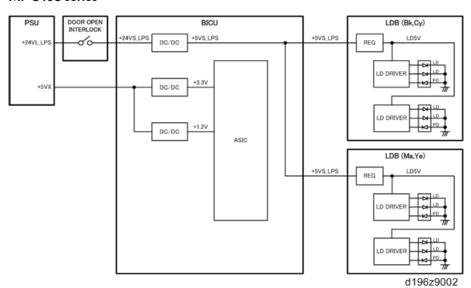
#### LD Safety Switch

An interlock switch turns off when the front cover or the right door is opened. As a result, this relay cuts off the power supply (+5V) to the two LD boards (the electric circuits go through the BiCU). This system prevents unexpected laser emission, and ensures users and technicians safety.

#### MP C306 series



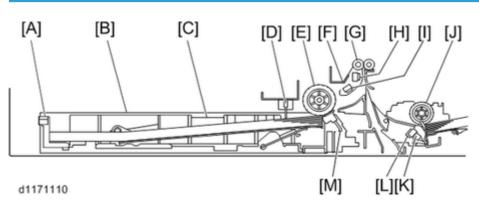
#### MP C406 series



#### 7

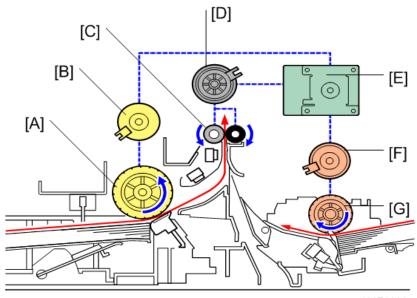
# Paper Feed and Registration

## Overview



Callout	ltem	Callout	ltem
[A]	End Fence	[H]	Registration Sensor
[B]	Paper Feed Tray	[1]	Paper Feed Sensor
[C]	Side Fence	[1]	Bypass Feed Roller
[D]	Paper End Sensor	[K]	Bypass Feed Paper Size Sensor
[E]	Paper Feed Roller	[L]	Bypass Paper End Sensor
[F]	Dust Collection Tray	[M]	Friction Pad
[G]	Registration Rollers (Right: Driven, Left: Drive)		

## Paper Feed, Registration, and Bypass Feed Drive

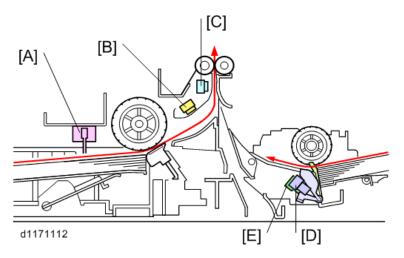


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Callout	ltem	Callout	ltem
[A]	Paper Feed Roller	[E]	Paper Transport Motor
[B]	Paper Feed Clutch	[F]	Bypass Feed Clutch
[C]	Registration Roller	[G]	Bypass Feed Roller
[D]	Registration Clutch		

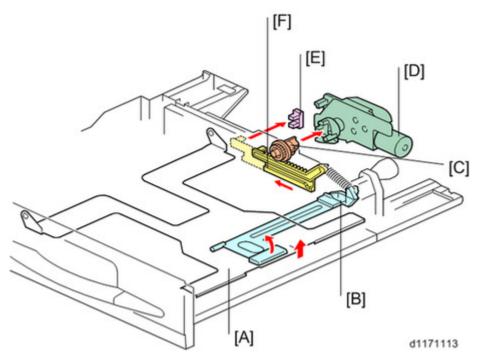
The drive from the paper transport motor is transmitted to each clutch through gears. The paper transport motor controls paper feed/exit, duplex, registration, waste toner transport coil and bypass tray lift.

## Sensor Locations in the Paper Feed Path



Callout	ltem	Callout	ltem
[A]	Paper End Sensor	[D]	Bypass Paper Width Sensor
[B]	Paper Feed Sensor	[E]	Bypass Paper End Sensor
[C]	Registration Sensor		

## Tray Lift Mechanism



Callout	ltem	Callout	ltem
[A]	Bottom Plate	[D]	Tray Lift Motor
[B]	Bottom Plate Lift Arm	[E]	Tray Lift Sensor
[C]	Bottom Plate Lift Gear	[F]	Rack and Pinion Mechanism

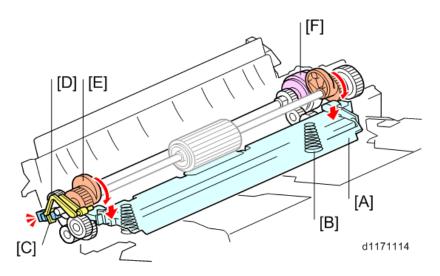
The tray lift motor rotates the gear [C] and the gear makes the rack [F] move.

The movement of the rack pulls the spring and this moves the bottom plate lift arm [B].

The arm lifts the bottom plate [A].

The position of the bottom plate is detected by the Tray Lift Sensor [E]. This machine does not use motor control to detect the bottom plate position.

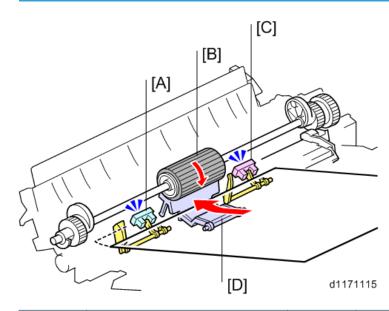
## Bypass Tray Bottom Plate Lift Mechanism



Callout	ltem	Callout	ltem
[A]	Bypass Tray Bottom Plate	[D]	Actuator
[B]	Pressure Spring	[E]	Bypass Tray Bottom Plate Lifting-up Cam (Front and Rear)
[C]	Bypass Tray Bottom Plate Lift Cam HP Sensor	[F]	Bypass Tray Bottom Plate Lifting-up Cam Clutch

The paper transport motor rotates the bypass tray bottom plate lift cam clutch [F], and this moves the bypass tray bottom plate [A] up and down.

The position of the bypass tray bottom plate lift cams (and because of this, the bypass tray bottom plate) is detected by the bypass tray bottom plate lift cam HP sensor [C].



Callout	ltem	Callout	ltem
[A]	Bypass Paper Size Sensor	[C]	Bypass Feed Paper End Sensor
[B]	Bypass Feed Roller	[D]	Bypass Feed Friction Pad

The bypass paper size sensor [A] is not at the side of the tray but at the side of the bypass paper feed unit.

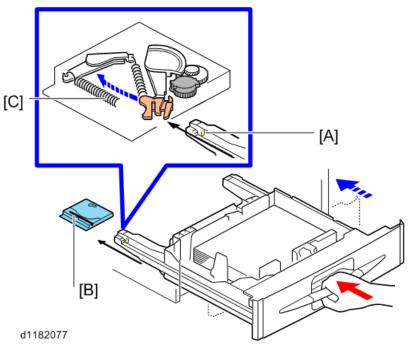
The bypass paper size sensor is a photointerrupter, which detects when B5 paper or wider is placed in the tray.

The bypass feed paper end sensor is activated if there is no paper on the tray.

## Tray Auto-close Mechanism

The tray has a pin [A] on its bottom. When the tray is set, the spring [C] in the draw-in unit [B] slowly pulls the tray in. When the tray is pulled out, the pin stretches the spring.





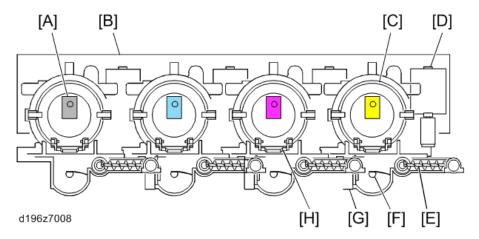
[A]: Pin

[B]: Draw-in Unit

[C]: Spring

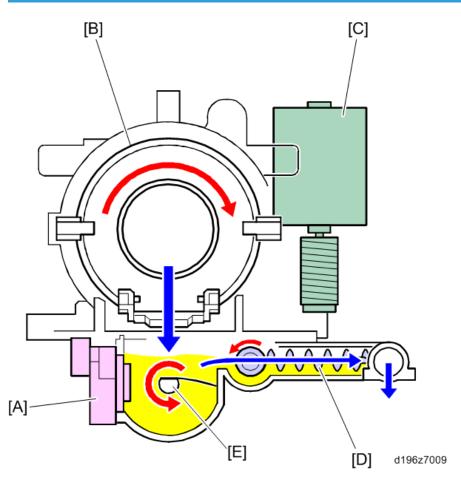
# **Toner Supply Section**

## Overview



Callout	ltem	Callout	ltem
[A]	ID Chip	[E]	Toner Transport Coil
[B]	Bottle ID Chip Contact Board	[F]	Agitator
[C]	Toner Bottle	[G]	Toner End Sensor
[D]	Toner Supply Motor	[H]	Shutter

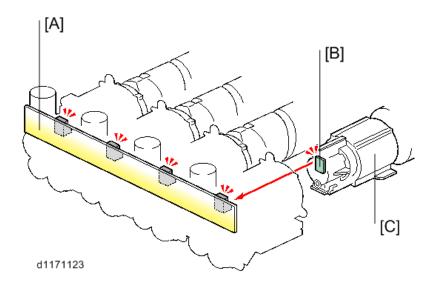
## **Toner Supply and Transport Mechanism**



Callout	ltem	Callout	ltem
[A]	Toner End Sensor (Only for CMY)	[D]	Toner Transport Coil
[B]	Toner Bottle	[E]	Agitator
[C]	Toner Supply Motor		

Rotating the toner bottle [B] transports the toner towards the rear of the machine. Each toner bottle has an ID chip that stores information for each toner bottle. The toner from the toner bottles goes into the hopper and is agitated by the agitator [E].

Then, rotating the toner transport coil [D] transports the toner to the development unit. Only color hoppers have the toner end sensor [A]. The ID chip manages the remaining amount of black toner.



Callout	ltem	Callout	ltem
[A]	Bottle ID Chip Contact Board	[C]	Toner Bottle
[B]	ID Chip (One for Each Color)		

Each toner bottle [C] has an ID chip [B]. When the toner bottle [C] comes in contact with the bottle ID chip contact board [A], the machine detects that the toner bottle is set.

#### Toner Near End and Toner End

#### Toner Near-End

First, the amount of remaining toner is detected with the pixel count and the driving time of the toner supply motor. Then, when the amount of remaining toner is less than the threshold for toner near-end (K = 23 g, CMY = 10 g), the machine determines a toner near-end.

For CMY, when the amount of remaining toner is less than 50 g, or when the toner end sensor, which is a piezoelectric sensor, detects toner near-end twice, the machine also determines a toner near-end.

#### **Toner End**

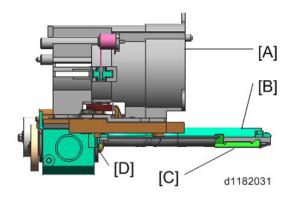
A toner end is detected when the toner end sensor detects the end threshold six times in the toner nearend condition.

The machine also detects a toner end when the difference of Vt and Vtref, and their total difference are as in the following matrix:

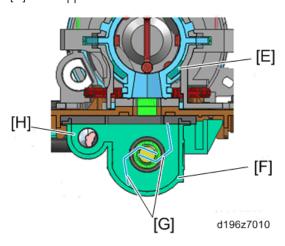
	Condition	Vt/Vtref: Diff	Vt/Vtref: Diff: Total
K	Before Near-End	0.7 V or more	Over 10 V
K	After Near-End	0.3 V or more	Over 3 V
CMY	-	0.5 V or more	Over 10 V

## **Toner Supply Unit**

The agitator [G] transports the toner supplied into the sub-hopper by raising it to the toner transport path. The transport path is level to make the machine's height lower.



- [A] Supply Housing
- [B] Toner Transport Path
- [C] Shutter
- [D] Sub-hopper

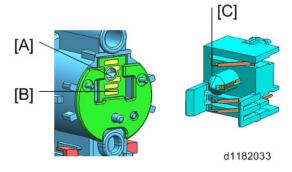


[E] Toner Bottle Cap

- [F] Sub-hopper
- [G] Agitator
- [H] Toner Transport Path

## **ID** Chip

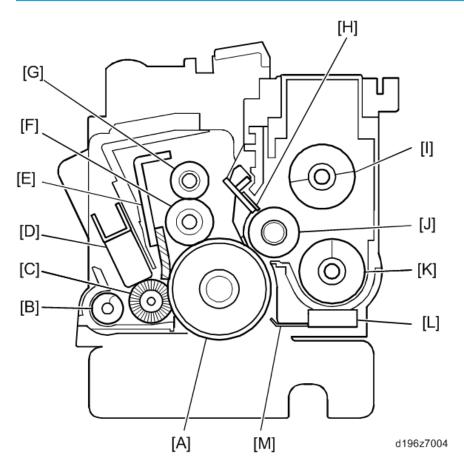
The ID chip [B] of the toner bottle is set correctly by inserting the positioning hole [A] of the toner bottle over the tapered boss [C] of the mainframe.



- [A] Positioning Hole
- [B] ID Chip
- [C] Tapered Boss (for Chip Positioning)

# **PCDU**

## Overview



### **Drum Section**

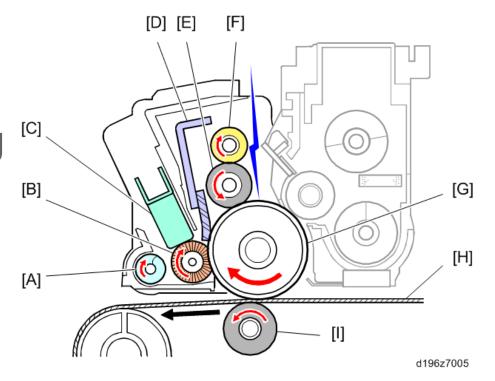
Callout	ltem	Callout	ltem
[A]	OPC Drum	[E]	Cleaning Blade
[B]	Waste Toner Transport Coil	[F]	Charge Roller
[C]	Lubricant Brush Roller	[G]	Charge Roller Cleaning Roller
[D]	Lubricant		

## **Development Section**

Callout	ltem	Callout	ltem
[H]	Doctor Blade	[K]	Toner Transport Coil (Lower)
[1]	Toner Transport Coil (Upper)	[L]	Toner Density Sensor (# sensor)
[1]	Development Roller	[M]	Toner Catching Mylar

The OPC drum section and the development section are joined by plates at the front and rear of the unit.

## **OPC Drum**



Callout	ltem	Callout	ltem
[A]	Waste Toner Transport Coil	[F]	Charge Roller Cleaning Roller
[B]	Lubricant Brush roller	[G]	OPC Drum
[C]	Lubricant	[H]	Image Transfer Belt (ITB)

/

Callout	ltem	Callout	ltem
[D]	Drum Cleaning Blade (Counter Rotation)	[۱]	Image Transfer Roller (1st Transfer Roller)
[E]	Charge Roller		

#### Charge Mechanism

A charge roller [E] charges the surface of the OPC drum [G] and drives the charge roller cleaning roller [F].

#### **OPC Drum**

This machine uses an organic photo conductor drum (OPC drum) [G] for image creation.

The laser exposes the drum from the machine's front to the rear, and the image developed transfers to the ITB (Image Transfer Belt). Then the ITB transports the created image.

#### **Drum Cleaning Mechanism**

The drum cleaning blade [D] cleans the drum (counter rotation method).

Drum cleaning and lubricant application are done at the same time.

The lubricant is applied with the lubricant brush roller [B].

The lubricant brush roller rotates in the opposite direction to the OPC drum.

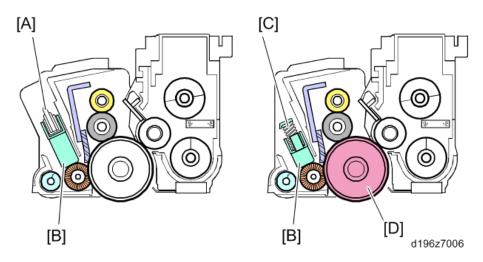
Toner and foreign objects are removed from the edges of the blade by rotating the drum counterclockwise when a copy job is done.

The waste Toner Transport Coil [A] transports the waste toner collected with the drum cleaning blade to the waste toner bottle via the front of the unit.

#### Discharge Mechanism

This machine uses spontaneous discharge to remove remaining charge from the drum. A quenching lamp is not used.

## Differences between K and CMY



Left: K

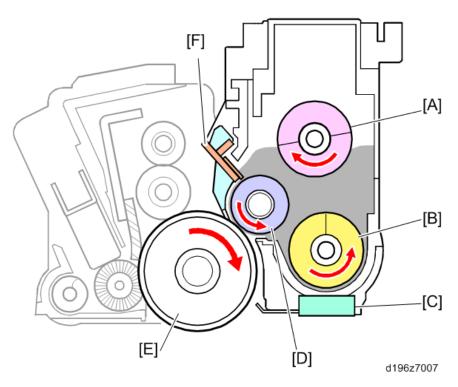
Right: CMY

The following points are the differences between K and CMY.

	K	CMY
Lubricant [B] quantity	K > C	MY
Lubricating method	Arm [A]	Pressure spring [C]
Silencer [D]	Available	Available

The silencer [D] is an internal layer of the drum, added to reduce sound during rotation.

## Development Unit



Callout	ltem	Callout	ltem
[A]	Toner Transport Coil (Upper)	[D]	Development Roller (Sleeve Architecture)
[B]	Toner Transport Coil (Lower)	[E]	OPC Drum
[C]	Toner Density Sensor (Sensor)	[F]	Doctor Blade

Callout	ltem	Callout	ltem
[A]	Toner Transport Coil (Upper)	[C]	Toner Density Sensor (mu ( $\mu$ ) Sensor)
[B]	Toner Transport Coil (Lower)		

[A]

[B]

• Developer Agitation Mechanism

The developer is agitated by the upper [A] and lower [B] transport coils.

Toner and developer are regulated by the doctor blade, and applied to the development roller.

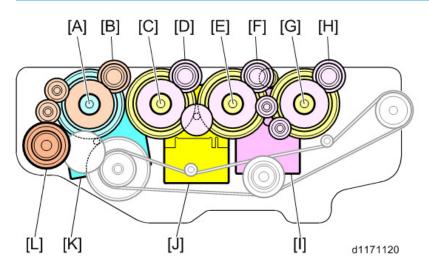
• Toner Density Detection Mechanism

Toner density sensor [C] detects the toner density. Toner is supplied when the toner density is not sufficient.

• Toner Density Control

The ID sensor at the lower right of the ITB detects the amount of light reflected from the drum and detects the toner density. Toner is supplied based on the information which the ID sensor detects.

## **Drum/Development Drive**



Callout	ltem	Callout	ltem
[A]	Drum Gear (K)	[G]	Drum Drive Gear (Y)
[B]	Development Drive Gear (K)	[H]	Development Drive Gear (Y)
[C]	Drum Drive Gear (C)	[1]	Development Motor (CMY)
[D]	Development Drive Gear (C)	[J]	Drum Motor (CMY)
[E]	Drum Drive Gear (M)	[K]	Drum Motor (K)
[F]	Development Drive Gear (M)	[L]	Development Clutch (K)

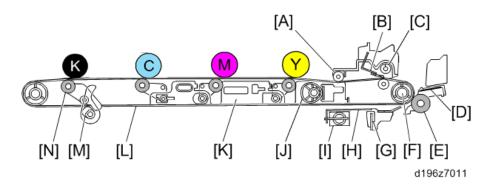
The Drum motor (Bk) [K] drives the drum (K). The Development Clutch [L] drives the Development Unit for K.

The Drum motor (CMY) [J] drives the other three drums and the development motor (CMY) [I] drives the Development Units for C/M/Y.

Do not disassemble the three drive gears ([C], [E], and [G]) in the field. These are precisely assembled in the factory.

# ITB/ Paper Transfer

## Overview



Callout	ltem	Callout	ltem
[A]	Belt Tension Roller	[H]	ID Sensor Shutter
[B]	ITB Cleaning Blade	[1]	Shutter Solenoid
[C]	Waste Toner Transport Coil	[J]	ITB Contact Cam (CMY)
[D]	Discharge Plate	[K]	ITB Contact Slider
[E]	Paper Transfer Roller	[L]	ITB (Image Transfer Belt)
[F]	ITB Drive Roller	[M]	ITB Contact Cam (K)
[G]	ID Sensor	[N]	Image Transfer Roller

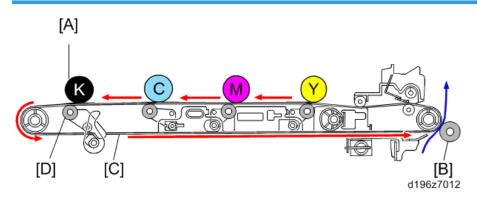
## Mechanisms

## Differences from the predecessor models

	C305 (Predecessor model)	C306/C406 (This model)
Image Transfer	Direct Transfer	Indirect transfer

	C305 (Predecessor model)	C306/C406 (This model)
Paper Transfer	Repulsion transfer (Paper transfer bias is applied to the ITB drive roller.)  Contact/release mechanism	Attraction transfer (Paper transfer bias is applied to the paper transfer roller.)  Constant contact (No release mechanism)
Cleaning Mechanism	Cleaning Blade + Lubricant brush roller	Cleaning Blade

#### Transfer Movement and Image Transport



Callout	ltem	Callout	ltem
[A]	OPC Drum	[C]	ITB
[B]	Paper Transfer Roller	[D]	Image Transfer Roller (First Transfer Roller)

Images of each color are created and transferred to the ITB (image transfer belt) [C].

The paper transfer roller [B] transfers the toner image from the ITB to the paper.

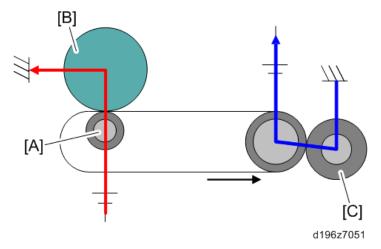
This model uses the indirect transfer method to enhance the quality of transfer.

The indirect transfer method uses the resistance of the ITB to apply the bias to the drum. So, in this model, the position of the image transfer roller is changed and so is its material.

As the image transfer method is changed, the paper transfer method is changed from the repulsion method to the attraction method (the reason is explained below).

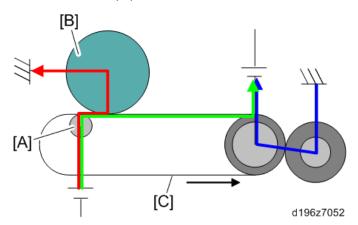


• Direct Image Transfer + Repulsion Transfer Method (C305):



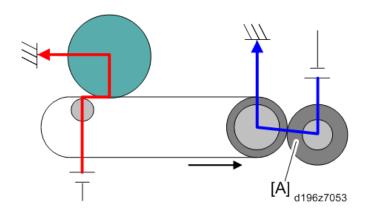
### • Indirect Image Transfer + Repulsion Transfer Method:

The image transfer roller [A] transfers the image transfer bias to the drum [B]. However, some of the bias goes to the image transfer belt [C]. This causes harmful interference between the image transfer current and paper transfer current.

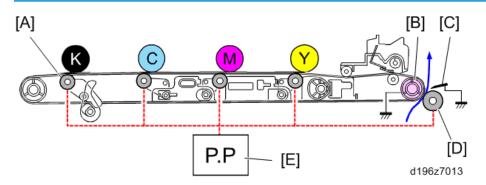


#### • Indirect Image Transfer + Attraction Transfer Method (C306/C406):

To eliminate the interference, applying the opposite bias to the paper transfer roller [A] is required. That is why the attraction transfer method is used in this model.



## **Transfer Bias**



Callout	ltem	Callout	ltem
[A]	Image Transfer Roller (First Transfer Roller)	[D]	Paper Transfer Roller
[B]	ITB Drive Roller	[E]	Power Pack
[C]	Discharge Plate		

The power pack [E] applies a transfer bias to the image transfer roller [A]. The ITB drive roller [B] and discharge plate [C] are grounded through a diode.

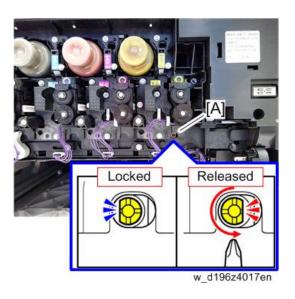
There is no contact/release mechanism for the paper transfer system, which the previous model uses, to reduce noise.

Callout	ltem	Callout	ltem
[A]	ITB Contact Cam (CMY)	[D]	Contact Slider
[B]	ITB Contact Motor	[E]	Image Transfer Roller (First Transfer Roller)
[C]	ITB Contact Sensor		

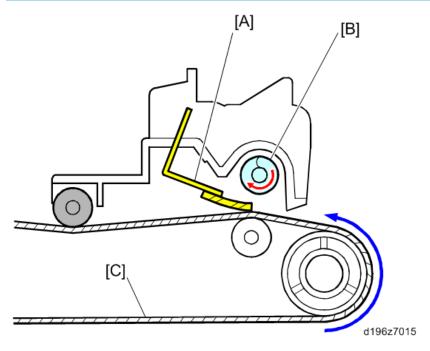
ITB has a contact mechanism to prevent the OPC drum (CMY) from early deterioration. The color drums are not needed for B/W printing, so this mechanism releases the ITB from the OPC drums (CMY).

The ITB contact motor [B] rotates the ITB contact cam [A] through a gear. The contact slider then moves and raises the image transfer roller [E] into contact with the CMY drums.

If the mechanism is defective (e.g.: Paper jams), and is stuck with the CMY rollers up against the ITB, the cam can be turned manually to lower the rollers, in order to remove the ITB unit without damaging the machine, as follows. The ITB will move away from the CMY drums. To do this, turn the pressure release screw to the left until the flat part of the half moon on the screw points to the right



## ITB Cleaning

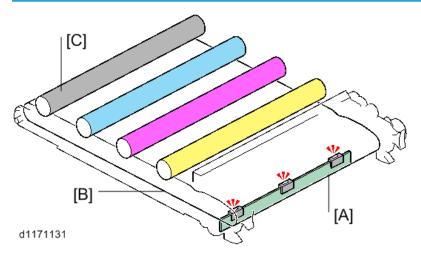


Callout	ltem	Callout	ltem
[A]	ITB Cleaning Blade	[C]	ITB
[B]	Waste Toner Collection Coil		

The cleaning blade [A] cleans the ITB [C]. The waste toner collection coil [B] transports the waste toner removed by the ITB cleaning blade towards the front of the machine.

This model only uses a cleaning blade for cleaning, whereas the previous model uses a blade and a lubricant brush roller.

#### **Image Position Correction**

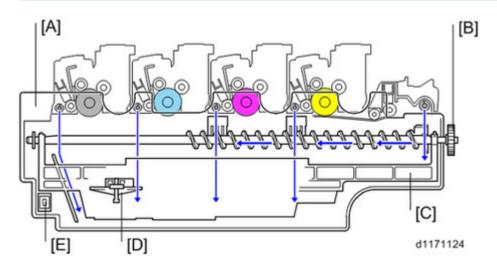


Callout	ltem	Callout	ltem
[A]	ID Sensor	[C]	OPC Drum
[B]	ITB		

The image position adjustment is done by the three ID sensors [A].

## **Waste Toner Collection**

## **Waste Toner Transport Mechanism**



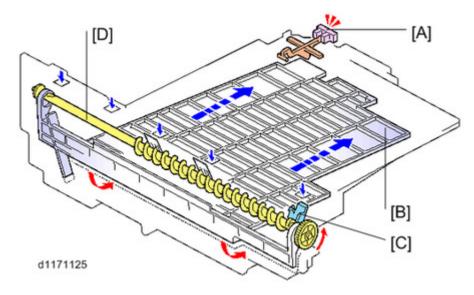
Callout	ltem	Callout	ltem
[A]	Waste Toner Bottle	[D]	Waste Toner Full Sensor
[B]	Waste Toner Bottle Transport Coil	[E]	Waste Toner Bottle Set Switch
[C]	Waste Toner Agitator		

The waste toner collected from the ITB cleaning unit is transported towards the front of the machine and it goes into the waste toner bottle [A].

The waste toner of yellow and magenta coming from the PCDU (Y/M) and the waste toner from the ITB cleaning unit is collected at the center of the waste toner bottle by the waste toner transport coil. The black and cyan waste toner comes from the PCDU to the waste toner bottle directly.

The waste toner agitator [C] carries waste toner piled up at the front of the waste toner bottle to the rear.

The waste toner bottle set switch [E] detects the presence of the waste toner bottle, and there is also a waste toner bottle full sensor [D].



Callout	ltem	Callout	ltem
[A]	Waste Toner Full Sensor	[C]	Waste Toner Agitator (for ITB Cleaning Unit)
[B]	Waste Toner Agitator	[D]	Waste Toner Bottle Transport Coil

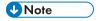
The waste toner agitator [B] carries waste toner piled up at the front of the waste toner bottle to the rear. The agitator [C] moves together with the waste toner bottle transport coil [D].

When the waste toner full sensor [A] detects a "waste toner near full", the machine displays an alert message on the operation panel, which prompts users to replace the waste toner bottle.

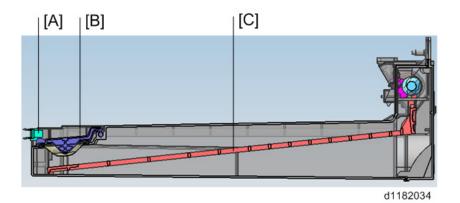
#### Waste Toner Full Detection

When the waste toner moves the rubber actuator [B] to the highest position, the waste toner full sensor [A] detects that the waste toner bottle is near-full. The machine does not stop at this time.

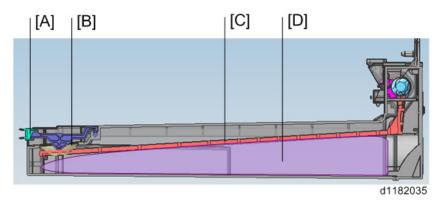
When the quantity of waste toner calculated by the machine reaches 25 g or 3,000 sheets in standard mode, whichever comes first after near-full was detected, the machine detects that the waste toner bottle is full, and stops itself automatically.



When the waste toner bottle is empty:



• When the waste toner bottle is full:



- [A] Waste Toner Full Sensor
- [B] Rubber Actuator
- [C] Waste toner agitator
- [D] Waste Toner

## **Process Control and MUSIC**

## **Process Control**

### Outline

Process control adjusts the image creation process to maintain a constant image density. Process control is executed at the following times.

Trigger	Operative Condition	Notes	
	When a certain time passes after the previous job end, AND:		
	<ol> <li>More than six hours pass after the last OPC drum operation (SP3-530-001).</li> </ol>		
	<ol> <li>More than 100 full color copies or more than 250 B/W copies are made between the second latest power-on and the latest power-on.</li> </ol>		
	<ul> <li>When a certain time passes after the previous job end, OR, the change of temperature/humidity after the last OPC drum operation exceeds the following condition:</li> </ul>	Except when recovering from an SC	
Power ON	<ol> <li>The change of temperature is more than or equal to the threshold [deg] (SP3-530-002).</li> </ol>		
	<ol><li>The change of relative humidity is more than or equal to the threshold [%RH] (SP3-530-003).</li></ol>	or jam	
	<ol> <li>The change of absolute humidity is more than or equal to the threshold [g/m3] (SP3-530-004).</li> </ol>		
	Default settings: Time: 360 minutes		
	Temperature: 10 deg		
	Relative humidity: 50%RH		
	Absolute humidity: 6 g/m <sup>3</sup>		
	Other related SPs:		
	SP3-530-005/006		

/

Trigger	Operative Condition	Notes
	When the job end counter becomes more than the threshold.	
Job End	Related SPs:	-
	SP3-534-001/011	
Job	When the job interrupt counter becomes more than the threshold.	
Interruption	Related SPs:	-
	SP3-533-001/011	
Non-use (Idle)	Non-use (Idle) Non-use time becomes more than the value in SP3-531-001.	
Manual Process When SP3-011-001 is executed. Control		-
Toner End Recovery When a Toner End is resolved.		-
Initial Setting	When an initial developer setting is completed.	-

Vc is the charge bias, which is applied to the charge rollers.

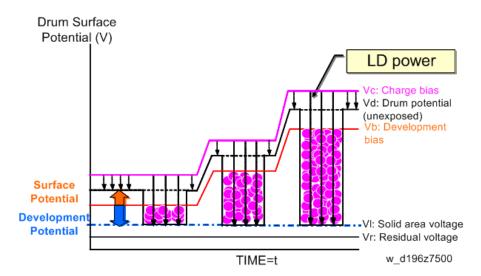
Vd is the potential of the unexposed (charged) drum.

The value of Vc is not equal to Vd.

For example, if applying a Vc of 700 [-V], the actual drum potential (Vd) tends to be about 650 [-V].

Vb is the potential when toner starts to stick to the drum (Development bias).

When the potential gets to Vb or greater, toner starts to stick to the drum in proportion to the potential. Development gamma is the coefficient showing the relation between the potential and the volume of toner adhesion.



In addition to the development gamma and the potential, the toner density in the developer needs to be controlled. This is done to maintain the proper toner density (the amount of toner adhesion).

The target for the toner density in the developer is when the output from the toner density sensor is Vtref.

Process Control is done as shown in the following chart, which includes development gamma determination, Vtref correction, and LD power control.

### Charged Drum Potential/Development Bias Control (Solid Printing Density Stable)

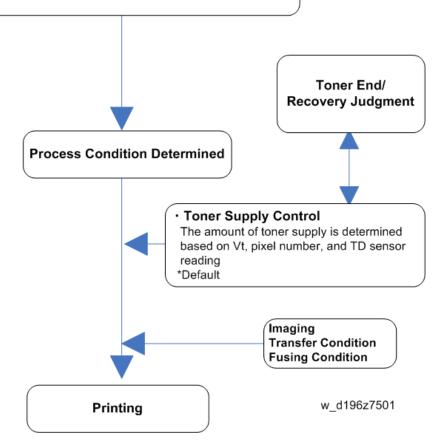
The development gamma is detected by the ID sensor and the development bias is controlled to meet the target density.

Vtref Correction (Solid Printing Density Stable)
 Vtref is corrected depending on the gamma.

## • LD Power Correction (Highlight Density Stable)

The LD power is controlled in order that the density of the 1-dot independent pattern is a fixed value.

\*Default: LD Power Fixed



### Charge/Development Bias Control and Vtref Compensation

Charge/Development bias control and Vtref Compensation is done using the following procedure. Its operating time varies depending on the machine's line speed.

#### Adjusting the ID sensor Vsg

This step adjusts ID sensor's LED's light intensity so that Vsg, which is the ID sensor output when monitoring the bare surface of the ITB, becomes within 4.0±0.5V. When Vsg does not reach the target value three times, the machine issues SC370 (ID sensor Calibration Error).

- SP3-320-011 (Vsg Error Counter)
- SP3-320-013 (Vsg Upper Threshold)
- SP3-320-014 (Vsg Lower Threshold)
- The above SPs can only be accessed from Special Service mode.

#### Agitating the Developer

This step agitates the developer, and gets the TD sensor output.

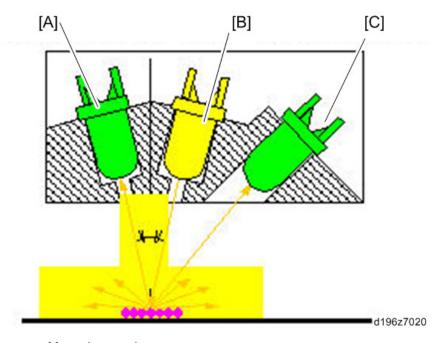
The developer agitation time is determined by the three factors below.

- 1. The change of absolute humidity
- 2. Non-use time
- 3. Coverage

#### Creating patterns, detecting the density

Five patterns are created by adjusting the charge/development bias on the transfer belt for each color. Then the ID sensor detects the created patterns.

The ID sensor consists of an LED and two types of photo detector. The sensor detects the reflection from the LED [B] with the direct reflection detector (REG) [A] and the diffused reflection detector (DIF) [C].



### **Determining Vtref from the Development Gamma**

Detecting the development gamma value with an ID sensor pattern and measuring Vsp/Vsg determines the charge/development bias for the correct image density.

Also, the reading from the TD sensor and the development gamma determine Vtref, which is the reference value for the TD sensor.

#### LD Power Control

LD Control is set with SP3-600-001 (Process Control/ Select ProCon: LD Control).

- If SP 3-600-001 is set to LD Power Control by Process Control (Default): The LD strength is adjusted based on a table which is determined by Development Bias Control and Vtref Correction.
- If SP 3-600-001 is set to use a fixed LD power, the LD power that is used depends on the settings of SP2-221-001/002/003/004.

#### **Toner Supply Control**

SP3-400-001, -002, -003, -004

- 0: Fixed supply method
- 2: PID method
- 4: DANC method (Default)
  - Fixed Supply method
     Toner supply time is calculated based on the supply rate of SP3-440-001 through -004
     (DrvTime: Setting).
  - PID method

/

PID (Proportion Integral Differential)

The amount of toner supply is calculated based on the pixel information and TD sensor information.

DANC method

DANC (Divided Active Noise Control): Conventional PID method + active noise control. It controls the timing to supply the developer to minimize uneven developer density in the development unit.

#### Toner Near End, Toner End

#### Toner Near-End

First, the amount of remaining toner is detected with the pixel count and the driving time of the toner supply motor. Then, when the amount of remaining toner is less than the threshold for toner nearend (K = 23 g, CMY = 10 g), the machine determines a toner near-end.

For CMY, when the amount of remaining toner is less than 50 g, or when the toner end sensor, which is a piezoelectric sensor, detects toner near-end twice, the machine also determines a toner near-end.

#### Toner End

A toner end is detected when the toner end sensor detects the end threshold six times in the toner near-end condition.

The machine also detects a toner end when the difference of the Vt and Vtref, and their total difference are as in the following matrix:

	Condition	Vt/Vtref: Diff	Vt/Vtref: Diff: Total
K	Before Near-End	0.7 V or more	Over 10 V
N.	After Near-End	0.3 V or more	Over 3 V
CMY	-	0.5 V or more	Over 10 V

When you open and close the front door, and turn the main power off and on, the machine detects that a new toner bottle is set. The machine then starts the toner supply to recover from the toner end. After supplying toner, the machine checks the toner end sensor and Vt condition and deactivates the toner end condition.

#### **Developer Initial Setting**

When a new PCDU is set in the machine, the machine automatically detects it and enters the developer initial setting mode. The machine then detects the  $\mu$  count which is an output from the TD sensor. The developer initial setting is done as follows.

#### 1. Starting the developer initial setting mode

The new unit detection mechanism triggers the developer initial setting mode.

#### 2. Agitating the developer

The machine rotates the development roller and transport coil to agitate the developer for 30 seconds.

#### 3. Detecting the # count (Initial value)

While agitating the developer, the machine detects the output from the TD sensor, and stores this output as the initial  $\mu$  count.

#### 4. Calculating Vt

The machine calculates Vt using the difference of the current  $\mu$  count while referring to the initial  $\mu$  count through SP.

#### 5. Forced toner supply (only when newly installing the machine)

This step is required only when the machine is newly installed because there is no toner in the toner transport route.

When the developer initial setting is successfully completed, the machine stores the calculated Vt as Vtref. The Vtref is used as a reference the next time the machine performs an initial developer setting.

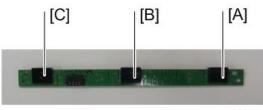
SC360-01 through -04 appears if the results of step 3 are as follows:

The  $\mu$  count is equal or exceeds the threshold (6480 [counts]).

The  $\mu$  count does not match the target threshold (5800 – 6380 [counts]) three times consecutively.

Process Control and MUSIC are forcibly done after developer initial setting when a PCDU is replaced.

#### **ID Sensor**



d1182040

Three ID sensors are on a single board. The center sensor [B] acts as an ID sensor and a MUSIC sensor. The front [A] and rear [C] sensors are used only for MUSIC.

The ID sensors [A] are installed at the upstream side of the paper transfer roller [B] and detect image density at the plate [C]. This layout allows the machine to detect a pattern faster and to help reduce waiting time.

#### **TD Sensor**

In this model, a non-contact toner density (TD) sensor, which we also call a mu ( $\mu$ ) sensor, is used for toner density control.

The TD sensor is attached on the lower side of the development unit. Unlike a HST sensor, the board of the TD sensor is exposed. So there is a cover around the sensor to protect it and to maintain a good contact between the sensor and development unit.

The TD sensor measures the permeability of the developer without contacting it, from the outside of the case, and converts the measured value to the toner density.

According to the toner density measured by this sensor, the proper amount of toner is supplied to the developer.

A counter corresponding to the frequency is used as the unit of TD sensor output. Thus, unlike a HST sensor which directly detects Vt, the TD sensor output is converted into Vt for toner supply control.

In the TD sensor, there is an ID chip storing the machine identification information, the running distance information of Development unit and PCU, and other information used by image density control.

#### MUSIC

#### **Color Skew Adjustment Timing**

This model has a mechanism that adjusts color skew, which we call MUSIC. The machine creates a pattern for correction, measures the image position by the pattern, and adjusts the image position.

No.	MUSIC performs when:	Notes
1	The power switch is just turned on, or the machine recovers from the energy save mode.	Executes [Mode b] (*2) or [Mode a] (*1)
2	The machine does a print job.	Executes [Mode b] (*2)
3	Printing is completed.	Executes [Mode b] (*2)
4	The front cover is closed.	Executes [Mode b] (*2) or [Mode a] (*1)
5	The machine is waiting.	Executes [Mode b] (*2)
6	The machine detects a new PCDU automatically, ITB manually.	Executes [Mode a] (* 1)

- \*1 [Mode a] fine adjusts twice.
- \*2 [Mode b] fine adjusts once.

To operate modes a/b/c manually, use the following SPs:

- SP2-111-001 (Forced Line Position Adj.: [Mode a])
- SP2-111-002 (Forced Line Position Adj.: [Mode b])
- SP2-111-003 (Forced Line Position Adj.: [Mode c]): Do this SP when you have replaced a laser unit, or when significant color skew occurs.



• Do [Mode a] and [Mode b] after doing [Mode c].

#### **MUSIC Error Determination**

MUSIC determines whether an error occurs for each color.

SP2-194-007 shows the results, and SP2-194-010 through -013 show the error details.

SP2-194-007 (MUSIC Execution Result - Execution Result)

SP2-194-010 (MUSIC Execution Result - Error Result: C)

SP2-194-011 (MUSIC Execution Result - Error Result: M)

SP2-194-012 (MUSIC Execution Result - Error Result: Y)

SP2-194-013 (MUSIC Execution Result - Error Result: K)

Error Details	Description
0	Not done
1	Completed successfully
2	Cannot detect patterns
3	Insufficient lines for a pattern
4	Out of the adjustment range
5 or 6	TD sensor false detection

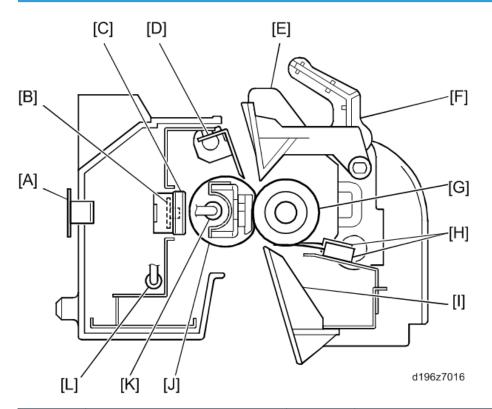
#### **Adjustment Overview**

- 1. Performs Vsg adjustment to correct TD sensor output.
- 2. Creates a MUSIC pattern on the transfer belt with each color toner.
- 3. Reads the MUSIC pattern on the belt, and measures the positions of the lines on the pattern.
- 4. Calculates the color skew amount from the position data.
- 5. Calculates the tolerance/deviation for main scan magnification, and the main/scan registration skew amount. Then determines the amount of color skew adjustment.

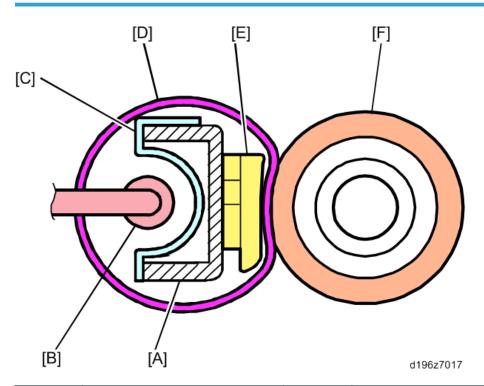
#### 7

# **Fusing**

## Overview



Callout	ltem	Callout	ltem
[A]	Fusing Thermopile	[G]	Pressure Roller
[B]	Fusing Thermistor (NC Sensor)	[H]	Pressure Roller Thermistors (×3)
[C]	Fusing Thermostat	[1]	Entrance Guide Plate
[D]	Separation Plate	[1]	Fusing Sleeve Belt (QSU Method)
[E]	Exit Guide Plate	[K]	Fusing Lamp
[F]	Pressure Arm	[L]	Fuse for New Unit Detection



Callout	ltem	Callout	ltem
[A]	Stay	[D]	Fusing Sleeve Belt (Diameter: 25)
[B]	Fusing Lamp	[E]	Nip Pad
[C]	Reflector	[F]	Pressure Roller (Diameter: 25

The fusing unit uses the QSU system. (QSU: Quick Start Up).

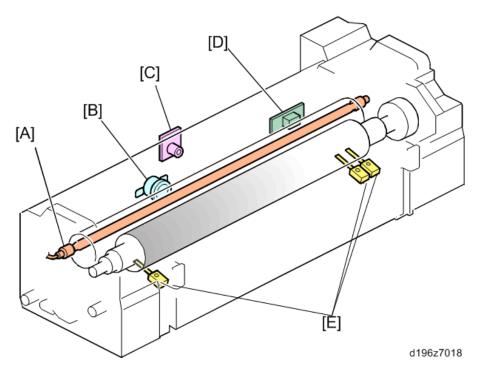
The heat from the fusing lamp [B] is reflected by the reflector [C] and heats the fusing sleeve belt [D] at the left.

The temperature at both ends of the fusing lamp is lower than the middle.

The pressure roller drives the fusing sleeve belt.

The sleeve belt itself has no drive mechanism; the pressure roller drives it. The nip pad [E] at the sleeve belt side is pushed against the pressure roller and keeps the nip width on the sleeve belt.

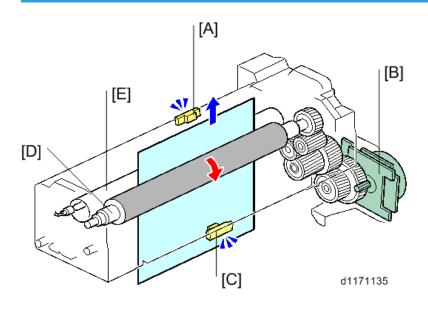
## **Fusing Temperature Control**



Callout	ltem	Callout	ltem
[A]	Fusing Lamp	[D]	Fusing Thermistor (NC Sensor)
[B]	Fusing Thermostat	[E]	Pressure Roller Thermistors (x3)
[C]	Fusing Thermopile		

The fusing temperature is controlled by the fusing thermopile [C].

The thermostat [B] is a safety switch. The fusing unit must be replaced if the thermostat is blown.



Callout	ltem	Callout	ltem
[A]	Fusing Exit Sensor	[D]	Pressure Roller
[B]	Fusing Motor	[E]	Fusing Sleeve Belt
[C]	Fusing Entrance Sensor		

The fusing motor [B] drives the pressure roller [D] through gears.

The pressure roller [D] drives the fusing sleeve belt [E].

The fusing entrance sensor [C] and fusing exit sensor [A] detect paper jams around/in the fusing unit.

## **Fusing Temperature Control**

#### Warm-up mode

When the main power switch is turned ON, the machine starts the fusing warm-up. The machine drives the fusing motor to increase the fusing temperature to the reload target temperature. When the machine completes the fusing warm-up, it keeps the reload target temperature by driving the fusing motor for a certain period of time.

#### Standby mode

When a certain period of time passes after fusing reload is completed, the machine stops the fusing lamp and fusing motor. Then the machine keeps the fusing temperature to the standby target temperature (SP1107-001) by energizing the fusing lamp.

In standby mode, the machine starts the fusing motor intermittently.

#### Printing ready mode

After returning to standby mode, the machine lights the fusing lamp to increase the fusing temperature to the printing ready target temperature. If there is no printing job, the machine then moves back to the standby mode.

If there is a printing job, the machine starts the fusing lamp to increase the fusing temperature to the target temperature after reload/feeding, and then starts the print job.

#### **CPM Down Control**

This machine automatically lowers the CPM according to usage and machine status to obtain the best image quality and keep the machine in good condition.

If the fusing lamp is always activated during consecutive printing, and/or the paper size is smaller than the lamp's width, then some heat will not be used for fusing and may stay around the front and rear ends of the fusing unit. This will increase the temperature in the fusing unit abnormally.

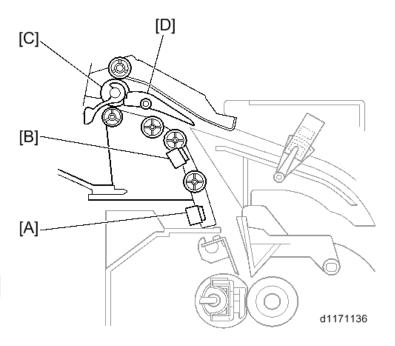
CPM down control keeps the machine's CPM low until the fusing unit sufficiently cools down. Normally, it takes 10 minutes to recover the original CPM.

#### **CPM Down Level**

	A5	Postcard	Envelope	Recovery Time
CPM (Standard)	15	15	15	
CPM Down Starting Sheet Count		14th sheet	5th sheet	
CPM (Controlled)	No CPM	10	6	10 mins.
Output sheet count after one minute from recovery	control	14	8	

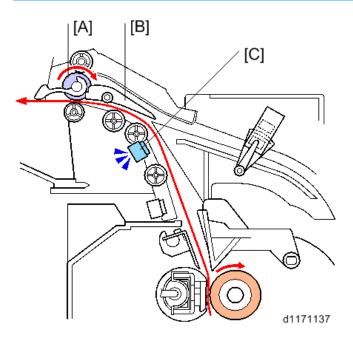
# Paper Exit and Inverter

## Overview



Callout	ltem	Callout	ltem
[A]	Fusing Exit Sensor	[C]	Paper Exit Inverter Roller
[B]	Paper Exit Sensor	[D]	Inverter Junction Gate

## Mechanism



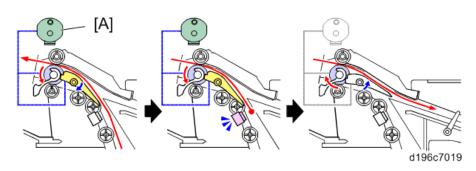
Callout	ltem	Callout	ltem
[A]	Paper Exit Inverter Roller	[C]	Paper Exit Sensor
[B]	Inverter Junction Gate		

## **Duplex Operation**

The movement of the inverter junction gate [B] switches the paper feed path from the paper exit side to the inverter side, or vice versa. This allows duplex feed.

#### **Paper Exit**

The paper transport motor rotates the paper exit inverter roller [A] through a gear. The paper exit sensor [C] detects paper exit jams and the paper inversion timing.



Callout	ltem
[A]	Paper Exit Rotary Solenoid

The paper exit rotary solenoid [A] controls the inverter junction gate and paper exit inverter roller simultaneously.

In duplex printing, after the first side of a sheet has been printed, the paper exit rotary solenoid switches the inverter junction gate to direct the paper to the paper exit path, while at the same time rotates the paper exit roller in reverse to feed the paper towards the paper exit (see the left illustration above).

When the trailing edge of the paper passes the paper exit sensor, the machine turns off the paper exit rotary solenoid, switches the inverter junction gate back to the original position before the paper completely goes out of the paper exit, and rotates the paper exit roller forward to feed the paper to the duplex transport path.

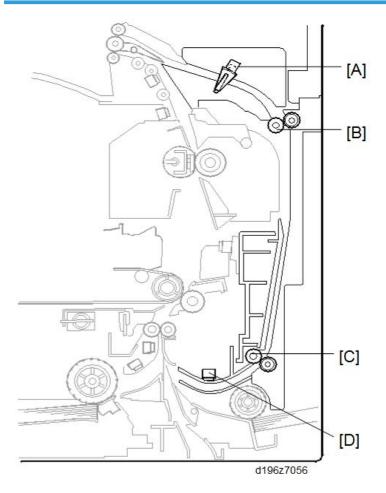
After that, the machine starts to print the 2nd side and feeds out the paper that is printed on both sides to the paper exit tray.

/

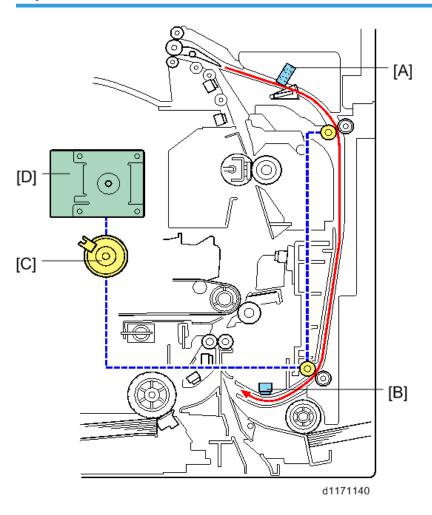
#### 7

# Duplex

## Overview



Callout	ltem	Callout	ltem
[A]	Duplex Entrance Sensor	[C]	Duplex Paper Transport Roller (Lower)
[B]	Duplex Paper Transport Roller (Upper)	[D]	Duplex Exit Sensor



Callout	ltem	Callout	ltem
[A]	Duplex Entrance Sensor	[C]	Duplex Clutch
[B]	Duplex Exit Sensor	[D]	Paper Transport Motor

After the inverter mechanism feeds the paper back into the machine, the paper goes to the duplex feed path.

Duplex feed is not possible when the bypass tray is in use.

### **Duplex Drive**

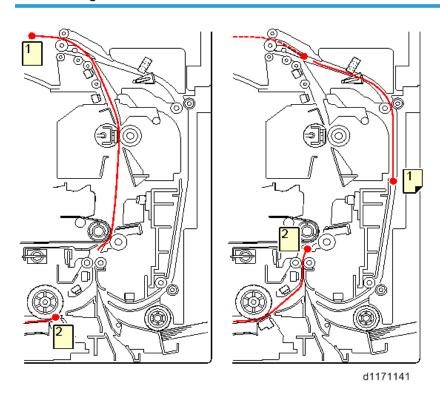
The drive from the paper transport motor [D] is transmitted to the duplex clutch [C] through a gear, and the duplex clutch turns on to drive the duplex rollers.

There are two duplex paper transport rollers (upper and lower). The duplex drive is transmitted from the lower duplex paper transport roller to the upper duplex paper transport roller via a timing belt.

#### **Duplex Transport**

There are two paper sensors (upper and lower) in the duplex unit. The upper sensor is the duplex entrance sensor [A]. The lower sensor is the duplex exit sensor [B].

## Interleaving



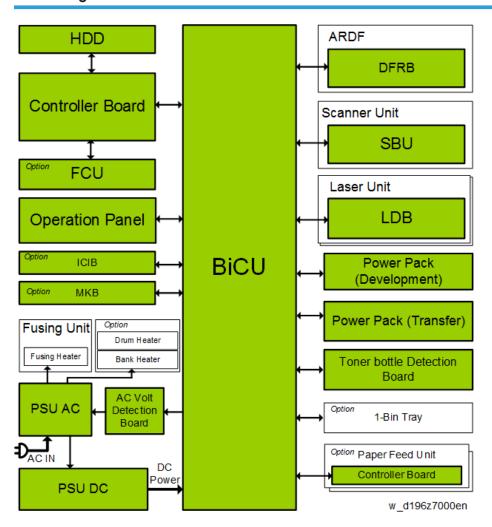
This machine adopts "2 in 1" interleaving.

The interleave operation of this machine is as follows:

1st sheet back -> 2nd sheet back -> first sheet front -> 2nd sheet front -> 3rd sheet back -> 4th sheet back.

## **Electrical Parts**

## **Block Diagram**



### **Board Outline**

#### Controller

Controls the MFP system overall. Contains an MIPS CPU, controller ASIC, IO control ASIC, and RAM.

#### **SBU**

Scanning control circuit which performs analog signal processing and AD image conversion of the CCD read image.

It also has an interface with the IPU, and controls scanner input and output signals according to CPU commands.

#### LDB

LD control circuit which drives the laser diode with a universal driver.

#### **BiCU**

Controls the engine, as well as MFP engine sensors, motors and solenoids (The BCU has the IOB functions).

#### **FCU**

Controls the fax program.

#### OPU

Controls the control panel.

#### Power Packs (HVPS)

Generates high-voltage power required for process control. The power pack consists of two units: T1T2 for transfer and CB for charging/developing.

#### **PSU**

Generates DC power from the mains AC power supply, and supplies it to each control circuit. Contains an A/C drive circuit for controlling the fusing lamp.

#### **ACVB**

Detects the voltage of the mains AC supply.

#### **DFRB**

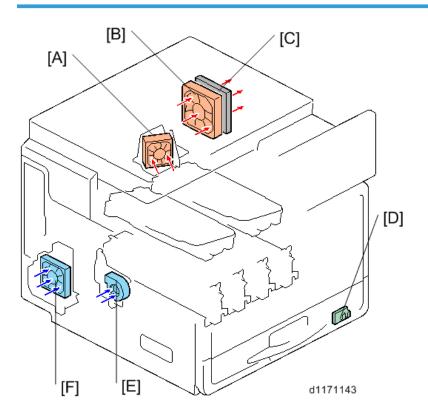
Controls motors, sensors, and solenoids in the ARDF.

#### **Fuse**

Refer to Fuse Location (page 598 "Fuse Location").

## **Machine Ventilation**

## Overview



Callout	ltem	Callout	ltem
[A]	LD Unit Cooling Fan	[D]	Temperature/Humidity Sensor
[B]	Exhaust Fan	[E]	PCDU Cooling Duct Fan
[C]	Ozone Filter	[F]	PSU Fan

The machine has four fans [A] [B] [E] [F] to ventilate the interior of the machine. There is a temperature/humidity sensor [D] at the front (lower right) of the machine. The machine takes in air from the left of the machine and exhausts it from the right of the machine after it cools the machine interior.

The ozone filter [C] is installed at the right of the exhaust fan, which helps make it easier to replace the filter.

#### **Machine Ventilation**

The following tables summarize the fan control.

#### Fan Control Overview

Status	PCDU Cooling Duct Fan	Fusing Fan	PSU Fan	LD Unit Cooling Fan	
Engine Off		С	)ff		
Power ON – Warm- up	Stops				
Standby	Stops	Rotates at low speed	Stops	Stops	
Standby after printing	*1				
Printing	Rotates at full- speed → Stops *2	Rotates at full- speed → Rotates at low-speed *2	Rotates at full- speed* <sup>3</sup>	Rotates at full- speed ⇒ Stops *2	
Lower Power					
Silent	Stops *4				
Abnormal status					

#### Notes:

- 1. Keeps the printing status for the time specified in SP1-950-001 through -004. Then the fan keeps rotating until it reaches the temperature specified in SP2-241-004.
  - 001: PCDU Cooling Duct Fan
  - 002: Fusing Fan
  - 003: PSU Fan
  - 004: LD Unit Cooling Fan
- 2. Rotates at full speed when the temperature around the drum exceeds the temperature specified in SP1-955-001 through -004; Stops or rotates at low-speed when the temperature is out of the threshold specified in SP1-955-005.
  - 001: PCDU Cooling Duct Fan
  - 002: Fusing Fan
  - 004: LD Unit Cooling Fan
- 3. If the time interval between the end timing of the last printing status and the start timing of the next printing status exceeds the value in SP1-955-007, the machine stops the fan until the duration specified in SP1-955-006, and then rotates at full speed.

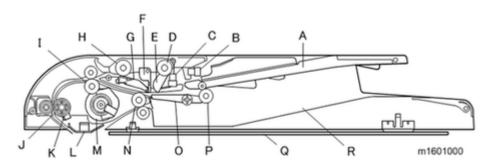
4. If the fan is rotating, the machine keeps rotating it until the time specified in SP1-950-001 through -004.

## **Operation Panel**

Refer to "Smart Operation Panel" manual for details.

# ARDF (Option)

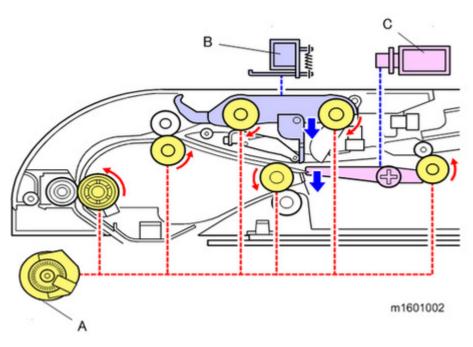
## Overview



Callout	ltem	Callout	ltem
[A]	Original Feed Tray	[J]	2nd Paper Transport Roller
[B]	ARDF Feed Cover Sensor	[K]	ARDF Registration Sensor
[C]	ARDF Original Sensor	[L]	White Plate Guide
[D]	Pickup Roller	[M]	ARDF Drive Roller
[E]	Original Set Detection Actuator	[N]	Original Exit Roller
[F]	Original Stopper	[0]	Junction Gate
[G]	Friction Pad	[P]	Reverse Roller
[H]	Paper Feed Roller	[Q]	Platen Cover
[۱]	1 st Paper Transport Roller	[R]	Original Exit Tray

Callout	ltem	Callout	ltem
[A]	ARDF Original Transport Sensor	[E]	ARDF Feed Cover Sensor
[B]	ARDF Transport Motor	[F]	ARDF Reverse Solenoid
[C]	ARDF Feed Solenoid	[G]	ARDF Relay Board
[D]	ARDF Original Set Sensor		

## Original Transport Drive Mechanism

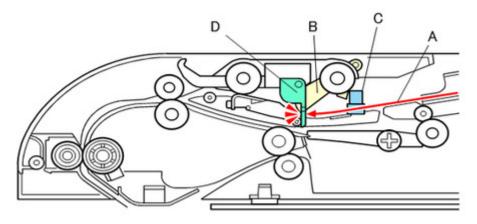


Callout	ltem	Callout	ltem
[A]	ARDF Transport Motor	[C]	ARDF Reverse Solenoid
[B]	ARDF Feed Solenoid		

The ARDF Transport Motor [A] drives each roller through gears. The ARDF Feed Solenoid [B] controls the original pick-up. The ARDF Reverse Solenoid [C] operates the reverse junction gate.

Note that this machine does not have an automatic size detection mechanism.

## Original Set Detection Mechanism



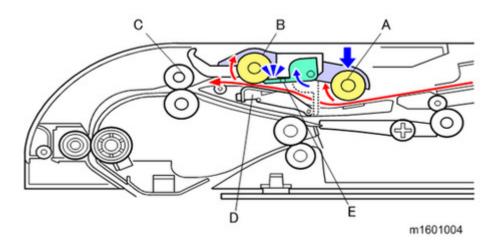
m1601003

Callout	ltem	Callout	ltem
[A]	Original	[C]	ARDF Original Sensor
[B]	Original Set Detection Actuator	[D]	Original Stopper

When users put an original [A] on the original feed tray in place, a feeler is pushed by the original set detection actuator [B]. As a result, the ARDF original sensor [C] is covered and the machine detects that an original is set.

The original stopper [D] prevents the user from placing originals too far into the feeder.

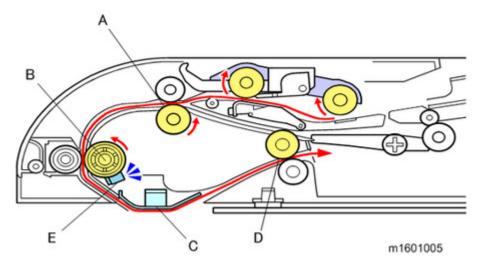
## Original Transport Mechanism (Single-sided Scanning)



Callout	ltem	Callout	ltem
[A]	Pickup Roller	[C]	1 st Paper Transport Roller
[B]	Paper Feed Roller	[D]	Friction Pad

When users start a job, the ARDF feed solenoid lowers the pickup roller [A]. The original is transported to the 1st paper transport roller [C] through the paper feed roller [B].

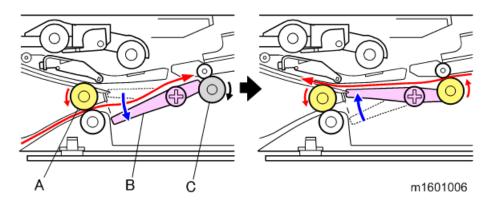
When scanning multiple sheets of original consecutively, the friction pad [D] feeds the topmost sheet of the paper stack on the original feed tray to the 1st paper transport roller without double feeding. The original stopper [E] is free during transporting the original for smooth paper transporting.



Callout	ltem	Callout	ltem
[A]	1 st Paper Transport Roller	[D]	Original Exit Roller
[B]	2nd Paper Transport Roller	[E]	ARDF Original Transport Sensor
[C]	White Plate Guide		

The original is feed through the 1st and 2nd paper transport roller [A][B], is scanned on the exposure glass under the white plate guide [C], and comes out through the original exit roller [D].

The ARDF original transport sensor [E] detects jams related to ARDF.



Callout	ltem	Callout	ltem
[A]	Original Exit Roller	[C]	Reverse Roller
[B]	Junction Gate		

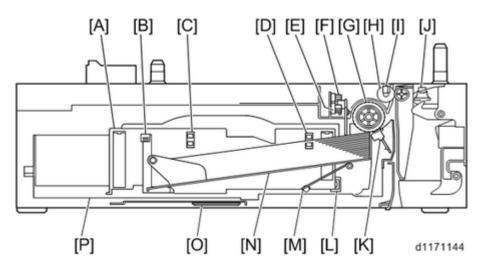
The ARDF Reverse Solenoid lowers the junction gate [B], and the original is transported to the reverse roller [C]. Then, the reverse roller [C] transports the original out of the ARDF by rotating in reverse. After that, the ARDF Reverse Solenoid is turned off after the trailing edge of the original passes the original exit roller [A], and the reverse roller starts normal rotation. The original comes back into the ARDF.

After the second side is scanned, the ARDF reverses the original again and feeds it out face down.

#### 7

## Paper Feed Unit (Option)

## Overview



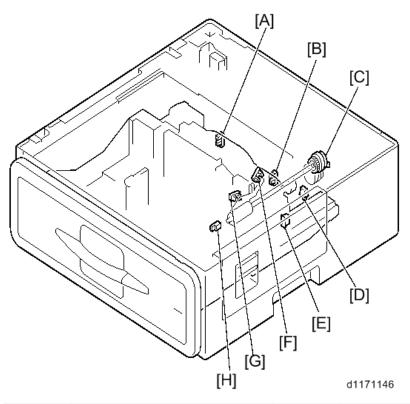
Callout	ltem	Callout	ltem	
[A]	Side Fence	[1]	Paper Transport Sensor	
[B]	End Fence	[1]	Vertical Transport Cover Open/ Close Switch	
[C]	Tray Bottom Plate Lift Sensor	[K]	Friction Pad	
[D]	Tray Bottom Plate HP Sensor	[L]	Tray Set Switch	
[E]	Paper End Sensor	[M]	Bottom Plate Lift lever	
[F]	Remaining Paper Sensor	[N]	Tray Bottom Plate	
[G]	Paper Feed Roller	[0]	Anti-condensation Heater (Option)	
[H]	Vertical Transport Roller	[P]	Paper Tray	

 Callout
 Item
 Callout
 Item

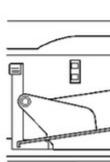
 [A]
 Anti-condensation Heater (Option)
 [D]
 Paper Feed Clutch

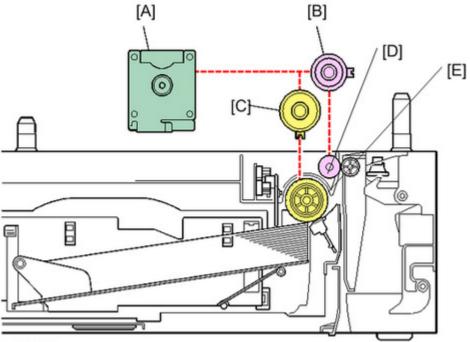
 [B]
 Controller Board
 [E]
 Tray Lift Motor

 [C]
 Paper Feed Motor



Callout	ltem	Callout	ltem
[A]	Tray Bottom Plate Lift Sensor	[E]	Tray Set Switch
[B]	Tray Bottom Plate HP Sensor	[F]	Paper End Sensor
[C]	Vertical Transport Clutch	[G]	Remaining Paper Sensor
[D]	Vertical Transport Cover Open/ Close Switch	[H]	Vertical Transport Sensor





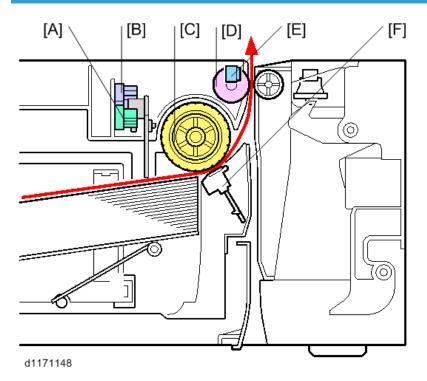
-41		-,		4		-
ď	11	-	1	п	4	1

Callout	ltem	Callout	ltem
[A]	Paper Feed Motor	[D]	Vertical Transport Roller
[B]	Vertical Transport Clutch	[E]	Paper Feed Roller
[C]	Paper Feed Clutch		

The paper feed motor drives the paper feed clutch [C] and the vertical transport clutch [B] through gears. The operation timing of each clutch is as follows.

- 1. The paper feed clutch [C] is turned on until the vertical transport roller begins to operate.
- 2. The vertical transport clutch [B] is turned on until the paper reaches the mainframe.

## Sensors and Friction Pad



Callout	ltem	Callout	ltem
[A]	Paper End Sensor	[D]	Vertical Transport Roller
[B]	Remaining Paper Sensor	[E]	Vertical Transport Sensor
[C]	Paper Feed Roller	[F]	Friction Pad

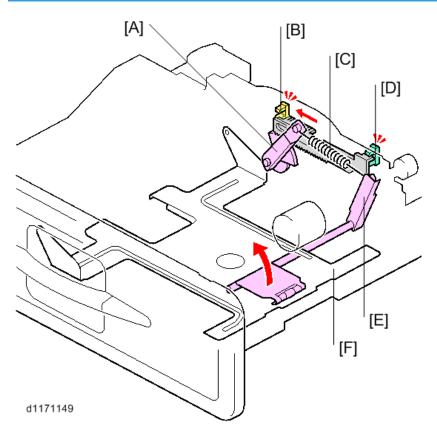
Only one actuator is used for detecting paper end and remaining paper.

The front side of the actuator is for the remaining paper sensor [B], and the rear side of the actuator is for the paper end sensor [A].

The vertical transport sensor [E] acts as a paper feed sensor.

This machine uses the friction pad method (same as the mainframe).

## Tray Lifting up Mechanism

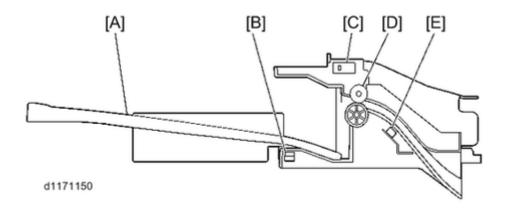


Callout	ltem	Callout	ltem
[A]	Tray Bottom Plate Pressure Lever	[D]	Tray Bottom Plate HP Sensor
[B]	Tray Bottom Plate Lift Sensor	[E]	Tray Bottom Plate Lift Lever
[C]	Lift Lever Encoder	[F]	Tray Bottom Plate

The pressure of the tray bottom plate [F] can be adjusted depending on the amount of paper remaining. The pulses from the lift lever encoder [C] are detected by the tray bottom plate lift sensor [B]. The tray lift motor is controlled based on the pulses from the encoder.

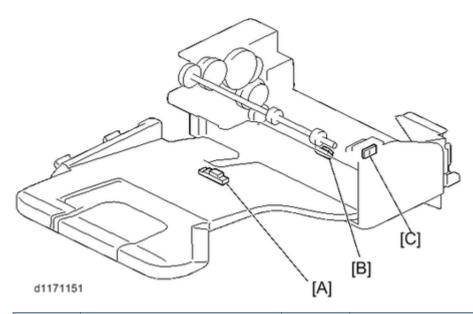
## 1-Bin Tray Unit (Option)

## Overview



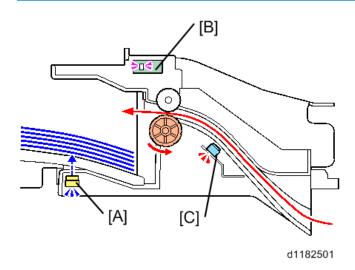
Callout	ltem	Callout	ltem
[A]	Paper Exit Tray	[D]	Paper Exit Roller
[B]	Paper Sensor	[E]	Paper Exit Sensor
[C]	LED Board		

## **Electrical Components**



Callout	ltem	Callout	ltem
[A]	Paper Sensor	[C]	LED Board
[B]	Paper Exit Sensor		

## Paper Exit from 1-Bin Tray Unit



Callout	ltem	Callout	ltem
[A]	Paper Sensor	[C]	Paper Exit Sensor
[B]	LED		

The paper from the paper exit section is transported to the 1-Bin unit.

This uses the same transport path as usual even if duplex is used.

The paper sensor [A] detects the fed out paper, and the LED [B] blinks to inform users that there is paper on the 1-Bin tray after the end of the job.

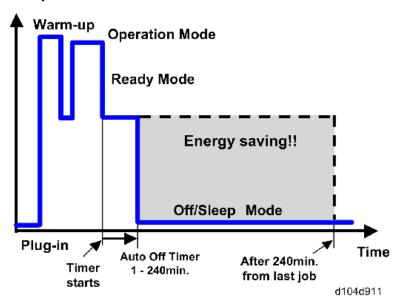
The paper exit sensor [C] detects paper jams in the 1-Bin tray.

# **Energy Save**

#### **Energy Saver Modes**

Customers should use energy saver modes properly, to save energy and protect the environment.

# Power Consump.



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 240 min., the grey area will disappear, and no energy is saved before 240 min. expires.

#### **Timer Settings**

The user can set these timers with User Tools (System settings > Timer setting)

• Auto off timer (1 – 240 min): Off/Sleep Mode. Default setting: 1 min.

#### Return to Stand-by Mode

#### Off/Sleep Mode

Recovery time.

• 10 sec.

7

#### 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.

#### **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 (Not used in this model)
- 8941-004: Low power mode (Not used in this model)
- 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.)	Time at End (min.)	Running time (hour) (2- 1)/60 =	Power consumption Spec. (W)	Power consumption (KWH) $(^{\textcircled{3}}x^{\textcircled{4}})/1000$ $= ^{\textcircled{5}}$
Operating	001: Operatin g 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

MEMO

MEMO



# **Model GR-C2**

# Machine Codes: D196/D214/D219/D220/D236

# **Appendices**

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# 1. Specifications

# **Specifications**

### Specifications

#### Mainframe

Configuration:	Desktop		
Scanning Element:	One-dimensional solid scanning through CCD		
Printing Process:	Dry Electrostatic Transfer System with Dual Component Development; 4-Drum Method		
Development:	Dry two-componen	t magnetic brush development system	
Resolution:	Scan:  • Exposure glass: 600 × 600 dpi  • ADF: 600 × 300 dpi  Print: 600 × 600 dpi		
Fusing:	New Color QSU system (Direct Heating fusing)		
Max Imageable Area:	Standard tray	216 x 356 (8.5" x 14.0")	
	Bypass tray	216 x 600 (8.5" x 23.6")	
Original Type:	Sheets, book, three-dimensional object		
Maximum original size:	A4 / LG(8.5" x 14")		
Copy Speed:	C306:		
	Color: 30 cpm (A4), 31cpm (LT)		
	B&W: 30 cpm (A4), 31cpm (LT)		
	C406:		
	Color: 35 cpm (A4), 36 cpm (LT)		
	B&W: 40 cpm (A4), 42cpm (LT)		

	C306:		
	Color: 11.0 seconds or less		
First Copy Time:	B&W: 7.2 seconds or less		
(LT/A4 LEF, 1st tray)	C406:		
	Color: 10.5 se	econds or less	
	B&W: 6.2 sec	onds or less	
Warm-up Time:	25 seconds (23°C	(73.4°F), rated voltage)	
D D C;	Standard tray	250 sheets	
Print Paper Capacity: (80 g/m², 20lb)	Bypass tray	100 sheets	
, , ,	Optional tray	500 sheets	
	Standard tray	A4 SEF / LT SEF to A5SEF	
Print Paper Size:	Bypass tray	A4 / LG to A6 SEF / Envelope	
Triiii rupei Size.	Optional tray	Optional tray A4 SEF / LG SEF to A5 SEF	
	For details, see page 9		
Printing Paper Weight:	Standard tray	60-163 g/m² (16-44 lb)	
	Bypass tray	60-220 g/m² (16-59 lb)	
	Optional tray	60-163 g/m² (16-44 lb)	
	Duplex	60-163 g/m² (16-44 lb)	
Output Paper Capacity:	Std: 100 sheets		
	Max: 200 sheets (with 1 bin tray)		
Continuous copy:	Up to 99 sheets		
Memory:	2GB		
Hard disk	320GB		
СРИ	RM7035C-533L		
Max Email Address in HDD 2000			
Register Group Address in HDD	Max. 100 Group (Max. 500 addresses in one group address)		

Register client folder address in HDD	Max. 2,000 folders	
Zoom:	Arbitrary: From 25 to 400% (1% st	ep)
	Fix	xed:
	North America	Europe/Asia
	65%	50%
	78%	71%
	93%	93%
	100%	100%
	129%	141%
	155%	200%
Power Source: 110 V, 60 Hz: More than 10 A (for Taiwa 120V -127 V, 60 Hz: More than 10 A (for 220 V - 240 V, 50/60 Hz: More than 5 A		0 A (for North America)
Power Consumption:	North America C306 (with full system): 1300 W or less C406 (with full system): 1300 W or less EU/Asia C306 (with full system): 1,200 W or less C406 (with full system): 1,200 W or less *The full system consists of the main unit, two paper tray units, and internal tray 2.	
Energy Saver:  Reduced electrical consumption:  North America  C306: 0.71 W or less  C406: 0.63 W or less  EU/Asia  C306: 0.66 W or less  C406: 0.75 W or less		

Ш

Noise Emission:	Sound power level with full system
	C306:
	Stand-by: 31.9 dB (A)
	Copying: 67.7 dB (A)
	C406:
	Stand-by: 31.9 dB (A)
	Copying:
	B&W: 68.3 dB (A)
	Color: 67.8 dB (A)
	Sound pressure level with full system
	C306:
	Stand-by: 19.3 dB (A)
	Copying: 55.3 dB (A)
	C406:
	Stand-by: 19.8 dB (A)
	Copying:
	B&W: 56.1 dB (A)
	Color: 54.2 dB (A)
	*Sound power level and sound pressure level are actual values measured in accordance with ISO 7779.
	*Sound pressure level is measured from the position of the bystander.
	*The full system consists of the main unit, ADF, internal tray 2, and two paper tray units.
Dimensions (W x D x H):	510 x 588 x 505 mm (20.1" x 23.1" x 19.9"):
	(including ARDF and operation panel)
Weight:	Basic model: 40.5 kg (89.3 lb)
	ADF model: 45 kg (99.3 lb)

#### **Printer**

Printer Languages:	Standard: PCL 5c/6, PDF, RPCS, PostScript 3
	Option: XPS, PictBridge

Resolution:	PCL5c:
	600 x 600 dpi (1, 2, 4 bit), 300 x 300 dpi Grayscale
	PCL6:
	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:
	600 x 600 dpi (1, 2, 4 bit)
Resident Fonts:	PCL5c/ 6: 45 fonts, 13 International fonts
	Adobe PostScript 3: 136 fonts
Host Interfaces:	Standard: Ethernet (RJ-45 network port: 10Base-T/100Base-TX/1000Base-T), USB2.0[TypeB], USB2.0 Host I/F[TypeA](2 port), SD slot
	Option: IEEE 1284/ECP, Wireless LAN (IEEE 802.11a,b,g,n), Bluetooth
	Ethernet (RJ-45 network port : 10Base-T/100Base-TX/1000Base-T)
Network Protocols:	Standard: TCP/IP (IPv4, IPv6)
	Optional: IPX/SPX

#### Scanner

Scanning Method	Full-color scanner / Flatbed scanning
Available Scanning Resolution Range:	Twain Mode:  • Exposure glass: 100 to 1200 dpi  • ADF: 100 to 600 dpi  WIA Mode:  100 to 1200 dpi  Delivery Mode:  • 100 / 200 / 300 / 400 / 600 dpi (default: 200 x 200 dpi)
Grayscales:	1 bit or 8 bits/pixel each for RGB

Scanning Throughput	B&W: Over 30ipm (200dpi / 300dpi)
	(A4, SEF, Mono 1bit, Text/Line Art, MH compression with ADF)
	Color: Over 30ipm (200dpi), Over 20ipm (300dpi)
	(A4, SEF, FC Text/Photo / JPEG standard compression with ADF)
Standard Scanner	DF: 600 x 300 dpi
Resolution:	Flatbed: 600 x 600 dpi
Network Interface:	Standard: 100BASE-TX / 10BASE-T / 1000 Base-T, IEEE802.11a/b/g
Compression Method:	B&W: TIFF (MH, MR, MMR, JBIG2)
	Gray Scale, Full Color: JPEG

#### **ARDF**

Paper Size/Weight:	Simplex	Size	A4 to A6, LG to HLT	
		Weight	52 to 128 g/m² (14 to 34 lb.)	
	Duplex	Size	A4 to A6, LG to HLT	
		Weight	64 to 105 g/m² (17 to 28 lb.)	
Table Capacity:	50 sheets (80	g/m², 20 lb.	Bond or less)	
	20 sheets (more than 80 g/m², 20 lb. Bond)			
Separation:	Friction pad	Friction pad		
Original Transport:	Roller transport			
Original Feed Order:	From the top original			
Power Source:	DC 24V, 5V from the scanner unit			
Power Consumption:	20 W or less			
Dimensions (W x D x H):	476 × 360 × 79.8 mm (18.8" × 14.2" × 3.2")			
Weight:	Approx. 4 kg (	8.9 lb.)		

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# **Supported Paper Sizes**

### Paper Feed

Paper	Size	Main Tray	Paper Feed Unit	Bypass Tray
A4 SEF	210 x 297 mm	<b>✓</b>	<b>✓</b>	<b>√</b> *1
A5 SEF	148 x 210 mm	<b>→</b>	<b>√</b>	<b>√</b> *1
A5 LEF	210 x 148 mm	-	-	<b>√</b>
A6 SEF	105 x 148 mm	-	-	<b>√</b>
B5 SEF	182 x 257 mm	<b>→</b>	<b>✓</b>	<b>√</b> *1
B6 SEF	128 x 182 mm	-	-	<b>√</b>
Legal SEF	8.5 x 14 inch	-	<b>✓</b>	<b>√</b> *1
Foolscap SEF	8.5 x 13 inch	-	<b>✓</b>	<b>√</b> *1
Letter SEF	8.5 x 11 inch	<b>√</b>	<b>✓</b>	<b>√</b> *1
GovernmentLG SEF	8.25 x 14 inch	-	<b>✓</b>	<b>√</b> *1
Folio SEF	8.25 x 13 inch	-	<b>✓</b>	<b>√</b> *1
F/GL SEF	8 x 13 inch	-	<b>✓</b>	<b>√</b> *1
Eng Quatro SEF	8 x 10 inch	-		<b>√</b>
Executive SEF	7.25 x 10.5 inch	-	<b>✓</b>	<b>√</b> *1
Half Letter SEF	5.5 x 8.5 inch	<b>→</b>	<b>✓</b>	<b>√</b> *1
Half Letter LEF	8.5 x 5.5 inch	-	-	<b>√</b>
Com 10 Env. SEF	4.125 x 9.5 inch	-	-	<b>√</b>
Monarch Env. SEF	3.875 x 7.5 inch	-	-	<b>√</b>
C5 Env. SEF	162 x 229 mm	-	-	<b>√</b>
C6 Env. SEF	114 x 162 mm	-	-	<b>√</b>
DL Env. SEF	110 x 220 mm	-	-	<b>√</b>

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Paper	Size	Main Tray	Paper Feed Unit	Bypass Tray
16K SEF	195 x 267 mm	-	-	✓
8.5 × 12 SEF	8.5 x 12 inch	-	<b>~</b>	√*2
8 1/2 × 13 2/5 SEF	8.5 x 13.4 inch	-	<b>~</b>	<b>√</b> *1

#### **Custom:**

-	Main Tray	Paper Feed Unit	Bypass Tray
Width	139.5 - 216.0 mm	139.5 - 216.0 mm	76.2 - 216.0 mm
YYIGIII	5.50 - 8.50 inch	5.50 - 8.50 inch	3.00 - 8.50 inch
Length	210.0 - 297.0 mm	210.0 - 356.6 mm	139.0 - 600.0 mm
Lengin	8.27 - 11.69 inch	8.27 - 14.03 inch	5.48 - 23.62 inch

#### **Remarks**

√: Supported

RTB 53 Modified remarks

- \*1: Enables duplex printing by setting SP mode for NA, EU, and Asia. (No duplex printing for the default setting) Duplex printing can be selected from printer driver.
- \*2: Enables duplex printing by setting SP mode for NA and EU. (No duplex printing for the default setting) Duplex printing can be selected from printer driver.

#### **Paper Exit**

Paper	Size	Main Tray	1 Bin Tray
A4 SEF	210 x 297 mm	✓	<b>~</b>
A5 SEF	148 x 210 mm	<b>√</b>	<b>√</b>
A5 LEF	210 x 148 mm	<b>~</b>	<b>√</b>
A6 SEF	105 x 148 mm	<b>√</b>	<b>√</b>
B5 SEF	182 x 257 mm	<b>~</b>	<b>√</b>
B6 SEF	128 x 182 mm	<b>~</b>	<b>√</b>
Legal SEF	8.5 x 14 inch	<b>~</b>	<b>√</b>
Foolscap SEF	8.5 x 13 inch	<b>~</b>	<b>√</b>

Paper	Size	Main Tray	1 Bin Tray
Letter SEF	8.5 x 11 inch	<b>~</b>	<b>✓</b>
GovernmentLG SEF	8.25 x 14 inch	<b>~</b>	<b>✓</b>
Folio SEF	8.25 x 13 inch	<b>~</b>	<b>✓</b>
F/GL SEF	8 x 13 inch	<b>✓</b>	<b>✓</b>
Eng Quatro SEF	8 x 10 inch	<b>√</b>	<b>✓</b>
Executive SEF	7.25 x 10.5 inch	<b>~</b>	<b>✓</b>
Half Letter SEF	5.5 x 8.5 inch	<b>~</b>	<b>✓</b>
Half Letter LEF	8.5 x 5.5 inch	<b>~</b>	-
Com 10 Env. SEF	4.125 x 9.5 inch	<b>√</b>	-
Monarch Env. SEF	3.875 x 7.5 inch	<b>✓</b>	-
C5 Env. SEF	162 x 229 mm	<b>~</b>	-
C6 Env. SEF	114 x 162 mm	<b>~</b>	-
DL Env. SEF	110 x 220 mm	<b>√</b>	-
16K SEF	195 x 267 mm	<b>✓</b>	<b>→</b>
8.5 × 12 SEF	8.5 x 12 inch	<b>√</b>	<b>√</b>
8 1/2 × 13 2/5 SEF	8.5 x 13.4 inch	<b>√</b>	<b>√</b>

#### **Custom:**

-	Main Tray	1 Bin Tray
Width	76.2 - 216.0 mm	139.7 - 216.0 mm
vyiain	3.00 - 8.50 inch	5.50 - 8.50 inch
1 1	139.0 - 600.0 mm	210.0 - 600.0 mm
Length	5.48 – 23.62 inch	8.27 - 23.62 inch

#### Remarks

√: Supported

# **Software Accessories**

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer allows you to select which components to install.

#### **Printer Drivers**

#### Windows

OS	Туре	PCL5c	PCL6	PS3	XPS
	Starter	-	-	-	-
	Home Basic	✓	<b>√</b> *3	<b>√</b> *3	<b>✓</b> *1
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Home Premium	✓	<b>√</b> *3	<b>√</b> *3	<b>✓</b> *1
Windows Vista	Business	<b>✓</b>	<b>√</b> *3	<b>√</b> *3	<b>✓</b> *1
	Ultimate	<b>✓</b>	<b>√</b> *3	<b>√</b> *3	<b>✓</b> *1
	Enterprise	✓	<b>√</b> *3	<b>√</b> *3	<b>✓</b> *1
	Starter	-	-	-	-
	Home Basic	-	-	-	-
	Home Premium	<b>✓</b>	<b>✓</b>	✓	✓
Windows 7	Professional	✓	<b>✓</b>	✓	✓
	Ultimate	<b>✓</b>	<b>✓</b>	✓	✓
	Enterprise	✓	✓	✓	✓
	Windows 8	<b>✓</b>	✓	<b>✓</b>	✓
Windows 8/8.1	Pro	<b>✓</b>	✓	✓	✓
	Enterprise	<b>✓</b>	✓	✓	✓
	RT	-	-	-	-

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OS	Туре	PCL5c	PCL6	PS3	XPS
	Standard Edition	<b>√</b> *2	<b>√</b> *2	<b>√</b> *2	-
Windows Server	Enterprise Edition	<b>√</b> *2	<b>√</b> *2	<b>√</b> *2	-
2003/R2	Datacenter Edition	-	-	-	-
	Web Edition	-	-	-	-
	Standard Edition	✓	✓	✓	<b>✓</b>
	Enterprise Edition	✓	✓	✓	~
Windows Server	Standard without Hyper-V	✓	✓	✓	<b>✓</b>
2008/R2	Enterprise without Hyper-V	✓	✓	✓	<b>✓</b>
	Datacenter Edition	-	-	-	-
	Web Edition	-	-	-	-
	Foundation	✓	✓	✓	✓
Windows Server 2012/R2	Essentials	✓	✓	✓	✓
	Standard	✓	✓	✓	✓
	Datacenter	-	-	-	-

### **√**: Supported

- -: Not supported
- \*RPCS driver has been discontinued.
- \*1:SP1 or later is recommended
- \*2:SP2 or later is Recommended
- \*3:SP1 or later is recommended

#### Mac OS Environment

OS		Printer Utility for Mac
Mac OS 8.6 or later, Mac OS X classic		-
Mac OS X Native: v.10.57 or later		-

### **√**: Supported

-: Not supported

#### **UNIX Environment**

UNIX Platforms	Version
Sun Solaris	9, 10
HP-UX	11.x, 11i v2, 11i v3
Red Hat Linux	Enterprise V4, V5, V6
SCO OpenServer	5.0.7, 6.0
IBM AIX	V 5L, V5.3, V6.1, V7.1

#### **Novell Netware**

	Supported Version	Netware 6.5 or later
Netware Server*	Client OS	"Windows Vista/ 2003/2008/7/8/2012/8.1/2012R2

<sup>\*</sup> Netware option is required.

#### SAP R/3 Environment (Device Type / Barcode & OCR Package)

Device Type will be provided from SAP itself in SAP Printer Vendor Program.

For the detailed specification, please refer to another announcement to be issued in the future.

Supported Barcode &		Code 128, Code 39, Code 93, Codabar, 2 of 5 interleaved/Industrial/Matrix, MSI, USPS, UPC/EAN
''	OCR Fonts	OCR A, OCR B



- 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.

#### Scanner and LAN Fax drivers

#### Operating system for TWAIN driver:

Windows Vista/7/8/8.1, Windows Server 2003/2003 R2/2008/2008 R2/2012/2012 R2 (TWAIN scanner runs in 32-bit compatible mode on a 64-bit operating system, so TWAIN scanner is not compatible with 64-bit applications. Use it with 32-bit applications.)

#### Operating system for WIA driver:

Windows Vista (SP1 or later)/7/8/8.1, Windows Server 2008/2008 R2/2012/2012 R2 (WIA scanner can function under both 32- and 64-bit operating systems.)

#### Operating system for LAN FAX driver:

Windows Vista, Windows 7,8, 8.1, Windows Server 2003, Windows Server 2018, Windows Server 2012, Windows Server 2008 R2, Windows Server 2012 R2



- The LAN Fax driver lets you fax documents directly form your PC. Address Book Editor and Cover Sheet Editor are to be installed as well.
- The Network TWAIN driver operates in 32-bit compatibility mode on 64-bit operating systems
- The Network TWAIN driver is provided on the scanner drivers CD-ROM.

# **Optional Equipment**

### Paper Feed Unit (D573)

Paper Feed System:	Feed Roller and Friction Pad
Paper Height Detection:	Empty only
Tray Capacity:	500 sheets
Paper Weight:	60 to 163 g/m² (16 to 43.5 lb.)
Paper Size:	A5 SEF to A4/LG SEF
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	Less than 27 W (Power is supplied from the main unit.)
Dimensions (W x D x H):	498 mm x 552 mm x 150 mm (19.7" x 21.8" x 6.0")
Weight:	10.4 kg (23.0 lb.) or less

### 1-bin Tray Unit (D574)

Paper detection:	Detects paper	
Tray Capacity:	100 sheets (80 g/m <sup>2</sup> )	
Paper Weight:	60 to 163 g/m <sup>2</sup> (16 to 43.5 lb.)	
Paper Size:	Width: 139.7 to 216mm (5.0" to 8.5") Length: 210 to 600mm (8.3" to 23.7")	
Power Source:	DC 24V, 5V (from the main frame)	
Power Consumption:	Less than 1 W (Power is supplied from the main unit.)	
Dimensions (W x D x H):	540 mm x 460 mm x 116 mm (21.3" x 18.1" x 4.6")	
Weight:	3.0 kg (6.6 lb.) or less	

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### ARDF (D3BE)

Scan:	Simplex / Duplex
ADF Capacity:	50 sheets (80 g/m2, 20 lb. Bond or less)
	20 sheets (more than 80 g/m2, 20 lb. Bond)
Paper Weight:	Simplex: 52 to 128 g/m2 (14 to 34 lb.)
	<b>Duplex:</b> 64 to 105 g/m2 (17 to 28 lb.)
Paper Size:	Simplex:
	• 5 1/2"x8 1/2" LEF/SEF(HLT) to 8 1/2"x14"SEF(LG)
	A6 SEF, B6 SEF, A5 LEF/SEF to A4 SEF
	• Vertical: 5" to 8.5" / 128 to 216mm
	Horizontal: 5.5" to 23.6" / 139.7 to 600mm
	*Image quality of custom paper and A6/B6 is not guaranteed.
	Duplex:
	• 5 1/2"x 8 1/2"LEF/SEF(HLT) to 8 1/2"x14"SEF(LG)
	A6 SEF,B6 SEF,A5 LEF/SEF to A4 SEF
	• Vertical:5" to 8.5" / 128 to 216mm
	Horizontal: 5.5" to 14" / 139.7 to 355.6mm
	*Image quality of custom paper and A6/B6 is not guaranteed.
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	20W or less
	(Power is supplied from the main unit)
Dimensions (W x D x H):	476 × 360 × 79.8 mm (18.8" × 14.2" × 3.2")
Weight:	Approx. 4 kg (8.9 lb.)

# 2. Preventive Maintenance Tables

### **Maintenance Tables**

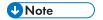
#### **Preventive Maintenance Items**

Chart: A4 (LT)/5% Mode: 2 prints/job Color Ratio: 30%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect



#### • Yield Parts:

The parts mentioned in these tables have a target yield. However, the total copy/print volume made by the machine will not reach the target yield within the machine's targeted lifetime if the machine is used under the target usage conditions (ACV, color ratio, and P/J). So, these parts are categorized not as PM parts but as yield parts (EM parts). The parts with "(R)" in this table are yield parts.

The PM count for the following items is based on the sheets of copy paper:

ltem	36K	60K	90K	120K	EM	Remarks			
Scanner Unit									
Exposure Glass					С	Ricoh exposure glass cleaner			
ADF Exposure Glass					С	Ricoh exposure glass cleaner			
PCDU									
PCDU - K		R				PCDU (K) differs between C306 and C406. Make sure the correct part number before ordering it.			
PCDU - C	(R)								

ltem	36K	60K	90K	120K	EM	Remarks			
PCDU - M	(R)								
PCDU - Y	(R)								
Transfer Unit									
Image Transfer Belt Unit				(R)					
Paper Transfer Roller Unit				(R)					
Fusing Unit									
Fusing Unit				(R)					
Fusing Entrance Guide Plate		С							
Fusing Exit Guide Plate		С				Remove toner or paper dust			
Separation Plate		С				with a dry cloth			
Thermopile		С							
Pressure Roller		С							
Paper Transport (Mainframe)									
Registration Roller					С	Damp cloth			
Registration Sensor					С	Blower brush or dry cloth			
Paper Dust Case					С	Blower brush			
Paper Feed Roller				(R)	С	Damp cloth			
Paper Feed Exit Sensor					С	Blower brush or dry cloth			
By-pass Feed Roller				(R)	С	Damp cloth			
Separation Pad				(R)	С	Dry cloth			
Duplex									
Duplex Entrance Sensor					С	Blower brush or dry cloth			
Duplex Exit Sensor					С	Blower brush or dry cloth			
Duplex Rollers					С	Damp cloth			

ltem	36K	60K	90K	120K	EM	Remarks				
Duplex Entrance Guide Plate					С	Damp cloth; alcohol				
Paper Feed Tray (Optional)	Paper Feed Tray (Optional)									
Paper Feed Roller				(R)	С					
Separation Pad				(R)	С					
Transport Roller					С	Wipe with a damp cloth				
Tray Lift Pad					С					
Transport Sensor					С					
1-Bin Tray Unit										
Tray Exit Roller					С					
Tray Exit Sensor					С	Wipe with a damp cloth				
Tray Paper Remaining Sensor					С	Tripe will a daily cioli				
Others										
Waste Toner Bottle			R							
Ozone Filter					С					

The PM count for the following items is based on the number of originals fed:

ltem	30K	45K	60K	120K	EM	Remarks
ARDF						
Separation Pad	(R)				С	Wipe with a dry cloth
Pick-up Roller		(R)			С	Wipe with a damp
Feed Roller		(R)			С	cloth

ltem	30K	45K	60K	120K	EM	Remarks
Transport Roller					С	
Registration Roller					С	Wipe with a damp
Exit Roller					С	cloth
Inverter Roller					С	

### 3. SP Mode Tables

# Service Program Mode

#### **ACAUTION**

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.

#### **Enabling and Disabling Service Program Mode**



• 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.

### 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.



- 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 <sup>®</sup> 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 ③ 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.

- 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.

#### 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.

#### Paper Weight

Plain Paper 1:  $60-74 \text{ g/m}^2$ , 16-20 lb.

Plain Paper 2:  $75-81 \text{ g/m}^2$ , 20-22lb.

Middle Thick: 82-105 g/m², 22-28lb.

Thick Paper 1: 106-130 g/m², 28.3-34.6lb.

Thick Paper 2:  $131-163 \text{ g/m}^2$ , 35-43lb. Thick Paper 3:  $164-220 \text{ g/m}^2$ , 44-58lb.

Paper Type

N: Normal paper

Paper Feed Station
P: Paper tray

MTH: Middle thick paper

TH: Thick paper

#### 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

Print Mode
S: Simplex
L: Low speed (89 mm/s)
D: Duplex
M: Middle speed (178 mm/s)

B: By-pass table

#### Others

The following symbols are used in the SP mode tables.

**FA**: Factory setting

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(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 BICU 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



• 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.

# Main SP Tables-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	e is moved	to the trailing edge of paper.					
	Decreasing a value: an imag	ge is moved	I to the leading edge of paper.					
1-001-001	Tray: Plain	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-002	Tray: Middle Thick	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-003	Tray: Thick	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-005	Tray: Plain: 1200	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-006	Tray: Middle Thick: 1200	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-007	By-pass: Plain	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-008	By-pass: Middle Thick	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-009	By-pass: Thick	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-012	By-pass: Plain: 1200	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-013	By-pass: Middle Thick: 1200	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-014	Duplex: Plain	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-015	Duplex: Middle Thick	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-016	Duplex: Thick	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					
1-001-017	Tray: Special 1	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]					
1-001-018	By-pass: Special 1	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]					
1-001-019	Duplex: Plain:1200	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]					

1-001-020	Duplex: Middle Thick:1200	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]
1-001-021	Duplex: Special 1	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]
1-001-022	Tray: Special 1: 1200	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]
1-001-023	By-pass: Special 1: 1200	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]
1-001-024	Duplex: Special 1: 1200	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]
1-001-026	Offset:Transfer Separation	*ENG	[-4.0 to 4.0 / <b>0.0</b> / 0.1 mm/step]
1-001-030	Auto correct: On/Off	*ENG	[0 or 1 / <b>0</b> / 1/step]
1-001-031	Std. Measure: On/Off	*ENG	[0 or 1 / <b>0</b> / 1/step]
1-001-032	Offset	*ENG	[-5.0 to 5.0 / <b>0.0</b> / 0.1 mm /step]
1-001-033	Offset Standard: 1	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm/step]
1-001-034	Offset Standard:2	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm /step]
1-001-035	Offset Standard:3	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm /step]
1-001-036	Offset Standard:4	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm /step]
1-001-037	Offset Standard:5	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm /step]
1-001-038	Offset Standard:6	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm /step]
1-001-039	Offset Standard:7	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm /step]
1-001-040	Offset Standard:8	*ENG	[0.0 to 999.0 / <b>0.0</b> / 0.1 mm /step]
1-001-041	Tray: Plain: Std Speed 2	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]
1-001-043	By-pass: Plain: Std Speed 2	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]
1-001-045	Duplex: Plain: Std Speed 2	ENG	[-9.0 to 9.0 / <b>0.0</b> / 0.1 mm/step]
1-001-047	Tray: Special 1: Std Speed 2	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]
1-001-048	By-pass: Special 1: Std Speed 2	ENG	[-9.0 to 9.0 / <b>1.1</b> / 0.1 mm/step]
1-001-049	Duplex: Special 1: Std Speed 2	ENG	[-9.0 to 9.0 / <b>1.1</b> / 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.		
1-002-001	By-pass Table	ENG	[-4.0 to 4.0 / <b>0.0</b> / 0.1 mm/step]
1-002-002	Tray 1	ENG	[-4.0 to 4.0 / <b>0.0</b> / 0.1 mm/step]
1-002-003	Tray 2	ENG	[-4.0 to 4.0 / <b>0.0</b> / 0.1 mm/step]
1-002-004	Tray 3	ENG	[-4.0 to 4.0 / <b>0.0</b> / 0.1 mm/step]
1-002-005	Duplex	ENG	[-4.0 to 4.0 / <b>0.0</b> / 0.1 mm/step]

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.		
1-003-001	Tray 1 : Plain	ENG	[-5 to 5 / <b>2</b> / 1 mm/step]
1-003-002	Tray 1 : Middle Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-003	Tray 1 : Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-004	Tray2/3: Plain	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-005	Tray2/3: Middle Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-006	Tray2/3: Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-007	By-pass: Plain	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-008	By-pass: Middle Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-009	By-pass: Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-010	Duplex: Plain	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-011	Duplex: Middle Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-012	Duplex: Thick	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-013	Tray 1 : Plain: 1200	ENG	[-5 to 5 / <b>2</b> / 1 mm/step]

1-003-014	Tray1: Middle Thick:1200	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-015	Tray2/3: Plain:1200	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-016	Tray2/3: Middle Thick: 1200	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-017	By-pass: Plain:1200	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-018	By-pass: Middle Thick: 1200	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-019	By-pass: Small size	ENG	[-5 to 5 / <b>-2</b> / 1 mm/step]
1-003-020	Tray 1 : Plain: Std. Spd. 2	ENG	[-5 to 5 / <b>2</b> / 1 mm/step]
1-003-022	Tray2/3: Plain: Std. Spd.	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-024	By-pass: Plain: Std. Spd. 2	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-025	By-pass: Middle Thick: BW	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]
1-003-026	Duplex: Plain: Std. Spd. 2	ENG	[-5 to 5 / <b>0</b> / 1 mm/step]

1105	[Print Target Temperature]		
	Roller Type Center and Ends: Heating roller, Pressure roller Paper Type: Plain, Thin, Thick, OHP, Middle Thick, Special.		
1-105-001	Plain 1 :FC:Center	*ENG	C306: [100 to 180 / <b>143</b> / 1 deg/step] C406: [100 to 200 / <b>168</b> / 1 deg/step]
1-105-003	Plain 1:BW:Center	*ENG	[100 to 180 / * / 1 deg/step]  * C306:139  * C406:157
1-105-005	Plain2:FC:Center	*ENG	C306: [100 to 180 / <b>154</b> / 1 deg/step] C406: [100 to 200 / <b>180</b> / 1 deg/step]
1-105-007	Plain2:BW:Center	*ENG	[100 to 180 / * / 1 deg/step]  * C306:144  * C406:162

1-105-009	Thin:FC:Center	*ENG	[100 to 180 / * / 1 deg/step] * C306:153 * C406:163
1-105-011	Thin:BW:Center	*ENG	[100 to 180 / * / 1 deg/step]  * C306:143  * C406:147
1-105-013	Middle Thick:FC:Center	*ENG	[100 to 180 / <b>168</b> / 1 deg/step]
1-105-015	Middle Thick:BW:Center	*ENG	[100 to 180 / <b>158</b> / 1 deg/step]
1-105-017	Thick1:FC:Center	*ENG	[100 to 180 / <b>143</b> / 1 deg/step]
1-105-019	Thick1:BW:Center	*ENG	[100 to 180 / <b>143</b> / 1 deg/step]
1-105-021	Thick2:FC:Center	*ENG	[100 to 180 / <b>145</b> / 1 deg/step]
1-105-023	Thick2:BW:Center	*ENG	[100 to 180 / <b>145</b> / 1 deg/step]
1-105-025	Thick3:FC:Center	*ENG	[100 to 180 / <b>148</b> / 1 deg/step]
1-105-027	Thick3:BW:Center	*ENG	[100 to 180 / <b>148</b> / 1 deg/step]
1-105-029	Special 1:FC:Center	*ENG	C306: [100 to 180 / <b>143</b> / 1 deg/step] C406: [100 to 200 / <b>168</b> / 1 deg/step]
1-105-031	Special 1:BW:Center	*ENG	[100 to 180 / * / 1 deg/step] * C306:139 * C406:157
1-105-033	Special2:FC:Center	*ENG	C306: [100 to 180 / <b>154</b> / 1 deg/step] C406: [100 to 200 / <b>180</b> / 1 deg/step]
1-105-035	Special2:BW:Center	*ENG	[100 to 180 / * / 1 deg/step]  * C306: <b>144</b> * C406: <b>162</b>
1-105-037	Special3:FC:Center	*ENG	[100 to 180 / <b>168</b> / 1 deg/step]
1-105-039	Special3:BW:Center	*ENG	[100 to 180 / <b>158</b> / 1 deg/step]
1-105-041	Envelop:Center	*ENG	[100 to 180 / <b>146</b> / 1 deg/step]
1-105-043	OHP:Center	*ENG	[100 to 180 / <b>160</b> / 1 deg/step]

1-105-101	Plain 1:FC:Center:Low	*ENG	[100 to 180 / <b>127</b> / 1 deg/step]
	Speed		[1.00.0.100]
1-105-103	Plain 1:BW:Center:Low Speed	*ENG	[100 to 180 / <b>127</b> / 1 deg/step]
1-105-105	Plain2:FC:Center:Low Speed	*ENG	[100 to 180 / <b>129</b> / 1 deg/step]
1-105-107	Plain2:BW:Center:Low Speed	*ENG	[100 to 180 / <b>129</b> / 1 deg/step]
1-105-109	Thin:FC:Center:Low Speed	*ENG	[100 to 180 / <b>123</b> / 1 deg/step]
1-105-111	Thin:BW:Center:Low Speed	*ENG	[100 to 180 / <b>123</b> / 1 deg/step]
1-105-113	Middle Thick:FC:Center:Low Speed	*ENG	[100 to 180 / <b>141</b> / 1 deg/step]
1-105-115	Middle Thick:BW:Center:Low Speed	*ENG	[100 to 180 / <b>141</b> / 1 deg/step]
1-105-117	Special 1:FC:Center:Low Speed	*ENG	[100 to 180 / <b>127</b> / 1 deg/step]
1-105-119	Special 1:BW:Center:Low Speed	*ENG	[100 to 180 / <b>127</b> / 1 deg/step]
1-105-121	Special2:FC:Center:Low Speed	*ENG	[100 to 180 / <b>129</b> / 1 deg/step]
1-105-123	Special2:BW:Center:Low Speed	*ENG	[100 to 180 / <b>129</b> / 1 deg/step]
1-105-125	Special3:FC:Center:Low Speed	*ENG	[100 to 180 / <b>141</b> / 1 deg/step]
1-105-127	Special3:BW:Center:Low Speed	*ENG	[100 to 180 / <b>141</b> / 1 deg/step]
1-105-129	Envelope:Thick1:FC:Cente	*ENG	[100 to 180 / <b>146</b> / 1 deg/step]

1-105-133	Envelope:Thick2:FC:Cente	*ENG	[100 to 180 / <b>146</b> / 1 deg/step]
1-105-137	Envelope:Thick3:FC:Cente	*ENG	[100 to 180 / <b>146</b> / 1 deg/step]
1-105-141	Postcard:Thick1:FC:Center	*ENG	[100 to 180 / <b>131</b> / 1 deg/step]
1-105-145	Postcard:Thick2:FC:Center	*ENG	[100 to 180 / <b>131</b> / 1 deg/step]
1-105-149	Postcard:Thick3:FC:Center	*ENG	[100 to 180 / <b>131</b> / 1 deg/step]
1-105-151	Special 4:FC:Center	*ENG	[100 to 180 / <b>143</b> / 1 deg/step]
1-105-153	Special 4:BW:Center	*ENG	[100 to 180 / <b>143</b> / 1 deg/step]
1-105-155	Special 5:FC:Center	*ENG	[100 to 180 / <b>145</b> / 1 deg/step]
1-105-157	Special 5:BW:Center	*ENG	[100 to 180 / <b>145</b> / 1 deg/step]
1-105-159	Special 6:FC:Center	*ENG	[100 to 180 / <b>148</b> / 1 deg/step]
1-105-161	Special 6:BW:Center	*ENG	[100 to 180 / <b>148</b> / 1 deg/step]

1106	[Fusing Temperature Display] Fusing Temperature Display (Heating or Pressure)			
	Displays the current temper	Displays the current temperature of the heating and pressure rollers.		
1-106-001	Center	ENG	[-50 to 250 / <b>0</b> / 1 deg/step]	
1-106-002	End ENG [-20 to 348 / <b>0</b> / 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.			
1-106-003	Pressure: Center ENG [-20 to 250 / <b>0</b> / 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.			
1-106-005	Pressure: End Rear	ENG	[-20 to 250 / <b>0</b> / 1 deg/step]	
1-106-006	Pressure: End Front	ENG	[-20 to 250 / <b>0</b> / 1 deg/step]	

1109	[Rotation Speed Setting]
	-

1-109-001	Overshoot Prevent Rotation	*ENG	[0 to 3 / <b>0</b> / 1/step]
1-109-002	After Reload Rotation	*ENG	[0 to 3 / <b>0</b> / 1/step]
1-109-003	Print Ready Rotation	*ENG	[0 to 3 / <b>0</b> / 1/step]

1112	[Image Process Temp. Correct]		
	These SPs are used for the fusing temperature control for variable job images. This control saves the power consumption when the machine copies or prints a job text image in black and white mode.		
1-112-002	Temp.:Plain:Center:Energy Saving	*ENG	[-30 to 20 / * / 1 deg/step]  * C306:13  * C406:17
1-112-004	Temp.:Plain:Press:Energy Saving	*ENG	[-30 to 20 / <b>0</b> / 1 deg/step]

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1113	[Curl Correction]			
1-113-001	Execute Pattern *ENG [0 or 1 / 0:OFF / 1/step]			
	Selects the curl correction type.			

1131	[Continuous Print Mode Switch]				
	Sets the permission for paper to feed	ne permission for paper to feed.			
1-131-00	Feed Permit Condition Setting	*ENG	[0 to 2 / 1 / 1/step]		
1			0: Productivety Model		
			1: Fusing Quality 1		
			2: Fusing Quality 2		

1132	[Voltage Detection]			
	Switches maximum fixed duty level and power control.			
1-132-012	Voltage Detection         *ENG         [0.0 to 650.0 / 0.0 / 0.1 V/step]			
1-132-014	Max	*ENG	[0.0 to 350.0 / <b>0.0</b> / 0.1 V/step]	

1-132-015	Min	*ENG	[0.0 to 350.0 / <b>0.0</b> / 0.1 V/step]
1-132-016	Latest	*ENG	[0.0 to 350.0 / <b>0.0</b> / 0.1 V/step]
1-132-017	SC Detection	*ENG	[0.0 to 350.0 / <b>0.0</b> / 0.1 V/step]

1135	[Inrush Control]			
1-135-001	Inrush Control	*ENG	[0 or 1 / <b>0</b> / 1/step]	

1136	[Engy Svg Paper Feed Judg.]		
1-136-001	Control ON/OFF	*ENG	[0 or 1 / 1 / 1/step]

1141	[Fusing SC Issue Time Info]		
	Displays the time when an SC code was issued.		
1-141-001	SC Number	*ENG	[0 to 99999 / <b>0</b> / 1/step]
1-141-101	Heating Roller Temperature 1:Center	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-104	Heating Roller Temperature 1:End	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-107	Press Roller Temperature 1	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-108	Press Roller: End R Temperature 1	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-109	Press Roller: End F Temperature 1	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-151	Heating Roller Temperature 2:Center	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-154	Heating Roller Temperature 2:End	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-157	Press Roller Temperature 2	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-158	Press Roller.End R Temperature 2	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]

1-141-159	Press Roller.End F Temperature 2	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-201	Heating Roller Temperature 3:Center	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-204	Heating Roller Temperature 3:End	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-207	Press Roller Temperature 3	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-208	Press Roller.End R Temperature 3	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]
1-141-209	Press Roller.End F Temperature 3	*ENG	[-50 to 260 / <b>0</b> / 1 deg/step]

1142	[Fusing Jam Detection]			
	This SP displays the SC code that was issued if a fusing unit jam error occurs three times in succession.			
1-142-00	SC Display	*ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	

1152	[Fusing Nip Band Check]		
	Checks and adjusts the nip of the hot roller and pressure roller.		
1-152-00	Execute	ENG	[0 or 1 / <b>0</b> / 1/step] [Execute]

1158	[Abnormal Noise Confirmation]			
	-			
1-158-001	Unit: Execute	ENG	[0 or 1 / <b>0</b> / 1/step]	
1-158-002	No Unit: Execute	ENG	[0 or 1 / <b>0</b> / 1/step]	
1-158-003	Operation Time	*ENG	[0 to 200 / <b>20</b> / 1 sec/step]	
1-158-004	Operation Line Speed	*ENG	[0 to 3 / <b>0</b> / 1/step]	

1-158-005	Heat Center Target Temp	*ENG	[100 to 180 / * / 1 deg/step]
			* C306: <b>154</b>
			* C406: <b>180</b>
1-158-007	Press Target Temp	*ENG	[0 to 200 / <b>150</b> / 1 deg/step]

1190	[Flicker Control]		
1-190-001	Flicker Control	*ENG	[0 or 1 / <b>0</b> / 1/step]

1801	[Motor Speed Adjustment] Adjusts the speeds of each motor.		
1-801-001	Transport M: Plain 1/2	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-002	Transport M: Thin	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-003	Transport M: M-Thick:Std Spd1	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-004	Transport M: Thick 1	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-005	Transport M: Thick2	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-006	Transport M: Thick3	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-007	Transport M: Special 1	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-008	Transport M: Special2	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-009	Transport M: Special3	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-010	Transport M: Envelope	*ENG	[-4.00 to 4.00 / <b>0.00</b> / 0.01%/step]
1-801-011	Transport M: OHP	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-012	Transport M: Plain 1/2:Low Speed	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-013	Transport M: Thin:Low Speed	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-014	Transport M: M-Thick:Low Speed	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-015	Transport M: Special 1:Low Speed	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]

1-801-016   Transport M: Special2:Low   Speed   FENG   F				İ
Speed	1-801-016	· ·	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-019   Transport M: M-Thick: Gloss:Std Spd1   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]     1-801-020   Transport M: Postcard   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]     1-801-051   Bk Drum/Dev. Mot: Std Speed 1   *ENG   [-4.00 to 4.00 / <b>0.00</b> / 0.01%/step]     1-801-052   Bk Drum/Dev. Mot: Low Speed   *ENG   [-4.00 to 4.00 / <b>0.00</b> / 0.01%/step]     1-801-053   Col Drum/Dev. Mot: Std Speed 1   *ENG   C306: [-6 to 6 / <b>0</b> / 1/step]     1-801-054   Col Drum/Dev. Mot: Low Speed   *ENG   [-6 to 6 / <b>0</b> / 1/step]     1-801-055   Offset: Std Speed 1: Color   *ENG   C306: [-6 to 6 / <b>0</b> / 1/step]     1-801-056   Offset: Low Speed: Color   *ENG   C306: [-6 to 6 / <b>0</b> / 1/step]     1-801-081   Transport M: Plain 1/2: Std Spd 2   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]     1-801-082   Transport M: Thin: Std Spd2   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]     1-801-085   Transport M: Special 1: Std Spd2   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]     1-801-086   Transport M: Special 2: Std Spd2   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]     1-801-086   Transport M: Special 3: Std Spd2   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]     1-801-086   Transport M: Special 3: Std Spd2   *ENG   [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]	1-801-01 <i>7</i>	· ·	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
Colors:Std Spd1   Calor   Ca	1-801-018	Transport M: Plain 1/2: Gloss	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-051   Bk Drum/Dev. Mot: Std Speed 1   *ENG	1-801-019		*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
Speed   1	1-801-020	Transport M: Postcard	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
Speed   Tensport M: State   Speed   Tensport M: Special 1: State   Speed   S	1-801-051		*ENG	[-4.00 to 4.00 / <b>0.00</b> / 0.01%/step]
Speed 1   C406: [-5 to 5 / 0 / 1/step]    -801-054	1-801-052	· ·	*ENG	[-4.00 to 4.00 / <b>0.00</b> / 0.01%/step]
1-801-054	1-801-053	Col Drum/Dev. Mot: Std	*ENG	C306: [-6 to 6 / <b>0</b> / 1/step]
Speed   Tensport M: Special 1: Std   Speed		Speed 1		C406: [-5 to 5 / <b>0</b> / 1/step]
C406: [-5 to 5 / 0 / 1/step]  1-801-056 Offset:Low Speed:Color *ENG [-6 to 6 / 0 / 1/step]  1-801-081 Transport M: Plain1/2: Std Spd 2 *ENG [-4.00 to 4.00 / 0.43 / 0.01%/step]  1-801-082 Transport M: Thin:Std Spd 2 *ENG [-4.00 to 4.00 / 0.43 / 0.01%/step]  1-801-084 Transport M: Special1: Std Spd 2 *ENG [-4.00 to 4.00 / 0.43 / 0.01%/step]  1-801-085 Transport M: Special2: Std Spd 2 *ENG [-4.00 to 4.00 / 0.43 / 0.01%/step]  1-801-086 Transport M: Special3: Std Spd 2 *ENG [-4.00 to 4.00 / 0.43 / 0.01%/step]  1-801-086 Transport M: Special3: Std Spd 2 *ENG [-4.00 to 4.00 / 0.43 / 0.01%/step]	1-801-054	'	*ENG	[-6 to 6 / <b>0</b> / 1 / step]
1-801-056       Offset:Low Speed:Color       *ENG       [-6 to 6 / 0 / 1/step]         1-801-081       Transport M: Plain 1/2: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-082       Transport M: Thin:Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-084       Transport M: Special 1: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-085       Transport M: Special 2: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-086       Transport M: Special 3: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]	1-801-055	Offset: Std Speed 1: Color	*ENG	C306: [-6 to 6 / 0 / 1/step]
1-801-081       Transport M: Plain 1/2: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-082       Transport M: Thin:Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-084       Transport M: Special 1: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-085       Transport M: Special 2: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]         1-801-086       Transport M: Special 3: Std Spd 2       *ENG       [-4.00 to 4.00 / 0.43 / 0.01%/step]				C406: [-5 to 5 / 0 / 1/step]
Spd 2	1-801-056	Offset:Low Speed:Color	*ENG	[-6 to 6 / <b>0</b> / 1/step]
1-801-084 Transport M: Special 1: Std Spd2 *ENG [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step] 1-801-085 Transport M: Special 2: Std Spd2 *ENG [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step] 1-801-086 Transport M: Special 3: Std Spd2 *ENG [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]	1-801-081	1	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
Spd2	1-801-082	Transport M: Thin:Std Spd2	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
Spd2	1-801-084	· ·	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
Spd2	1-801-085		*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-087 Transport M: OHP:Std Spd2 *ENG [-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]	1-801-086		*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
	1-801-087	Transport M: OHP:Std Spd2	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]

1-801-088	Transport M: Plain 1/2:Gloss:Std Spd 2	*ENG	[-4.00 to 4.00 / <b>0.43</b> / 0.01%/step]
1-801-130	Drum Motor Adjustment Control	*ENG	[0 or 1 / 1 / 1/step]
1-801-131	Color Dev. Mot.:Std Speed 1	*ENG	[-20 to 20 / <b>0</b> / 0.1%/step]
1-801-132	Color Dev. Mot.:Low Speed	*ENG	[-20 to 20 / <b>0</b> / 0.1%/step]
1-801-133	Bk Drum/Dev. Mot:Std Speed2	*ENG	[-4.00 to 4.00 / <b>0</b> / 0.01%/step]
1-801-134	Bk Drum/Dev. Mot:Middle Speed	*ENG	[-4.00 to 4.00 / <b>0</b> / 0.01%/step]
1-801-135	Col Drum/Dev. Mot:Middle Speed	*ENG	[-6 to 6 / <b>0</b> / 1/step]
1-801-136	Offset: Middle Speed: Color	*ENG	[-6 to 6 / <b>0</b> / 1/step]
1-801-137	Color Dev M: Middle Speed	*ENG	[-20 to 20 / 0 / 0.1%/step]
1-801-138	Col Drum Mot: Std Spd 1: Indep.	*ENG	[-4.00 to 4.00 / <b>0</b> / 0.01%/step]
1-801-139	Col Drum Mot: Mid Spd: Indep.	*ENG	[-4.00 to 4.00 / <b>0</b> / 0.01%/step]
1-801-140	Col Drum Mot: Low Spd: Indep.	*ENG	[-4.00 to 4.00 / <b>0</b> / 0.01%/step]

1902	[Ladder Pattern Print]		
	-		
1-902-00	Execute	ENG	[-/-/-]
I			[Execute]

1907	[Paper Feed Timing Adj.]		
Adjusts the timing of paper feed. (A "+" setting broadens paper feed in setting narrows paper feed interval.)			ing broadens paper feed interval, a "-"
1-907-001	Tray1 Clutch ON: Plain	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]

1-907-002	Tray1 Clutch ON: Middle Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-003	Tray1 Clutch ON: Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-007	Tray1 Clutch OFF: Plain	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-008	Tray1 Clutch OFF: Middle Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-009	Tray1 Clutch OFF: Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-010	Tray 1 Paper Exit Sensor: Plain	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-011	Tray1 Paper Exit Sensor: Middle Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-012	Tray 1 Paper Exit Sensor: Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-013	By-pass Clutch ON: Plain	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-014	By-pass Clutch ON: Middle Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-015	By-pass Clutch ON: Thick	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-016	By-pass Clutch ON: Envelop	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-017	By-pass Clutch OFF: Plain	ENG	[-10 to 10 / <b>-5</b> / 1 mm/step]
1-907-018	By-pass Clutch OFF: Middle Thick	ENG	[-10 to 10 / <b>-5</b> / 1 mm/step]
1-907-019	By-pass Clutch OFF: Thick	ENG	[-10 to 10 / <b>-5</b> / 1 mm/step]
1-907-020	By-pass Clutch OFF: Envelop	ENG	[-10 to 10 / <b>-5</b> / 1 mm/step]
1-907-021	Exit Junction Solenoid: OFF	ENG	[-20 to 20 / <b>0</b> / 1 mm/step]
1-907-022	Exit Junction Solenoid: ON	ENG	[-20 to 20 / <b>0</b> / 1 mm/step]
1-907-025	Exit Junction Solenoid: OFF:Low	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-026	Exit Junction Solenoid: ON:Low	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
1-907-029	Tray Lift Motor Pressure	*ENG	[-2540 to 2540 / <b>0</b> / 20 msec/step]

/step] /step]
• •
/step]

Tray3: Min. Paper Interval: Plain	*ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
Tray3: Min. Paper Interval: Mid. Thick	*ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
Tray3: Min. Paper Interval: Thick	*ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
Tray1 Clutch ON: Plain: Std Speed 2	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
Tray1 Clutch OFF: Plain: Std Speed 2	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
Tray1 Paper Exit Sen.: Plain: Std Spd 2	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
Tray1 Paper Exit Sen.: Middle Thick: BW	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
By-pass Clutch ON: Plain: Std Speed 2	ENG	[-10 to 10 / <b>0</b> / 1 mm/step]
By-pass Clutch OFF: Plain: Std Speed 2	ENG	[-10 to 10 / <b>-5</b> / 1 mm/step]
Exit Junction SOL:OFF: Std Speed 2	ENG	[-20 to 20 / <b>0</b> / 1 mm/step]
Exit Junction SOL:ON: Std Speed 2	ENG	[-20 to 20 / <b>0</b> / 1 mm/step]
Exit Junction SOL:OFF: Mid Speed	ENG	[-20 to 20 / <b>0</b> / 1 mm/step]
Exit Junction SOL:ON: Mid Speed	ENG	[-20 to 20 / <b>0</b> / 1 mm/step]
	Plain  Tray3: Min. Paper Interval: Mid. Thick  Tray3: Min. Paper Interval: Thick  Tray1 Clutch ON: Plain: Std Speed 2  Tray1 Clutch OFF: Plain: Std Speed 2  Tray1 Paper Exit Sen.: Plain: Std Speed 2  Tray1 Paper Exit Sen.: Middle Thick: BW  By-pass Clutch ON: Plain: Std Speed 2  By-pass Clutch OFF: Plain: Std Speed 2  Exit Junction SOL:OFF: Std Speed 2  Exit Junction SOL:ON: Std Speed 2  Exit Junction SOL:OFF: Mid Speed  Exit Junction SOL:OFF: Mid Speed  Exit Junction SOL:ON: Mid	Plain  Tray3: Min. Paper Interval: *ENG Mid. Thick  Tray3: Min. Paper Interval: *ENG Thick  Tray1 Clutch ON: Plain: Std Speed 2  Tray1 Clutch OFF: Plain: Std Speed 2  Tray1 Paper Exit Sen.: Plain: Std Speed 2  Tray1 Paper Exit Sen.: Middle Thick: BW  By-pass Clutch ON: Plain: Std Speed 2  By-pass Clutch OFF: Plain: Std Speed 2  Exit Junction SOL:OFF: Std Speed 2  Exit Junction SOL:ON: Std Speed 2  Exit Junction SOL:OFF: Mid Speed Exit Junction SOL:OFF: Mid Speed Exit Junction SOL:OFF: Mid Speed

1950	[Fan Cooling Time Set]		
	Adjust the rotation time for each fan motor after a job end.		
1-950-001	PCDU Cooling Fan	*ENG	[0 to 600 / <b>0</b> / 1 sec/step]
1-950-002	Fusing Fan	*ENG	[0 to 600 / 10 / 1 sec/step]

1-950-003	PSU Fan	*ENG	[0 to 600 / <b>0</b> / 1 sec/step]
1-950-004	Laser Unit Fan	*ENG	[0 to 600 / <b>0</b> / 1 sec/step]

1951	[Fan Start Time Set]  Adjust the start time for each fan motor after a job end.		
1-951-001	PCDU Cooling Fan	*ENG	[0 to 120 / <b>0</b> / 1 sec/step]
1-951-002	Fusing Fan	*ENG	[0 to 120 / <b>0</b> / 1 sec/step]
1-951-003	PSU Fan	*ENG	[0 to 120 / 120 / 1 sec/step]
1-951-004	Laser Unit Fan	*ENG	[0 to 120 / <b>0</b> / 1 sec/step]

1952	[Fan Control Off Mode Time Set]		
	Specifies the time for fan control off mode.		
1-952-001	-	*ENG	[0 to 60 / 10 / 1 min/step]

1953	[Extra Fan Control]  Configures the settings of extra fan control.		
1-953-001	Operation Status	*ENG	[0 or 1 / <b>0</b> / 1/step]
1-953-006	Extra Fan Start Temp.	*ENG	[0.0 to 50.0 / <b>5.0</b> / 0.1 deg/step]
1-953-007	Extra Fan Stop Temp. Threshold	*ENG	[0.0 to 50.0 / <b>2.0</b> / 0.1 deg/step]
1-953-008	Set: Extra Operation ON/OFF	*ENG	[0 or 1 / 1 / 1 / step]

1955	[Fan Control]		
1-955-001	PCDU Fan Operation Sw Temp.	*ENG	[0.0 to 100.0 / <b>38.0</b> / 0.1 deg/step]
1-955-002	Fusing Fan Operation Sw Temp.	*ENG	[0.0 to 100.0 / <b>0</b> / 0.1 deg/step]

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1-955-004	Laser Unit Fan Operation Sw Temp.	*ENG	[0.0 to 100.0 / <b>38.0</b> / 0.1 deg/step]
1-955-005	Fan Operation Sw Temp. Threshold	*ENG	[0.0 to 100.0 / <b>2.0</b> / 0.1 deg/step]
1-955-006	PSU Fan Operation Start Time2	*ENG	[0 to 900 / <b>300</b> / 1 sec/step]
1-955-007	PSU Fan Ctrl Off Mode Time2	*ENG	[0.0 to 60.0 / 10.0 / 0.1 min/step]

## Main SP Tables-2

## SP2-XXX (Drum)

2005	[Charge DC Voltage: Fix]		
	Adjusts the DC component of the charge roller bias in the print modes.		
2-005-001	Plain: Bk	*ENG	[0 to 2000 / <b>590</b> / 10 -V/step]
2-005-002	Plain: C	*ENG	[0 to 2000 / <b>590</b> / 10 -V/step]
2-005-003	Plain: M	*ENG	[0 to 2000 / <b>590</b> / 10 -V/step]
2-005-004	Plain: Y	*ENG	[0 to 2000 / <b>590</b> / 10 -V/step]

2013	[Environmental Correction: PCU]		
2-013-001	Environment Div. FC: Display	*ENG	Displays the environmental condition, which is measured in absolute humidity.
			[0 to 5 / <b>0</b> / 1/step]
			1: LL (LL <= 4.3 g/m <sup>3</sup> )
			2: ML (4.3 < ML <= 11.3 g/m <sup>3</sup> )
			$3: MM (11.3 < MM <= 18.0 g/m^3)$
			4: MH (18.0 < MH <= 24.0 g/m <sup>3</sup> )
			5: HH (24.0 g/m <sup>3</sup> < HH)
2-013-002	Forced Setting	*ENG	Selects the environmental condition manually. <b>DFU</b>
			[0 to 5 / <b>0</b> / 1/step]
			0: The environmental condition is determined automatically.
			1: LL, 2: ML, 3: MM, 4: MH, 5: HH

2016	[Lubricant Apply Operation]		
	-		
2-016-001	Temperature Threshold: Low	*ENG	[0 to 50 / <b>15</b> / 1 deg/step]

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Temperature Threshold: High	*ENG	[0 to 50 / <b>30</b> / 1 deg/step]
Page Setting 1: Low Speed	*ENG	[0 to 999 / <b>10</b> / 1 page/step]
Page Setting 2: Low Temp.	*ENG	[0 to 999 / <b>20</b> / 1 page/step]
Page Setting 3: Low Temp. 2	*ENG	[0 to 999 / <b>0</b> / 1 page/step]
Page Setting 4: High Temp.	*ENG	[0 to 999 / <b>20</b> / 1 page/step]
Coverage Threshold 1: Low Speed	*ENG	[0 to 100.00 / 10.00 / 0.01%/step]
Coverage Threshold 2: Low Temp.	*ENG	[0 to 60.00 / <b>20.00</b> / 0.01%/step]
Coverage Threshold 4: High Temp.	*ENG	[0 to 100.00 / <b>20.00</b> / 0.01%/step]
Application Time: 1	*ENG	[0 to 99 / 10 / 1 sec/step]
Application Time:2	*ENG	[0 to 99 / 10 / 1 sec/step]
Application Time:3	*ENG	[0 to 99 / 10 / 1 sec/step]
Application Time:4	*ENG	[0 to 99 / <b>5</b> / 1 sec/step]
Page Setting 5: Low Temp.	*ENG	[0 to 999 / <b>20</b> / 1 page/step]
Image Area Threshold 5: Low Temp.	*ENG	[60.00 to 100.00 / <b>60.00</b> / 0.01%/ step]
Application Time:5	*ENG	[0 to 99 / <b>3</b> / 1 sec/step]
Temperature Threshold: Low 2	*ENG	[0 to 50 / <b>15</b> / 1 deg/step]
	Page Setting 1: Low Speed Page Setting 2: Low Temp. Page Setting 3: Low Temp. 2 Page Setting 4: High Temp. Coverage Threshold 1: Low Speed Coverage Threshold 2: Low Temp. Coverage Threshold 4: High Temp. Application Time: 1 Application Time: 2 Application Time: 3 Application Time: 4 Page Setting 5: Low Temp. Image Area Threshold 5: Low Temp. Application Time: 5	Page Setting 1: Low Speed *ENG Page Setting 2: Low Temp. *ENG Page Setting 3: Low Temp. 2 *ENG Page Setting 4: High Temp. *ENG Coverage Threshold 1: Low Speed Coverage Threshold 2: Low Temp. *ENG Temp. *ENG Application Time: 1 *ENG Application Time: 2 *ENG Application Time: 4 *ENG Page Setting 5: Low Temp. *ENG Image Area Threshold 5: Low Temp. Application Time: 5 *ENG *ENG *ENG *ENG *ENG *ENG *ENG *ENG

2101	[Registration Adjustment]  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 optics housing unit. The value should be provided with the new laser optics housing unit.		
2-101-001	Color Main Dot: Bk	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]

2101	[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 optics housing unit. The value should be provided with the new laser optics housing unit.		
2-101-002	Color Main Dot: Ma	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]
2-101-003	Color Main Dot: Cy	*ENG	
2-101-004	Color Main Dot: Ye	*ENG	
2-101-005	Color Sub Line: Bk	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-101-006	Color Sub Line: Ma	*ENG	
2-101-007	Color Sub Line: Cy	*ENG	
2-101-008	Color Sub Line: Ye	*ENG	

2102	[Magnification Adjustment]		
	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.		
2-102-001	Main Mag.: Standard Speed: Bk	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.091</b> *C406: <b>0.094</b>
2-102-002	Main Mag.: Standard Speed2: Bk	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.091</b> *C406: <b>0.094</b>
2-102-003	Main Mag.: Low Speed: Bk	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.091</b> *C406: <b>0.094</b>
2-102-004	Main Mag.: Standard Speed: Ma	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.091</b> *C406: <b>0.094</b>

2-102-006	Main Mag.: Low Speed: Ma	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.091</b> *C406: <b>0.094</b>
2-102-007	Main Mag.: High Speed: Cy	*ENG	[-1.000 to 1.000 / * / 0.001%/step]  *C306: <b>0.081</b> *C406: <b>0.088</b>
2-102-009	Main Mag.: Low Speed: Cy	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.081</b> *C406: <b>0.088</b>
2-102-010	Main Mag.: High Speed: Ye	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.081</b> *C406: <b>0.088</b>
2-102-012	Main Mag.: Low Speed: Ye	*ENG	[-1.000 to 1.000 / * / 0.001%/step] *C306: <b>0.081</b> *C406: <b>0.088</b>

2102	[Main Scan Beam Pitch Adj.]		
2-102-013	Bk	*ENG	[0 to 100 / <b>11.53</b> / 0.01 dot/step]
2-102-015	Ма	*ENG	[0 to 100 / <b>11.53</b> / 0.01 dot/step]
2-102-017	Су	*ENG	[0 to 100 / <b>11.53</b> / 0.01 dot/step]
2-102-019	Ye	*ENG	[0 to 100 / <b>11.53</b> / 0.01 dot/step]

2102	[Magnification Adjustment]		
·			automatic line position adjustment and are se input only when a new laser unit is
2-102-028	Color Main Mag.: High Speed: Ma	*ENG	[-1.000 to 1.000 / <b>0.000</b> / 0.001%/ step]
2-102-031	Color Main Mag.: High Speed: Cy	*ENG	[-1.000 to 1.000 / <b>0.000</b> / 0.001%/ step]

2-102-034	Color Main Mag.: High	*ENG	[-1.000 to 1.000 / <b>0.000</b> / 0.001%/	
	Speed: Ye		step]	

2103	[Erase Margin Adjustment]		
	Adjusts the erase margin by deleting image data at the margins.		
2-103-001	Leading Edge Width	*ENG	[0.0 to 9.9 / <b>4.2</b> / 0.1 mm/step]
2-103-002	Trailing Edge Width	*ENG	
2-103-003	Left	*ENG	[0.0 to 9.9 / <b>2.0</b> / 0.1 mm/step]
2-103-004	Right	*ENG	
2-103-005	Duplex: Trailing Edge	*ENG	[0.0 to 9.9 / <b>0.0</b> / 0.1 mm/step]
2-103-006	Duplex: Left Edge	*ENG	
2-103-007	Duplex: Right Edge	*ENG	

2104	[Unit LD Power Adj.]		
	Adjusts the LD initial power. These SPs must be input only when a new laser unit is installed.		
2-104-001	Bk: LD1	*ENG [60.0 to 140.0 / 100.0 / 0.1%/	[60.0 to 140.0 / 100.0 / 0.1%/step]
2-104-002	Ma: LD1	*ENG	
2-104-003	Cy: LD1	*ENG	
2-104-004	Ye: LD1	*ENG	
2-104-005	Bk: LD2	*ENG	[60.0 to 140.0 / <b>100.0</b> / 0.1%/step]
2-104-006	Ma: LD2	*ENG	
2-104-007	Cy: LD2	*ENG	
2-104-008	Ye: LD2	*ENG	

2105	[LD Power Adj.]
	Adjusts the LD power of each color for each process speed.
Each LD power setting is decided by process control.	

2-105-001	High Speed: Bk	*ENG	[50.0 to 120.0 / <b>100.0</b> / 0.1%/step]
2-105-002	High Speed: Ma	*ENG	
2-105-003	High Speed: Cy	*ENG	
2-105-004	High Speed: Ye	*ENG	
2-105-005	Standard Speed2: Bk	*ENG	
2-105-009	Low Speed: Bk	*ENG	
2-105-010	Low Speed: Ma	*ENG	
2-105-011	Low Speed: Cy	*ENG	
2-105-012	Low Speed: Ye	*ENG	
2-105-013	Middle Speed: Bk	*ENG	[50.0 to 120.0 / <b>100.0</b> / 0.1%/step]
2-105-014	Middle Speed: Ma	*ENG	
2-105-015	Middle Speed: Cy	*ENG	
2-105-016	Middle Speed: Ye	*ENG	

2106	[Polygon Rotation Time]		
	Adjusts the time of the polygon motor rotation.		
2-106-001	Warming-Up Time Set	*ENG	[0 to 60 / 10 / 1 sec/step]
2-106-002	Post Rotating Time Set After Printing	*ENG	[0 to 60 / <b>0</b> / 1 sec/step]

2107	[Image Parameter]		
	Adjusts image parameters.		
2-107-001	Image Gamma Flag	ENG	[0 or 1 / 1 / 1/step]
2-107-002	Shading Correction Flag	*ENG	[0 or 1 / 1 / 1/step]

2109	[Test Pattern]
	Generates the test pattern using "COPY Window" tab in the LCD.

2-109-003	Pattern Selection	ENG	[0 to 23 / <b>0</b> / 1/step]
	0: None		11: Independent Pattern (1dot)
	1: Vertical Line (1dot)		12: Independent Pattern (2dot)
	2: Vertical Line (2dot)		13: Independent Pattern (4dot)
	3: Horizontal (1dot)		14: Trimming Area
	4: Horizontal (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		23: Full Dot Pattern
2-109-005	Color Selection	ENG	Specifies the color for the test pattern.
			[1 to 4 / 1 / 1/step]
			1:All Color, 2:Ma, 3:Ye, 4:Bk
2-109-006	Density:Bk	ENG	Specifies the color density for the test
2-109-007	Density:Ma	ENG	pattern. [0 to 15 / <b>15</b> / 1/step]
2-109-008	Density:Cy	ENG	0: Lightest density
2-109-009	Density:Ye	ENG	15: Darkest density

2110	[ST OUT]		
2-110-001	ST OUT Selection	*ENG	[0 or 1 / <b>0</b> / 1/step]

2111	[Forced Line Position Adj.]		
2-111-001	Mode a	ENG	[-/-/-] [Execute] 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.

2-111-002	Mode b	ENG	[-/-/-] [Execute]  Executes the fine line position adjustment once.  If this SP is not completed, do SP2111-003 first and then try this SP again
2-111-003	Mode c	ENG	[-/-/-] [Execute] 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.
2-111-004	Mode d	ENG	[- / - / -] [Execute] Executes the fine line position adjustment and rough line position adjustment.

2112	This SP is used to check the ID sensors at the factory. The results of this SP are displayed in SP2140 to SP2145.		
2-112-001	Execute	ENG	[-/-/-]
			[Execute]
2-112-010	Display Result: Front- Center-Rear	*ENG	[0 to 999 / <b>0</b> / 1/step]
2-112-020	Threshold Setting	*ENG	[0.00 to 5.50 / <b>1.90</b> / 0.01V/step]

2115	[Gamma Correction] DFU(SSP)		
2-115-001	Low CPP Edge Process Correction	*ENG	[0 to 100 / <b>80</b> / 1%/step]

2117	[Skew Adjustment]		
	Specifies a skew adjustment value for the skew motor M, C, Y or Bk.		
2-117-001	Ma:Skew Adjustment	*ENG	[-256 to 256 / <b>0</b> / 1 click/step]
2-117-002	Cy:Skew Adjustment	*ENG	
2-117-003	Ye:Skew Adjustment	*ENG	
2-117-004	Bk:Skew Adjustment	*ENG	

2140	[TM/ID Sensor Check]		
	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		
2-140-005	PWM: Front	*ENG	[0 to 1024 / <b>0</b> / 1/step]
2-140-006	PWM: Center	*ENG	
2-140-007	PWM: Rear	*ENG	

2141	[TM/ID Sensor Check]  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		
2-141-005	Average: Front	*ENG	[0.00 to 5.50 / <b>0</b> / 0.01 V/step]
2-141-006	Average: Center	*ENG	
2-141-007	Average: Rear	*ENG	

2142	[TM/ID Sensor Check]
	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

2-142-005	Maximum: Front	*ENG	[0.00 to 5.50 / <b>0</b> / 0.01 V/step]
2-142-006	Maximum: Center	*ENG	
2-142-007	Maximum: Rear	*ENG	

2143	[TM/ID Sensor Check]  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		
2-143-005	Minimum: Front	*ENG	[0.00 to 5.50 / <b>0</b> / 0.01 V/step]
2-143-006	Minimum: Center	*ENG	
2-143-007	Minimum: Rear	*ENG	

2146	[TM-Sensor Check Result]		
	This SP is used to check the TM sensors.		
2-146-005	Number of Edge Detection:Front	*ENG	[0 to 16 / <b>0</b> / 1/step]
2-146-006	Number of Edge Detection:Center	*ENG	
2-146-007	Number of Edge Detection:Rear	*ENG	

2150	[Area Mag. Correction] DFU(SSP)  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			
2-150-027	Area 0: Bk	*ENG	[-16.00 to 16.00 / <b>0.00</b> / 0.01 dot/step]	

2-150-028	Area 1: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306: <b>0.20</b> *C406: <b>-0.41</b>
2-150-029	Area 2: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306:- <b>0.45</b> *C406:- <b>0.76</b>
2-150-030	Area 3: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306:-0.62     *C406:-0.82
2-150-031	Area 4: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306:-0.40     *C406:-0.66
2-150-032	Area 5: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306: <b>0.00</b> *C406: <b>-0.28</b>
2-150-033	Area ó: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306:0.39     *C406:     NA:0.30     EU:0.31     AS:0.30     CHN:0.33     TWN:0.34     KOR:0.35
2-150-034	Area 7: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.56</b> *C406: <b>1.02</b>
2-150-035	Area 8: Bk	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306: <b>0.31</b> *C406: <b>1.62</b>

2-150-079	Area 0: Ma	*ENG	[-16.00 to 16.00 / <b>0.00</b> / 0.01 dot/step]
2-150-080	Area 1: Ma	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.20</b> *C406: <b>-0.41</b>
2-150-081	Area 2: Ma	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>-0.45</b> *C406: <b>-0.76</b>
2-150-082	Area 3: Ma	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]  *C306: NA:-0.62 EU:0.62 AS:-0.62 CHN:-0.62 TWN:-0.62 KOR:-0.62 *C406:-0.82
2-150-083	Area 4: Ma	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306:-0.40 *C406:-0.66
2-150-084	Area 5: Ma	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.00</b> *C406: <b>-0.28</b>
2-150-085	Area 6: Ma	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]  *C306:0.39  *C406: NA:0.30  EU:0.31  AS:0.32  CHN:0.33  TWN:0.34  KOR:0.35

2-150-086	Area 7: Ma	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.56</b> *C406: <b>1.02</b>
2-150-087	Area 8: Ma	*ENG	[-16.00 to 16.00 / <b>0.31</b> / 0.01 dot/step] *C306: <b>0.31</b> *C406: <b>1.62</b>
2-150-131	Area 0: Cy	*ENG	[-16.00 to 16.00 / <b>0.00</b> / 0.01 dot/step]
2-150-132	Area 1: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]  *C306:0.18  *C406: NA:-0.14  EU:-0.15  AS:-0.16  CHN:-0.17  TWN:-0.18  KOR:-0.19
2-150-133	Area 2: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306:0.49     *C406:     NA:0.03     EU:0.04     AS:0.05     CHN:0.06     TWN:0.07     KOR:0.08
2-150-134	Area 3: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.42</b> *C406: <b>-0.03</b>
2-150-135	Area 4: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.11</b> *C406: <b>-0.20</b>

2-150-136	Area 5: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306:-0.26 *C406:-0.32
2-150-137	Area 6: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306:-0.50 *C406:-0.26
2-150-138	Area 7: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306:-0.45     *C406:0.12
2-150-139	Area 8: Cy	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.02</b> *C406: <b>0.81</b>
2-150-183	Area 0: Ye	*ENG	[-16.00 to 16.00 / <b>0.00</b> / 0.01 dot/step]
2-150-184	Area 1: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]  *C306:0.18  *C406: NA:-0.14  EU:-0.15  AS:-0.16  CHN:-0.17  TWN:-0.18  KOR:-0.19
2-150-185	Area 2: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306:0.49     *C406:     NA:0.03     EU:0.04     AS:0.05     CHN:0.06     TWN:0.07     KOR:0.08

2-150-186	Area 3: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]  *C306: <b>0.42</b> *C406: <b>-0.03</b>
2-150-187	Area 4: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step] *C306: <b>0.11</b> *C406: <b>-0.20</b>
2-150-188	Area 5: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]  *C306:-0.26  *C406:-0.32
2-150-189	Area 6: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306:-0.50     *C406:-0.26
2-150-190	Area 7: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]  *C306: <b>-0.45</b> *C406: <b>0.12</b>
2-150-191	Area 8: Ye	*ENG	[-16.00 to 16.00 / * / 0.01 dot/step]     *C306: <b>0.02</b> *C406: <b>0.81</b>

2152	[Area Shad. Correct. Setting] DFU(SSP)  Sets the adjust coefficient for exposure shading for each color in each area of the MUSIC pattern.		
2-152-001	Area O: Bk	*ENG	[-31 to 31 / <b>-1</b> / 1/step]
2-152-002	Area 1: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306:-2  *C406:-1
2-152-003	Area 2: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>-2</b> *C406: <b>0</b>

2-152-004	Area 3: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306:-1  *C406:0
2-152-005	Area 4: Bk	*ENG	[-31 to 31 / <b>0</b> / 1/step]
2-152-006	Area 5: Bk	*ENG	[-31 to 31 / 1 / 1/step]
2-152-007	Area 6: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>2</b> *C406: <b>1</b>
2-152-008	Area 7: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>1</b>
2-152-009	Area 8: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>1</b>
2-152-010	Area 9: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>1</b>
2-152-011	Area 10: Bk	*ENG	[-31 to 31 / 1 / 1/step]
2-152-012	Area 11: Bk	*ENG	[-31 to 31 / * / 1/step]  *C306:0  *C406:1
2-152-033	Area 0: Ma	*ENG	[-31 to 31 / <b>-1</b> / 1/step]
2-152-034	Area 1: Ma	*ENG	[-31 to 31 / * / 1/step]  *C306:-2  *C406:-1
2-152-035	Area 2: Ma	*ENG	[-31 to 31 / * / 1/step] *C306:-2 *C406:0

2-152-036	Area 3: Ma	*ENG	[-31 to 31 / * / 1/step]  *C306:-1  *C406:0
2-152-037	Area 4: Ma	*ENG	[-31 to 31 / <b>0</b> / 1/step]
2-152-038	Area 5: Ma	*ENG	[-31 to 31 / 1 / 1/step]
2-152-039	Area 6: Ma	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>2</b> *C406: <b>1</b>
2-152-040	Area 7: Ma	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>1</b>
2-152-041	Area 8: Ma	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>1</b>
2-152-042	Area 9: Ma	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>1</b>
2-152-043	Area 10: Ma	*ENG	[-31 to 31 / 1 / 1/step]
2-152-044	Area 11: Ma	*ENG	[-31 to 31 / * / 1/step]  *C306:0  *C406:1
2-152-065	Area 0: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306:-1  *C406:3
2-152-066	Area 1: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306:-1  *C406:1
2-152-067	Area 2: Cy	*ENG	[-31 to 31 / * / 1/step] *C306:-2 *C406:1

2-152-068	Area 3: Cy	*ENG	[-31 to 31 / * / 1/step] *C306:-1 *C406:1
2-152-069	Area 4: Cy	*ENG	[-31 to 31 / <b>0</b> / 1/step]
2-152-070	Area 5: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306:1  *C406:-1
2-152-071	Area 6: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>2</b> *C406: <b>0</b>
2-152-072	Area 7: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>0</b>
2-152-073	Area 8: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>0</b>
2-152-074	Area 9: Cy	*ENG	[-31 to 31 / * / 1/step] *C306: <b>3</b> *C406: <b>2</b>
2-152-075	Area 10: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306:1  *C406:3
2-152-076	Area 11: Cy	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>0</b> *C406: <b>6</b>
2-152-097	Area 0: Ye	*ENG	[-31 to 31 / * / 1/step] *C306:-1 *C406:3

2-152-098	Area 1: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306:-1  *C406:1
2-152-099	Area 2: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306:-2  *C406:1
2-152-100	Area 3: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306:-1  *C406:1
2-152-101	Area 4: Ye	*ENG	[-31 to 31 / <b>0</b> / 1/step]
2-152-102	Area 5: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306:1  *C406:-1
2-152-103	Area ó: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>2</b> *C406: <b>0</b>
2-152-104	Area 7: Ye	*ENG	[-31 to 31 / * / 1/step] *C306: <b>3</b> *C406: <b>0</b>
2-152-105	Area 8: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>0</b>
2-152-106	Area 9: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306: <b>3</b> *C406: <b>2</b>
2-152-107	Area 10: Ye	*ENG	[-31 to 31 / * / 1/step]  *C306:1  *C406:3

		*ENG	[-31 to 31 / * / 1/step]
2-152-108	Area 11: Ye		*C306: <b>0</b>
			*C406: <b>6</b>

2153	[Area Shad. Size Setting] DFU(SSP)			
	Sets the area size for exposure shading for each color in each area of the MUSIC pattern.			
2-153-001	Area O: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-002	Area 1: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-003	Area 2: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-004	Area 3: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-005	Area 4: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-006	Area 5: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-007	Area 6: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-008	Area 7: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-009	Area 8: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-010	Area 9: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-011	Area 10: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-012	Area 11: Bk	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-017	Area 0: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-018	Area 1: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-019	Area 2: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-020	Area 3: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-021	Area 4: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-022	Area 5: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-023	Area 6: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	
2-153-024	Area 7: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]	

0.150.005		*F\ ! O	[], (0 / 5 / 1 / . ]
2-153-025	Area 8: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-026	Area 9: Ma	*ENG	[1 to 63 / 5 / 1/step]
2-153-027	Area 10: Ma	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-028	Area 11: Ma	*ENG	[1 to 63 / 5 / 1/step]
2-153-033	Area 0: Cy	*ENG	[1 to 63 / 5 / 1/step]
2-153-034	Area 1: Cy	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-035	Area 2: Cy	*ENG	[1 to 63 / 5 / 1/step]
2-153-036	Area 3: Cy	*ENG	[1 to 63 / 5 / 1/step]
2-153-037	Area 4: Cy	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-038	Area 5: Cy	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-039	Area 6: Cy	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-040	Area 7: Cy	*ENG	[1 to 63 / 5 / 1/step]
2-153-041	Area 8: Cy	*ENG	[1 to 63 / 5 / 1/step]
2-153-042	Area 9: Cy	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-043	Area 10: Cy	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-044	Area 11: Cy	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-049	Area 0: Ye	*ENG	[1 to 63 / 5 / 1/step]
2-153-050	Area 1: Ye	*ENG	[1 to 63 / 5 / 1/step]
2-153-051	Area 2: Ye	*ENG	[1 to 63 / 5 / 1/step]
2-153-052	Area 3: Ye	*ENG	[1 to 63 / 5 / 1/step]
2-153-053	Area 4: Ye	*ENG	[1 to 63 / 5 / 1/step]
2-153-054	Area 5: Ye	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-055	Area 6: Ye	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-056	Area 7: Ye	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-057	Area 8: Ye	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-058	Area 9: Ye	*ENG	[1 to 63 / 5 / 1/step]

2-153-059	Area 10: Ye	*ENG	[1 to 63 / <b>5</b> / 1/step]
2-153-060	Area 11: Ye	*ENG	[1 to 63 / <b>5</b> / 1/step]

2154	[Non Img Area Shad. Corr. C	Coef.] DFU(	(SSP)		
	Sets the adjust coefficient for outside the exposure shading for each color in each area of the MUSIC pattern.				
2-154-001	Leading Edge: Bk *ENG [50 to 150 / 100 / 1%/step]				
2-154-003	Image Process: Bk	*ENG	[50 to 150 / * / 1%/step]  *C306:105  *C406:102		
2-154-004	Leading Edge: Ma	*ENG	[50 to 150 / <b>100</b> / 1%/step]		
2-154-006	Image Process: Ma	*ENG	[50 to 150 / * / 1%/step]  *C306:105  *C406:102		
2-154-007	Leading Edge: Cy	*ENG	[50 to 150 / <b>100</b> / 1%/step]		
2-154-009	Image Process: Cy	*ENG	[50 to 150 / * / 1%/step]  *C306:105  *C406:95		
2-154-010	Leading Edge: Ye	*ENG	[50 to 150 / <b>100</b> / 1%/step]		
2-154-012	Image Process: Ye	*ENG	[50 to 150 / * / 1%/step] *C306: <b>105</b> *C406: <b>95</b>		

2160	[Vertical Line Width]		
2-160-001	600dpi:Bk	*ENG	[10 to 15 / <b>14</b> / 1/step]
2-160-002	600dpi:Ma	*ENG	
2-160-003	600dpi:Cy	*ENG	
2-160-004	600dpi:Ye	*ENG	

2-160-005	1200dpi:Bk	*ENG	[10 to 15 / <b>15</b> / 1/step]
2-160-006	1200dpi:Ma	*ENG	
2-160-007	1200dpi:Cy	*ENG	
2-160-008	1200dpi:Ye	*ENG	
2-160-009	600dpi:Independent Dot:Bk	*ENG	
2-160-010	1200dpi:Independent Dot:Bk	*ENG	

2180	[Line Pos. Adj. Clear]		
2-180-001	Color Registration	ENG	[-/-/-]
2-180-002	Main Scan Length Detection	ENG	[Execute]
2-180-003	MUSIC Result	ENG	
2-180-004	Area Magnification Correction:unit1	ENG	
2-180-005	Area Magnification Correction:unit2	ENG	

2180	[Shade. Adj. Clear]		
2-180-006	Shading Correction:unit1	ENG	[-/-/-]
2-180-007	Shading Correction:unit2	ENG	[Execute]

2181	[Line Position Adj. Result]			
	Displays the values for each correction.			
	"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 di				
"S. Cor.: Dot" indicates the dot correction value in the sub scan dire			alue in the sub scan direction.	
	"S. Cor.: Subdot" indicates the sub dot correction value in the sub scan direction.			
2-181-003	Skew: M	*ENG	[-5000.000 to 5000.000 / <b>0</b> / 0.001 um/step]	

2-181-011	M. Cor.: Dot: M	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]
2-181-012	M. Cor.: Subdot: M	*ENG	[-1.00 to 1.00 / <b>0</b> / 0.01 dot/step]
2-181-015	Left Mag.: Subdot: M	*ENG	[-32.00 to 32.00 / <b>0</b> / 0.01 dot/step]
2-181-016	Right Mag.: Subdot: M	*ENG	[-32.00 to 32.00 / <b>0</b> / 0.01 dot/step]
2-181-017	S. Cor.: 600 Line: M	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-181-018	S. Cor.: 600 Sub: M	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]
2-181-019	S. Cor.: 1200 Line: M	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-181-020	S. Cor.: 1200 Sub: M	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]
2-181-021	Skew: C	*ENG	[-5000.000 to 5000.000 / <b>0</b> / 0.001 um/step]
2-181-029	M. Cor.: Dot: C	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]
2-181-030	M. Cor.: Subdot: C	*ENG	[-1.00 to 1.00 / <b>0</b> / 0.01 dot/step]
2-181-033	Left Mag.: Subdot: C	*ENG	[-32.00 to 32.00 / <b>0</b> / 0.01 dot/step]
2-181-034	Right Mag.: Subdot: C	*ENG	[-32.00 to 32.00 / <b>0</b> / 0.01 dot/step]
2-181-035	S. Cor.: 600 Line: C	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-181-036	S. Cor.: 600 Sub: C	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]
2-181-037	S. Cor.: 1200 Line: C	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-181-038	S. Cor.: 1200 Sub: C	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]
2-181-039	Skew: Y	*ENG	[-5000.000 to 5000.000 / <b>0</b> / 0.001 um/step]
2-181-047	M. Cor.: Dot: Y	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]
2-181-048	M. Cor.: Subdot: Y	*ENG	[-1.00 to 1.00 / <b>0</b> / 0.01 dot/step]
2-181-051	Left Mag.: Subdot: Y	*ENG	[-32.00 to 32.00 / <b>0</b> / 0.01 dot/step]
2-181-052	Right Mag.: Subdot: Y	*ENG	[-32.00 to 32.00 / <b>0</b> / 0.01 dot/step]
2-181-053	S. Cor.: 600 Line: Y	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-181-054	S. Cor.: 600 Sub: Y	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]

2-181-055	S. Cor.: 1200 Line: Y	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-181-056	S. Cor.: 1200 Sub: Y	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]
2-181-057	S. Cor.: 600 Sub	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]
2-181-059	S. Cor.: 1200 Sub	*ENG	[-1.000 to 1.000 / <b>0</b> / 0.001 line/step]
2-181-061	Skew: Bk	*ENG	[-5000.000 to 5000.000 / <b>0</b> / 0.001 um/step]
2-181-072	Line Shift: M	*ENG	[0 to 1 / 0 / 1 line/step]
2-181-074	Line Shift: C	*ENG	[0 to 1 / <b>0</b> / 1 line/step]
2-181-076	Line Shift: Y	*ENG	[0 to 1 / <b>0</b> / 1 line/step]

2182	[Line Position Adj. Offset]				
	(Color) M. Scan: Main scan, S. Scan: Sub-scan				
2-182-004	M. Scan: Standard: Dot: M	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]		
2-182-005	M. Scan: Standard: Subdot: M	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]		
2-182-006	M. Scan: Middle: Dot: M	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]		
2-182-007	M. Scan: Middle: Subdot: M	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]		
2-182-008	M. Scan: Low: Dot: M	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]		
2-182-009	M. Scan: Low: Subdot: M	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]		
2-182-010	M. Scan: Standard: Dot: C	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]		
2-182-011	M. Scan: Standard: Subdot: C	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01dot/step]		
2-182-012	M. Scan: Middle: Dot: C	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]		
2-182-013	M. Scan: Middle: Subdot: C	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]		
2-182-014	M. Scan: Low: Dot: C	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]		
2-182-015	M. Scan: Low: Subdot: C	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]		
2-182-016	M. Scan: Standard: Dot: Y	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]		

2-182-017	M. Scan: Standard: Subdot: Y	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]
2-182-018	M. Scan: Middle: Dot: Y	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]
2-182-019	M. Scan: Middle: Subdot: Y	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]
2-182-020	M. Scan: Low: Dot: Y	*ENG	[-512 to 511 / <b>0</b> / 1 dot/step]
2-182-021	M. Scan: Low: Subdot: Y	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 dot/step]
2-182-022	S. Scan: Standard: Line: M	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-023	S. Scan: Standard: Subline: M	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]
2-182-024	S. Scan: Middle: Line: M	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-025	S. Scan: Middle: Subline: M	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]
2-182-026	S. Scan: Low: Line: M	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-027	S. Scan: Low: Subline: M	*ENG	[-1.00 to 1.00 / <b>0</b> / 0.01 line/step]
2-182-028	S. Scan: Standard: Line: C	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-029	S. Scan: Standard: Subline: C	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]
2-182-030	S. Scan: Middle: Line: C	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-031	S. Scan: Middle: Subline: C	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]
2-182-032	S. Scan: Low: Line: C	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-033	S. Scan: Low: Subline: C	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]
2-182-034	S. Scan: Standard: Line: Y	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-035	S. Scan: Standard: Subline: Y	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]
2-182-036	S. Scan: Middle: Line: Y	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-037	S. Scan: Middle: Subline: Y	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]
2-182-038	S. Scan: Low: Line: Y	*ENG	[-16384 to 16383 / <b>0</b> / 1 line/step]
2-182-039	S. Scan: Low: Subline: Y	*ENG	[-1.00 to 1.00 / <b>0.00</b> / 0.01 line/step]

2185	[MUSIC Pattern Timing :Set] DFU(SSP)		
2-185-0	Delay Time	ENG	[0 to 4000 / <b>0</b> / 1 msec/step]
01			

2190	[Line Position Adj. Select]		
2-190-0 12	Detection Error Level: um	*ENG	[-3500 to 3500 / <b>0</b> / 1 um/step]

2193	[MUSIC Condition Set]			
	Line Position Adjustment: Condition Setting			
2-193-002	Page: Job End: BW+FC	*ENG	[0 to 999 / <b>500</b> / 1 page/step]	
	Adjusts the threshold of the lin after job end.	e position	adjustment for BW and color printing mode	
2-193-003	Page: Job End: FC	*ENG	[0 to 999 / <b>200</b> / 1 page/step]	
	Adjusts the threshold of the linend.	e position	adjustment for color printing mode after job	
2-193-004	Page: Interrupt: BW+FC	*ENG	[0 to 999 / <b>200</b> / 1 page/step]	
	Adjusts the threshold of the linduring job.	e position	adjustment for BW and color printing mode	
2-193-005	Page: Interrupt: FC	*ENG	[0 to 999 / <b>200</b> / 1 page/step]	
	Adjusts the threshold of the line position adjustment for color printing mode during jobs.			
2-193-006	[0 to 999 / <b>100</b> / 1 page/step]			
	Adjusts the threshold of the line position adjustment for BW printing mode in stand-b 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			

2-193-007	Page: Standby: FC	*ENG	[0 to 999 / <b>100</b> / 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.			
2-193-008	Temp. Change	*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.			
2-193-011	Temp. Change 2	*ENG	[0 to 100 / <b>10</b> / 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.			
2-193-016	Page: Power ON:BW+FC	*ENG	[0 to 999 / <b>200</b> / 1 page/step]	

2194	[MUSIC Execution Result]			
	Line Position Adjustment: Execution Result			
2-194-001	Year	*ENG	[0 to 99 / <b>0</b> 1 year/step]	
	Displays the year of the	last MUS	IC execution.	
2-194-002	Month	*ENG	[1 to 12 / 1 1 month/step]	
	Displays the month of th	ne last MU	SIC execution.	
2-194-003	Day	*ENG [1 to 31 / 1/1 day/step]		
	Displays the date of the	last MUS	C execution.	
2-194-004	1-004 Hour *ENG [0 to 23 / 0 / 1 hour/step]		[0 to 23 / <b>0</b> / 1 hour/step]	
	Displays the time (hour)	of the last	MUSIC execution	
2-194-005	Minute	*ENG [0 to 59 / <b>0</b> / 1 minute/step]		
	Displays the time (minute) of the last MUSIC execution.			
2-194-006	Temperature	*ENG	[0 to 100 / <b>0</b> / 1 deg/step]	
	Displays the temperature of the last MUSIC execution.			

2-194-007	Execution Result	*ENG	[0 or 1 / <b>0</b> / 1/step]
			0: Completed successfully, 1: Failed
2-194-008	Number of Execution	*ENG	[0 to 999999 / <b>0</b> / 1 times/step]
2-194-009	Number of Failure	*ENG	[0 to 999999 / <b>0</b> / 1 times/step]
2-194-010	Error Result: C	*ENG	[0 to 9 / <b>0</b> / 1/step]
2-194-011	Error Result: M	*ENG	0: Not done
2-194-012	Error Result: Y	*ENG	Completed successfully     Cannot detect patterns
2-194-013	Error Result: K	*ENG	3: Fewer lines on the pattern than the target
			4: Out of the adjustment range
			5 to 9: Not used

2221	[LD Power: fixed: Set]			
	These SP codes set the LD power level for each laser unit.			
2-221-001	Standard Speed: Bk	*ENG	[0 to 200 / <b>100</b> / 1%/step]	
2-221-002	Standard Speed: C	*ENG	Increasing this value makes the image density darker.	
2-221-003	Standard Speed: M	*ENG	density deficer.	
2-221-004	Standard Speed: Y	*ENG		
2-221-011	Low Speed: M	*ENG		
2-221-012	Low Speed: Y	*ENG		

2229	[Develop DC Bias: Fixed]  Adjusts the development vias.			
2-229-001	Standard Speed: Bk	*ENG	[0 to 800 / <b>450</b> / 1 V/step]	
2-229-002	Standard Speed: C	*ENG		
2-229-003	Standard Speed: M	*ENG		
2-229-004	Standard Speed: Y	*ENG		

2241	[PCDU Temperature: Display]				
	Displays the environment temperature.				
2-241-0 03	Time Interval: Fan Extension Control	*ENG	[1 to 300 / <b>10</b> / 1 ec/step]		
2-241-0 04	PCU Temprature	ENG	[0.0 to 70.0 / <b>0</b> / 0.1 deg/step]		

2242	[TS Operation Env. Log]				
	Displays the rotation of PCU for each temperature.				
2-242-001	Distance: PCU: Bk: TS<=A-3	nce: PCU: Bk: TS<=A-3			
2-242-002	Distance: PCU: Bk: A-3 <ts<=a< td=""><td>ENG</td><td></td></ts<=a<>	ENG			
2-242-003	Distance: PCU: Bk: A <ts<=a+3< td=""><td>ENG</td><td></td></ts<=a+3<>	ENG			
2-242-004	Distance: PCU: Bk: A+3 <ts< td=""><td>ENG</td><td></td></ts<>	ENG			
2-242-100	Log Clear	ENG	[-/-/-]		
			[Execute]		

2302	[Environmental Correction: Trans]  Environmental Correction: Image Transfer Belt Unit		
2-302-001	Current Environmental Display	ENG	[-/-/-]

2-302-002	Forced Setting	*ENG	Sets the environment condition manually.
			[0 to 6 / <b>0</b> / 1/step]
			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)
2-302-003	Absolute Humidity:Threshold 1	*ENG	Adjusts the threshold value between LL and ML.
			[0.00 to 100.00 / <b>4.50</b> / 0.01 g/m <sup>3</sup> / step]
2-302-004	Absolute Humidity:Threshold 2	*ENG	Adjusts the threshold value between ML and MM.
			[0.00 to 100.00 / <b>9.00</b> / 0.01 g/m <sup>3</sup> / step]
2-302-005	Absolute Humidity:Threshold 3	*ENG	Adjusts the threshold value between MM and MH.
			[0.00 to 100.00 / <b>17.50</b> / 0.01 g/m <sup>3</sup> / step]
2-302-006	Absolute Humidity:Threshold 4	*ENG	Adjusts the threshold value between MH and HH.
			[0.00 to 100.00 / <b>24.00</b> / 0.01 g/m <sup>3</sup> / step]
2-302-007	Temperature:Threshold	*ENG	[-5 to 30 / <b>10</b> / 1 deg/step]

2303	[Time-Lapse Correction]		
2-303-001	Current Div Bk	*ENG	[0 to 3 / 0 / 1/step] Displays the current time-lapse division.
2-303-002	Current Div C	*ENG	[0 to 3 / 0 / 1/step] Displays the current time-lapse division.

2-303-003	Current Div M	*ENG	[0 to 3 / 0 / 1/step] Displays the current time-lapse division.
2-303-004	Current Div Y	*ENG	[0 to 3 / 0 / 1/step] Displays the current time-lapse division.
2-303-005	Correction Threshold 1_Bk	*ENG	[0 to 600000 / 5000 / 10 page/step] Adjusts the correction threshold.
2-303-006	Correction Threshold 1_Color	*ENG	[0 to 600000 / 5000 / 10 page/step] Adjusts the correction threshold.
2-303-007	Correction Threshold 2_Bk	*ENG	[0 to 600000 / 20000 / 10 page /step] Adjusts the correction threshold.
2-303-008	Correction Threshold 2_Color	*ENG	[0 to 600000 / 20000 / 10 page/step] Adjusts the correction threshold.
2-303-009	Correction Threshold 3_Bk	*ENG	[0 to 600000 / 50000 / 10 page/step] Adjusts the correction threshold.
2-303-010	Correction Threshold 3_Color	*ENG	[0 to 600000 / 50000 / 10 page/step] Adjusts the correction threshold.

2304	[Time-Lapse Correction:Transfer]			
	Adjusts the correction threshold.			
2-304-001	Threshold 1	*ENG	[0 to 999999999 / <b>0</b> / 1 mm/step]	
2-304-002	Threshold 2	*ENG	[0 to 999999999 / <b>0</b> / 1 mm/step]	
2-304-003	Threshold 3	*ENG	[0 to 999999999 / <b>0</b> / 1 mm/step]	
2-304-004	Threshold 4	*ENG	[0 to 999999999 / <b>0</b> / 1 mm/step]	

2305	[Vc Correction]		
	Adjusts the correction threshold.		
2-305-001	Threshold 1	*ENG	[0 to 2000 / <b>450</b> / 10 -V/step]
2-305-002	Threshold 2	*ENG	[0 to 2000 / 600 / 10 -V/step]

2-305-003	Threshold 3	*ENG	[0 to 2000 / <b>750</b> / 10 -V/step]
2-305-004	Threshold 4	*ENG	[0 to 2000 / <b>900</b> / 10 -V/step]

2308	[Paper Size Correction]  Adjusts the threshold value for the paper size correction.		
2-308-001	Threshold 1	*ENG	[0 to 250 / <b>194</b> / 1 mm/step] Threshold 1 ≤ paper: Paper is detected as "S1" size.
2-308-002	Threshold 2	*ENG	[0 to 250 / <b>165</b> / 1 mm/step] Threshold 2 ≤ paper ≤ Threshold 1: Paper is detected as "S2" size.
2-308-003	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]			
	Adjusts the bias of the paper transfer roller between images			
2-311-001	Image Transfer			
	Adjusts the bias of the image transfer belt between images. This value is added to the value of the image transfer belt bias.			
2-311-003	Paper Transfer	*ENG	[0 to 2100 / <b>500</b> / 10 -V/step]	

2316	[Power ON:Bias]		
	Adjusts the bias of the image transfer roller at power-on or a closed cover.		
2-316-001	Image Transfer	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]

2326	[Transfer Roller CL:Bias]		
2-326-001	Neg. Bias: Befor and After JOB	*ENG	[0 to 2100 / <b>250</b> / 10 -V/step]
	Adjusts the negative current o transfer roller.	f the paper	transfer roller for cleaning the paper

2-326-002	Pos. Bias Cor Coef: Befor and After JOB	*ENG	[10 to 995 / <b>100</b> / 10%/step]
	Adjusts the positive voltage of roller.	the paper	transfer roller for cleaning the paper transfer
2-326-003	Neg. Bias: After ProControl	*ENG	[0 to 2100 / <b>1000</b> / 10 -V/step]
	Adjusts the negative current lit transfer roller.	mit of the p	aper transfer roller for cleaning the paper
2-326-004	Pos. Bias Corr Coef: After ProCon	*ENG	[10 to 995 / <b>100</b> / 10%/step]
	Adjusts the positive current lim	nit of the pa	per transfer roller for cleaning the paper
2-326-005	Neg. Bias: Dirt Prevention	*ENG	[0 to 2100 / <b>500</b> / 10 -V/step]

2326	[Transfer Roller CL: Envir]		
2-326-011	Neg. Bias: Befor and After JOB	*ENG	[0 to 100 / <b>9</b> / 1/step]
2-326-013	Neg. Bias: After ProControl	*ENG	[0 to 100 / <b>2</b> / 1/step]
2-326-015	Neg. Bias: Dirt Prevention	*ENG	[0 to 100 / <b>9</b> / 1/step]

2327	[PTR Cleaning After ProCon]		
2-327-001	ON/OFF	*ENG	[0 to 1 / <b>0</b> / 1/step]
			Enables/disables the PTR cleaning after the process control.

2351	[Common:BW:Bias]		
	Image Transfer Belt: B/W: Bias Adjustment Standard: 260 mm/sec, Middle: 182 mm/sec, Low: 85 mm/sec		
2-351-001	Image Transfer: Standard Speed	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]
	Adjusts the current for the image transfer belt in B/W mode for plain paper.		

2-351-002	Image Transfer: Middle Speed	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]
2-351-003	Image Transfer: Low Speed	*ENG	[0 to 2100 / <b>1300</b> / 10 V/step]
	Adjusts the current for the ima	ge transfer	belt in B/W mode for thick 1 paper.
2-351-201	Image Transfer: Std Spd:2	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]

2357	[Common:FC:Bias]			
	Image Transfer Belt: Full Color: Bias Adjustment			
2-357-001	Image Transfer: Std Spd: Bk	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-002	Image Transfer: Std Spd: C	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-003	Image Transfer: Std Spd: M	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-004	Image Transfer: Std Spd: Y	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-005	Image Transfer: Middle Spd: Bk	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-006	Image Transfer: Middle Spd: C	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-007	Image Transfer: Middle Spd: M	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-008	Image Transfer: Middle Spd: Y	*ENG	[0 to 2100 / <b>1400</b> / 10 V/step]	
2-357-009	Image Transfer: Low Spd: Bk	*ENG	[0 to 2100 / 1300 / 10 V/step]	
2-357-010	Image Transfer: Low Spd: C	*ENG	[0 to 2100 / 1300 / 10 V/step]	
2-357-011	Image Transfer: Low Spd: M	*ENG	[0 to 2100 / 1300 / 10 V/step]	
2-357-012	Image Transfer: Low Spd: Y	*ENG	[0 to 2100 / 1300 / 10 V/step]	

2360	[Common:BW:Env.CorrectionTable]		
2-360-001	Image Transfer: Standard Spd	*ENG	[1 to 100 / <b>6</b> / 1/step]

2-360-002	Image Transfer: Middle Spd	*ENG	[1 to 100 / <b>6</b> / 1/step]
2-360-003	Image Transfer: Low Spd	*ENG	[1 to 100 / <b>6</b> / 1/step]
2360	[Common:FC:Env.Correction]	[able]	
2-360-004	ImageTransfer: Std Spd: Bk	*ENG	[1 to 100 / <b>6</b> / 1/step]
2-360-005	ImageTransfer: Std Spd: C	*ENG	[1 to 100 / 5 / 1/step]
2-360-006	ImageTransfer: Std Spd: M	*ENG	[1 to 100 / 5 / 1/step]
2-360-007	ImageTransfer: Std Spd: Y	*ENG	[1 to 100 / 5 / 1/step]
2-360-008	ImageTransfer: Middle Spd: Bk	*ENG	[1 to 100 / <b>6</b> / 1/step]
2-360-009	ImageTransfer: Middle Spd: C	*ENG	[1 to 100 / <b>5</b> / 1/step]
2-360-010	ImageTransfer: Middle Spd:	*ENG	[1 to 100 / <b>5</b> / 1/step]
2-360-011	ImageTransfer: Middle Spd: Y	*ENG	[1 to 100 / <b>5</b> / 1/step]
2-360-012	Image Transfer: Low Spd: Bk	*ENG	[1 to 100 / <b>6</b> / 1/step]
2-360-013	Image Transfer: Low Spd: C	*ENG	[1 to 100 / 5 / 1/step]
2-360-014	Image Transfer: Low Spd: M	*ENG	[1 to 100 / 5 / 1/step]
2-360-015	Image Transfer: Low Spd: Y	*ENG	[1 to 100 / 5 / 1/step]

2361	[Time-Lapse Correction: Div 1]			
	Specifies the number of time-lapse correction table.			
2-361-001	Standard Speed: Bk	*ENG	[0 to 60 / <b>1</b> / 1/step]	
2-361-002	Middle Speed: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-361-003	Low Speed: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-361-004	Standard Speed: FC: Bk	*ENG	[0 to 60 / <b>1</b> / 1/step]	
2-361-005	Standard Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]	

2-361-00	Standard Speed: FC: M	*ENG	[0 to 60 / 1 / 1 / step]
2-361-00	7 Standard Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]
2-361-00	08 Middle Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]
2-361-00	Middle Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]
2-361-0	0 Middle Speed: FC: M	*ENG	[0 to 60 / <b>1</b> / 1/step]
2-361-0	1 Middle Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]
2-361-0	2 Low Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]
2-361-0	3 Low Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]
2-361-0	4 Low Speed: FC: M	*ENG	[0 to 60 / 1 / 1/step]
2-361-0	5 Low Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]

2362	[Time-Lapse Correction: Div 2]			
	Specifies the number of time-lapse correction table.			
2-362-001	Standard Speed: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-362-002	Middle Speed: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-362-003	Low Speed: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-362-004	Standard Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-362-005	Standard Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]	
2-362-006	Standard Speed: FC: M	*ENG	[0 to 60 / 1 / 1/step]	
2-362-007	Standard Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]	
2-362-008	Middle Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-362-009	Middle Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]	
2-362-010	Middle Speed: FC: M	*ENG	[0 to 60 / 1 / 1/step]	
2-362-011	Middle Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]	
2-362-012	Low Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-362-013	Low Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]	

2-362-014	Low Speed: FC: M	*ENG	[0 to 60 / 1 / 1/step]
2-362-015	Low Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]

2363	[Time-Lapse Correction: Div 3]			
	Specifies the number of time-lapse correction table.			
2-363-001	Standard Speed: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-363-002	Middle Speed: Bk	*ENG	[0 to 60 / <b>1</b> / 1/step]	
2-363-003	Low Speed: Bk	*ENG	[0 to 60 / <b>1</b> / 1/step]	
2-363-004	Standard Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-363-005	Standard Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]	
2-363-006	Standard Speed: FC: M	*ENG	[0 to 60 / 1 / 1/step]	
2-363-007	Standard Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]	
2-363-008	Middle Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-363-009	Middle Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]	
2-363-010	Middle Speed: FC: M	*ENG	[0 to 60 / <b>1</b> / 1/step]	
2-363-011	Middle Speed: FC: Y	*ENG	[0 to 60 / <b>1</b> / 1/step]	
2-363-012	Low Speed: FC: Bk	*ENG	[0 to 60 / 1 / 1/step]	
2-363-013	Low Speed: FC: C	*ENG	[0 to 60 / 1 / 1/step]	
2-363-014	Low Speed: FC: M	*ENG	[0 to 60 / 1 / 1/step]	
2-363-015	Low Speed: FC: Y	*ENG	[0 to 60 / 1 / 1/step]	

2371	[Time-Lapse Correction:Transfer]			
	Specifies the time-lapse correction value.			
2-371-001	Standard Speed: Div1	*ENG	[0 to 2000 / <b>0</b> / 10 V/step]	
2-371-002	Middle Speed: Div1	*ENG		
2-371-003	Low Speed: Div1	*ENG		

2372	[Time-Lapse Correction:Transfer]		
	Specifies the time-lapse correction value.		
2-372-001	Standard Speed: Div2	*ENG	[0 to 2000 / <b>0</b> / 10 V/step]
2-372-002	Middle Speed: Div2	*ENG	
2-372-003	Low Speed: Div2	*ENG	

2373	[Time-Lapse Correction:Transfer]		
	Specifies the time-lapse correction value.		
2-373-001	Standard Speed: Div3	*ENG	[0 to 2000 / <b>0</b> / 10 V/step]
2-373-002	Middle Speed: Div3	*ENG	
2-373-003	Low Speed: Div3	*ENG	

2374	[Time-Lapse Correction:Transfer]			
	Specifies the time-lapse correction value.			
2-374-001	Standard Speed: Div4	*ENG	[0 to 2000 / <b>0</b> / 10 V/step]	
2-374-002	Middle Speed: Div4	*ENG		
2-374-003	Low Speed: Div4	*ENG		

2381	[Vc Correction]		
	Specifies the time-lapse correction value.		
2-381-001	Standard Speed: Div1	*ENG	[0 to 2000 / <b>0</b> / 10 -V/step]
2-381-002	Middle Speed: Div1	*ENG	
2-381-003	Low Speed: Div1	*ENG	

2382	[Vc Correction]
	Specifies the time-lapse correction value.

2-382-001	Standard Speed: Div2	*ENG	[0 to 2000 / <b>0</b> / 10 -V/step]
2-382-002	Middle Speed: Div2	*ENG	
2-382-003	Low Speed: Div2	*ENG	

2383	[Vc Correction]		
	Specifies the time-lapse correction value.		
2-383-001	Standard Speed: Div3	*ENG	[0 to 2000 / <b>0</b> / 10 -V/step]
2-383-002	Middle Speed: Div3	*ENG	
2-383-003	Low Speed: Div3	*ENG	

2384	[Vc Correction]		
	Specifies the time-lapse correction value.		
2-384-001	Standard Speed: Div4	*ENG	[0 to 2000 / <b>0</b> / 10 -V/step]
2-384-002	Middle Speed: Div4	*ENG	
2-384-003	Low Speed: Div4	*ENG	

2385	[Vc Correction]		
	Specifies the time-lapse correction value.		
2-385-001	Standard Speed: Div5	*ENG	[0 to 2000 / <b>0</b> / 10 -V/step]
2-385-002	Middle Speed: Div5	*ENG	
2-385-003	Low Speed: Div5	*ENG	

2401	[Plain1:Bias]
	Adjusts the DC voltage of the discharge plate for plain 1 paper.
	Standard: 260 mm/sec, Low: 85 mm/sec

2-401-001	Separation DC: Std Spd: 1 Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]
2-401-002	Separation DC: Std Spd: 2Side	*ENG	
2-401-003	Separation DC: Low Spd: 1 Side	*ENG	
2-401-004	Separation DC: Low Spd: 2Side	*ENG	

2403	[Plain 1 : Bias: BW]		
	Adjusts the current for the paper transfer roller for plain 1 paper in black-and-white mode.		
2-403-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 200 / * / 1 uA/step]  *C306: <b>21</b> *C406: <b>24</b>
2-403-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 200 / * / 1 uA/step] *C306:16 *C406:18
2-403-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / <b>10</b> / 1 uA/step]
2-403-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / <b>8</b> / 1 uA/step]
2-403-201	Paper Transfer: Std Spd 2: 1 Side	*ENG	[0 to 200 / <b>30</b> / 1 uA/step]
2-403-202	Paper Transfer: Std Spd 2: 2Side	*ENG	[0 to 200 / <b>22</b> / 1 uA/step]

2407	[Plain1:Bias:FC]
	Adjusts the current for the paper transfer roller for plain 1 paper in full color mode.

2-407-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 200 / * / 1 -uA/step] *C306: <b>22</b> *C406: <b>25</b>
2-407-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 200 / * / 1 -uA/step] *C306:18 *C406:20
2-407-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / 11 / 1 -uA/step]
2-407-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / <b>10</b> / 1 -uA/step]

2411	[Plain1:SizeCorrection:BW]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-411-001	Paper Transfer: Std Spd: 1 Sid:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-411-002	Paper Transfer: Std Spd: 2Sid:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-411-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-411-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-411-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>120</b> / 5%/step]	
2-411-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>175</b> / 5%/step]	
2-411-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>130</b> / 5%/step]	
2-411-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>213</b> / 5%/step]	
2-411-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>140</b> / 5%/step]	

2-411-016	Paper Transfer: Low Spd:	*ENG	[100 to 995 / <b>275</b> / 5%/step]	
	2Side:S4			

2412	[Plain1:SizeCorrection:FC]				
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.				
2-412-001	Paper Transfer: Std Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]		
2-412-002	Paper Transfer: Std Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]		
2-412-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]		
2-412-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]		
2-412-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>118</b> / 5%/step]		
2-412-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>150</b> / 5%/step]		
2-412-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>130</b> / 5%/step]		
2-412-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>180</b> / 5%/step]		
2-412-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>140</b> / 5%/step]		
2-412-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>250</b> / 5%/step]		

2413	[Plain1:Size-Env.Correct:BW]		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-413-001	Paper Transfer: Std Spd: 1 Side:S1	*ENG	[1 to 100 / <b>21</b> / 1/step]

2-413-002	Paper Transfer: Std Spd: 2Side:S1	*ENG	[1 to 100 / <b>22</b> / 1/step]
2-413-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[1 to 100 / <b>25</b> / 1/step]
2-413-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>26</b> / 1/step]
2-413-007	Paper Transfer: Low Spd: 1 Side: S2	*ENG	[1 to 100 / <b>27</b> / 1/step]
2-413-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / 28 / 1/step]
2-413-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>29</b> / 1/step]
2-413-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-413-015	Paper Transfer: Low Spd: 1 Side: S4	*ENG	[1 to 100 / <b>31</b> / 1/step]
2-413-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>32</b> / 1/step]

2414	[Plain 1: Size-Env. Correct: FC]  Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-414-001	Paper Transfer: Std Spd: 1 Side:S1	*ENG	[1 to 100 / 23 / 1/step]
2-414-002	Paper Transfer: Std Spd: 2Side:S1	*ENG	[1 to 100 / <b>24</b> / 1/step]
2-414-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG	[1 to 100 / <b>25</b> / 1/step]
2-414-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>26</b> / 1/step]
2-414-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>27</b> / 1/step]

2-414-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>28</b> / 1/step]
2-414-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>29</b> / 1/step]
2-414-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-414-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>31</b> / 1/step]
2-414-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>32</b> / 1/step]

2415	[Plain 1 : Leading Edge Correction]		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.		
2-415-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-415-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-415-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-415-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 995 / 100 / 5%/step]
2-415-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-415-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-415-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-415-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]

2416	[Plain 1: SW Timing Lead Edg	je]	
	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.		
2-416-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-416-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-416-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-416-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-416-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-416-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-416-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-416-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2417	[Plain 1:TrailEdgeCorrection]		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.		
2-417-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-417-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-417-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-417-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]

2-417-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-417-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-417-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-417-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]

2418	[Plain 1: SW Timing Trail Edge]		
	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.		
2-418-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-418-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-418-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-418-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-418-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-418-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-418-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-418-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2419	[Plain 1: Envir Correct. Table]
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2-419-013	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-419-014	Separation DC: Std Spd: 2Side	*ENG	
2-419-015	Separation DC: Low Spd: 1 Side	*ENG	
2-419-016	Separation DC: Low Spd: 2Side	*ENG	
2419	[Plain 1: Edge Envir Correct.]		
2-419-017	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>50</b> / 1/step]
2-419-018	Separation DC: Std Spd: 2Side	*ENG	
2-419-019	Separation DC: Low Spd: 1 Side	*ENG	
2-419-020	Separation DC: Low Spd: 2Side	*ENG	

2421	[Plain2:Bias]		
	Adjusts the DC voltage of the discharge plate for plain2 paper.		
2-421-001	Separation DC: Std Spd: 1 Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]
2-421-002	Separation DC: Std Spd: 2Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]
2-421-003	Separation DC: Low Spd: 1 Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]
2-421-004	Separation DC: Low Spd: 2Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]

2423	[Plain2:Bias:BW]	
	Adjusts the current for the paper transfer roller for plain2 paper in black-and-white mode.	

2-423-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 200 / * / 1 uA/step] *C306: <b>19</b> *C406: <b>22</b>
2-423-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 200 / * / 1 uA/step] *C306:16 *C406:18
2-423-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / 11 / 1 uA/step]
2-423-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / 11 / 1 uA/step]
2-423-201	Paper Transfer: Std Spd 2: 1 Side	*ENG	[0 to 200 / <b>26</b> / 1 uA/step]
2-423-202	Paper Transfer: Std Spd 2: 2Side	*ENG	[0 to 200 / <b>22</b> / 1 uA/step]

2427	[Plain2:Bias:FC]		
	Adjusts the current for the pap	er transfer	roller for plain2 paper in full color mode.
2-427-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 200 / * / 1 uA/step]  *C306: <b>22</b> *C406: <b>25</b>
2-427-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 200 / * / 1 uA/step] *C306: <b>18</b> *C406: <b>20</b>
2-427-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / 13 / 1 uA/step]
2-427-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / 13 / 1 uA/step]

2431	[Plain2:SizeCorrection:BW]
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.

2-431-001	Paper Transfer: Std Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-431-002	Paper Transfer: Std Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-431-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-431-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-431-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>120</b> / 5%/step]
2-431-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>175</b> / 5%/step]
2-431-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>140</b> / 5%/step]
2-431-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>213</b> / 5%/step]
2-431-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-431-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>275</b> / 5%/step]

2432	[Plain2:SizeCorrection:FC]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-432-001	Paper Transfer: Std Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-432-002	Paper Transfer: Std Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-432-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-432-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]

2-432-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>118</b> / 5%/step]
2-432-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-432-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>136</b> / 5%/step]
2-432-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>180</b> / 5%/step]
2-432-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>140</b> / 5%/step]
2-432-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>250</b> / 5%/step]

2433 [Plain2:Size-Env.Correct:BW]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-433-001	Paper Transfer: Std Spd: 1 Side:S1	*ENG	[1 to 100 / <b>33</b> / 1/step]
2-433-002	Paper Transfer: Std Spd: 2Side:S1	*ENG	[1 to 100 / <b>34</b> / 1/step]
2-433-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG	[1 to 100 / <b>37</b> / 1/step]
2-433-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / 38 / 1/step]
2-433-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>39</b> / 1/step]
2-433-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>40</b> / 1/step]
2-433-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>41</b> / 1/step]
2-433-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>42</b> / 1/step]

2-433-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>43</b> / 1/step]
2-433-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>44</b> / 1/step]

2434	[Plain2:Size-Env.Correct:FC]		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-434-001	Paper Transfer: Std Spd: 1 Side:S1	*ENG	[1 to 100 / <b>35</b> / 1/step]
2-434-002	Paper Transfer: Std Spd: 2Side:S1	*ENG	[1 to 100 / <b>36</b> / 1/step]
2-434-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[1 to 100 / <b>37</b> / 1/step]
2-434-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / 38 / 1/step]
2-434-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>39</b> / 1/step]
2-434-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>40</b> / 1/step]
2-434-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>41</b> / 1/step]
2-434-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>42</b> / 1/step]
2-434-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>43</b> / 1/step]
2-434-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>44</b> / 1/step]

2435	[Plain2:LeadingEdgeCorrection]	
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.	

2-435-001       Paper Transfer: Std Spd: 1Side       *ENG       [0 to 995 / 100 / 5%/step]         2-435-002       Paper Transfer: Std Spd: 2Side       *ENG       [0 to 995 / 100 / 5%/step]         2-435-003       Paper Transfer: Low Spd: 1Side       *ENG       [0 to 995 / 100 / 5%/step]         2-435-004       Paper Transfer: Low Spd: 2Side       *ENG       [0 to 995 / 100 / 5%/step]         2-435-005       Separation DC: Std Spd: 1Side       *ENG       [0 to 995 / 100 / 5%/step]         2-435-006       Separation DC: Std Spd: 2Side       *ENG       [0 to 995 / 100 / 5%/step]         2-435-007       Separation DC: Low Spd: 1Side       *ENG       [0 to 995 / 100 / 5%/step]         2-435-008       Separation DC: Low Spd: 2Side       *ENG       [0 to 995 / 100 / 5%/step]				
2Side  2-435-003 Paper Transfer: Low Spd:	2-435-001		*ENG	[0 to 995 / <b>100</b> / 5%/step]
1 Side  2-435-004 Paper Transfer: Low Spd: *ENG [0 to 995 / 100 / 5%/step]  2-435-005 Separation DC: Std Spd: *ENG [0 to 995 / 100 / 5%/step]  1 Side  2-435-006 Separation DC: Std Spd: *ENG [0 to 995 / 100 / 5%/step]  2-435-007 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]  1 Side  2-435-008 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]	2-435-002		*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-435-005 Separation DC: Std Spd: *ENG [0 to 995 / 100 / 5%/step]  2-435-006 Separation DC: Std Spd: *ENG [0 to 995 / 100 / 5%/step]  2-435-007 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]  1 Side *ENG [0 to 995 / 100 / 5%/step]  2-435-008 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]	2-435-003		*ENG	[0 to 995 / <b>100</b> / 5%/step]
1 Side  2-435-006 Separation DC: Std Spd: *ENG [0 to 995 / 100 / 5%/step]  2-435-007 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]  1 Side  2-435-008 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]	2-435-004	' '	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-435-007 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step] 1 Side *ENG [0 to 995 / 100 / 5%/step] 2-435-008 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]	2-435-005		*ENG	[0 to 995 / <b>100</b> / 5%/step]
1 Side  2-435-008 Separation DC: Low Spd: *ENG [0 to 995 / 100 / 5%/step]	2-435-006		*ENG	[0 to 995 / <b>100</b> / 5%/step]
	2-435-007		*ENG	[0 to 995 / <b>100</b> / 5%/step]
	2-435-008	' '	*ENG	[0 to 995 / <b>100</b> / 5%/step]

2436	[Plain 2: SW Timing Lead Edge]		
	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.		
2-436-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-436-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-436-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-436-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-436-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-436-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2-436-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-436-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2437	[Plain2:Trail Edge Correction]			
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			
2-437-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-437-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-437-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-437-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-437-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-437-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-437-007	Separation DC: Low Spd: 1Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-437-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	

2438	[Plain 2: SW Timing Trail Edge]		
Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			aper transfer roller current for the paper
2-438-001	Paper Transfer: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-438-002	Paper Transfer: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2-438-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-438-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-438-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-438-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-438-007	Separation DC: Low Spd: 1Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-438-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2439	[Plain 2: Envir Correct. Table]		
2-439-013	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-439-014	Separation DC: Std Spd: 2Side	*ENG	
2-439-015	Separation DC: Low Spd: 1 Side	*ENG	
2-439-016	Separation DC: Low Spd: 2Side	*ENG	
2439	[Plain 2: Edge Envir Correct.]		
2-439-017	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>50</b> / 1/step]
2-439-018	Separation DC: Std Spd: 2Side	*ENG	
2-439-019	Separation DC: Low Spd: 1 Side	*ENG	
2-439-020	Separation DC: Low Spd: 2Side	*ENG	

2441	[M-Thick: Bias]			
	Adjusts the DC voltage of the discharge plate for middle thick paper.			
2-441-001	Separation DC: Std Spd: 1 Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]	
2-441-002	Separation DC: Std Spd: 2Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]	
2-441-003	Separation DC: Low Spd: 1 Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]	
2-441-004	Separation DC: Low Spd: 2Side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]	

2443	[M-Thick: Bias: BW]			
	Adjusts the current for the paper transfer roller for middle thick paper in black-and-white mode.			
2-443-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / <b>20</b> / 1 uA/step]	
2-443-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / <b>16</b> / 1 uA/step]	
2-443-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / <b>10</b> / 1 uA/step]	
2-443-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / <b>8</b> / 1 uA/step]	

2447	[M-Thick: Bias: FC]  Adjusts the current for the paper transfer roller for middle thick paper in full color mode.		
2-447-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / <b>22</b> / 1 uA/step]
2-447-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / <b>18</b> / 1 uA/step]
2-447-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / <b>11</b> / 1 uA/step]

2-447-004	Paper Transfer: Low Spd:	*ENG	[0 to 200 / <b>10</b> / 1 uA/step]	
	2Side			

2451	[Middle:SizeCorrection:BW]			
Adjusts the size correction coefficient for the paper transfer roller current fo paper size.				
2-451-001	Paper Transfer: Std/Mid Spd: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-451-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-451-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-451-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-451-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>130</b> / 5%/step]	
2-451-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>163</b> / 5%/step]	
2-451-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>150</b> / 5%/step]	
2-451-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>250</b> / 5%/step]	
2-451-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]	
2-451-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>375</b> / 5%/step]	

2452	[M-Thick: Size Correction:FC]  Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-452-001	Paper Transfer: Std/Mid Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]

2-452-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-452-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-452-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-452-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>136</b> / 5%/step]
2-452-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>180</b> / 5%/step]
2-452-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-452-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>250</b> / 5%/step]
2-452-015	Paper Transfer: Low Spd: 1 Side: S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-452-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>350</b> / 5%/step]

2453	[M-Thick: Size-Env.Correct:BW]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-453-001	PaperTransfer:Standard: 1 Sid:S 1	*ENG	[1 to 100 / 21 / 1/step]	
2-453-002	PaperTransfer:Standard: 2Sid:S1	*ENG	[1 to 100 / 22 / 1/step]	
2-453-003	PaperTransfer:Low: 1 Side:S1	*ENG	[1 to 100 / <b>47</b> / 1/step]	
2-453-004	PaperTransfer:Low: 2Side:S1	*ENG	[1 to 100 / <b>48</b> / 1/step]	
2-453-007	PaperTransfer:Low: 1 Side:S2	*ENG	[1 to 100 / <b>49</b> / 1/step]	

2-453-008	PaperTransfer:Low: 2Side:S2	*ENG	[1 to 100 / <b>50</b> / 1/step]
2-453-011	PaperTransfer:Low: 1 Side:S3	*ENG	[1 to 100 / <b>51</b> / 1/step]
2-453-012	PaperTransfer:Low: 2Side:S3	*ENG	[1 to 100 / <b>52</b> / 1/step]
2-453-015	PaperTransfer:Low: 1 Side:S4	*ENG	[1 to 100 / <b>53</b> / 1/step]
2-453-016	PaperTransfer:Low: 2Side:S4	*ENG	[1 to 100 / <b>54</b> / 1/step]

2454	[M-Thick: Size-Env.Correct:FC]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-454-001	Paper Transfer: Std/Mid Spd: 1 Side: S1	*ENG	[1 to 100 / <b>45</b> / 1/step]	
2-454-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[1 to 100 / <b>46</b> / 1/step]	
2-454-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[1 to 100 / <b>47</b> / 1/step]	
2-454-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>48</b> / 1/step]	
2-454-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>49</b> / 1/step]	
2-454-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>50</b> / 1/step]	
2-454-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>51</b> / 1/step]	
2-454-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>52</b> / 1/step]	
2-454-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>53</b> / 1/step]	

2-454-016	Paper Transfer: Low Spd:	*ENG	[1 to 100 / <b>54</b> / 1/step]
	2Side:S4		

2455	[M-Thick: Leading Edge Corre	ect.]	
	Adjusts the correction to the p in each mode.	aper transf	fer roller current at the paper leading edge
2-455-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-455-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-455-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-455-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 995 / 100 / 5%/step]
2-455-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-455-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-455-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-455-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 995 / 100 / 5%/step]

2456	[M-Thick: SW Timing Lead Edge]			
	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.			
2-456-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	
2-456-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	
2-456-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	

2-456-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-456-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-456-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-456-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-456-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2457	[M-Thick: Trail Edge Correction]		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.		
2-457-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-457-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-457-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-457-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-457-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-457-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-457-007	Separation DC: Low Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-457-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]

2458	[M-Thick: SW Timing Trail Edge]		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.		
2-458-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-458-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-458-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-458-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-458-005	Separation DC: Std Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-458-006	Separation DC: Std Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-458-007	Separation DC: Low Spd: 1Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-458-008	Separation DC: Low Spd: 2Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]

2459	[M-Thick: Envir Correct. Table]		
2-459-013	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-459-014	Separation DC: Std Spd: 2Side	*ENG	
2-459-015	Separation DC: Low Spd: 1 Side	*ENG	
2-459-016	Separation DC: Low Spd: 2Side	*ENG	
2459	[M-Thick: Edge Envir Correction]		

2-459-017	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>50</b> / 1/step]
2-459-018	Separation DC: Std Spd: 2Side	*ENG	
2-459-019	Separation DC: Low Spd: 1 Side	*ENG	
2-459-020	Separation DC: Low Spd: 2Side	*ENG	

2481	[Thick1:Bias]		
	Adjusts the DC voltage of the discharge plate for thick 1 paper.		
2-481-003	Separation DC:1Side	*ENG	[0 to 4000 / <b>0</b> / 10-V/step]
2-481-004	Separation DC:2Side	*ENG	

2483	[Thick1:Bias:BW]		
	Adjusts the current for the paper transfer roller for thick 1 paper in black-and-white mode.		
2-483-003	PaperTransfer: 1 Side	*ENG	[0 to 200 / <b>14</b> / 1 uA/step]
2-483-004	PaperTransfer:2Side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]

2487	[Thick1:Bias:FC]			
	Adjusts the current for the paper transfer roller for thick 1 paper in full color mode.			
2-487-003	PaperTransfer:1Side	*ENG	[0 to 200 / 15 / 1 -uA/step]	
2-487-004	PaperTransfer:2Side	*ENG	[0 to 200 / 11 / 1 -uA/step]	

2491	[Thick1:SizeCorrection:BW]  Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-491-003	PaperTransfer: 1 Side: S 1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-491-004	PaperTransfer:2Side:S1	*ENG	

2-491-007	PaperTransfer:1Side:S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-491-008	PaperTransfer:2Side:S2	*ENG	[100 to 995 / <b>156</b> / 5%/step]
2-491-011	PaperTransfer:1Side:S3	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-491-012	PaperTransfer:2Side:S3	*ENG	[100 to 995 / <b>167</b> / 5%/step]
2-491-015	PaperTransfer: 1 Side: S4	*ENG	[100 to 995 / <b>107</b> / 5%/step]
2-491-016	PaperTransfer:2Side:S4	*ENG	[100 to 995 / <b>278</b> / 5%/step]

2492	[Thick1:SizeCorrection:FC]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-492-003	PaperTransfer: 1 Side: S 1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-492-004	PaperTransfer:2Side:S1	*ENG		
2-492-007	PaperTransfer:1Side:S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-492-008	PaperTransfer:2Side:S2	*ENG	[100 to 995 / <b>164</b> / 5%/step]	
2-492-011	PaperTransfer:1Side:S3	*ENG	[100 to 995 / <b>120</b> / 5%/step]	
2-492-012	PaperTransfer:2Side:S3	*ENG	[100 to 995 / <b>227</b> / 5%/step]	
2-492-015	PaperTransfer:1Side:S4	*ENG	[100 to 995 / <b>130</b> / 5%/step]	
2-492-016	PaperTransfer:2Side:S4	*ENG	[100 to 995 / <b>364</b> / 5%/step]	

2493	[Thick1:Size-Env.Correct:BW]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-493-003	PaperTransfer: 1 Side: S 1	*ENG	[1 to 100 / <b>59</b> / 1/step]	
2-493-004	PaperTransfer:2Side:S1	*ENG	[1 to 100 / <b>60</b> / 1/step]	
2-493-007	PaperTransfer:1Side:S2	*ENG	[1 to 100 / <b>61</b> / 1/step]	
2-493-008	PaperTransfer:2Side:S2	*ENG	[1 to 100 / <b>62</b> / 1/step]	
2-493-011	PaperTransfer: 1 Side: S3	*ENG	[1 to 100 / <b>55</b> / 1/step]	

2-493-012	PaperTransfer:2Side:S3	*ENG	[1 to 100 / <b>56</b> / 1/step]
2-493-015	PaperTransfer:1Side:S4	*ENG	[1 to 100 / <b>57</b> / 1/step]
2-493-016	PaperTransfer:2Side:S4	*ENG	[1 to 100 / <b>58</b> / 1/step]

2494	[Thick1:Size-Env.Correct:FC]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-494-003	PaperTransfer: 1 Side: S 1	*ENG	[1 to 100 / <b>59</b> / 1/step]	
2-494-004	PaperTransfer:2Side:S1	*ENG	[1 to 100 / <b>60</b> / 1/step]	
2-494-007	PaperTransfer:1Side:S2	*ENG	[1 to 100 / <b>61</b> / 1/step]	
2-494-008	PaperTransfer:2Side:S2	*ENG	[1 to 100 / <b>62</b> / 1/step]	
2-494-011	PaperTransfer:1Side:S3	*ENG	[1 to 100 / <b>63</b> / 1/step]	
2-494-012	PaperTransfer:2Side:S3	*ENG	[1 to 100 / <b>64</b> / 1/step]	
2-494-015	PaperTransfer:1Side:S4	*ENG	[1 to 100 / <b>65</b> / 1/step]	
2-494-016	PaperTransfer:2Side:S4	*ENG	[1 to 100 / <b>66</b> / 1/step]	

2495	[Thick 1: Leading Edge Correct.]			
	Adjusts the correction to the p in each mode.	aper transf	er roller current at the paper leading edge	
2-495-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-495-004	Paper Transfer:2side	*ENG		
2-495-007	Separation DC:1 side	*ENG		
2-495-008	Separation DC:2side	*ENG		

2496	[Thick 1: SW Timing Lead Edge]
	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.

2-496-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-496-004	Paper Transfer:2side	*ENG	
2-496-007	Separation DC:1 side	*ENG	
2-496-008	Separation DC:2side	*ENG	

2497	[Thick1:Trail Edge Correction]			
Adjusts the correction coefficient to the paper transfer roller current for trailing edge in each mode.		aper transfer roller current for the paper		
2-497-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-497-004	Paper Transfer:2side	*ENG		
2-497-007	Separation DC:1 side	*ENG		
2-497-008	Separation DC:2side	*ENG		

2498	[Thick 1: SW Timing Trail Edge]			
Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			aper transfer roller current for the paper	
2-498-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	
2-498-004	Paper Transfer:2side	*ENG		
2-498-007	Separation DC:1 side	*ENG		
2-498-008	Separation DC:2side	*ENG		

2499	[Thick 1: Envir Correct. Table]		
2-499-015	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-499-016	Separation DC:2side	*ENG	
2499	[Thick 1: Edge Envir Correct.]		
2-499-019	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-499-020	Separation DC:2side	*ENG	

2501	[Thick 2:Bias]			
	Adjusts the DC voltage of the discharge plate for thick 2 paper.			
2-501-003	Separation DC:1 side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]	
2-501-004	Separation DC:2side	*ENG		

2503	[Thick2:Bias:BW]			
Adjusts the current for the paper transfer roller for thick 2 pmode.  Middle: 182 mm/sec, Low: 85 mm/sec				
	Wilder 102 milly sec, tow. o	Wildlie. 102 IIIII/ Sec, LOW. 03 IIIII/ Sec		
2-503-003	Paper Transfer: 1 side	*ENG	[0 to 200 / <b>11</b> / 1 uA/step]	
2-503-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>8</b> / 1 uA/step]	

2507	[Thick 2:Bias:FC]			
	Adjusts the current for the paper transfer roller for thick 2 paper in full color mode.  Middle: 182 mm/sec, Low: 85 mm/sec			
2-507-003	Paper Transfer: 1 side	*ENG	[0 to 200 / <b>12</b> / 1 uA/step]	
2-507-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]	

2511	[Thick2:SizeCorrection:BW]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-511-003	Paper Transfer: 1 Side: S1	er Transfer: 1 Side: S1	
2-511-004	Paper Transfer:2Side:S1	*ENG	
2-511-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-511-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>163</b> / 5%/step]
2-511-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>136</b> / 5%/step]
2-511-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>250</b> / 5%/step]
2-511-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>164</b> / 5%/step]

2-511-016 Paper Transfer: 2Side: S4 *ENG [100 to	o 995 / <b>313</b> / 5%/step]
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2512	[Thick2:SizeCorrection:FC]  Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-512-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-512-004	Paper Transfer:2Side:S1	*ENG	
2-512-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-512-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>200</b> / 5%/step]
2-512-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>138</b> / 5%/step]
2-512-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>278</b> / 5%/step]
2-512-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>154</b> / 5%/step]
2-512-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>389</b> / 5%/step]

2513	[Thick2:Size-Env.Correct:BW]		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-513-003	Paper Transfer: 1 Side: S1	*ENG	[1 to 100 / <b>67</b> / 1/step]
2-513-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>68</b> / 1/step]
2-513-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>69</b> / 1/step]
2-513-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>70</b> / 1/step]
2-513-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>71</b> / 1/step]
2-513-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>72</b> / 1/step]
2-513-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>73</b> / 1/step]
2-513-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / <b>74</b> / 1/step]

2514	[Thick2:Size-Env.Correct:FC]		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-514-003	Paper Transfer: 1 Side: S1	*ENG	[1 to 100 / <b>67</b> / 1/step]
2-514-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>68</b> / 1/step]
2-514-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>69</b> / 1/step]
2-514-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>70</b> / 1/step]
2-514-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>71</b> / 1/step]
2-514-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>72</b> / 1/step]
2-514-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>73</b> / 1/step]
2-514-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / <b>74</b> / 1/step]

2515	[Thick2:LeadingEdgeCorrection]			
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.			
2-515-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-515-004	Paper Transfer:2side	*ENG		
2-515-007	Separation DC:1 side	*ENG		
2-515-008	Separation DC:2side	*ENG		

2516	[Thick 2: SW Timing Lead Edge]  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.		
2-516-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-516-004	Paper Transfer:2side	*ENG	
2-516-007	Separation DC:1 side	*ENG	
2-516-008	Separation DC:2side	*ENG	

2517	[Thick2:Trail EdgeCorrection]  Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.		
2-517-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-517-004	Paper Transfer:2side	*ENG	
2-517-007	Separation DC:1 side	*ENG	
2-517-008	Separation DC:2side	*ENG	

2518	[Thick2:SwitchTimingTrailEdge]  Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.		
2-518-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-518-004	Paper Transfer:2side	*ENG	
2-518-007	Separation DC:1 side	*ENG	
2-518-008	Separation DC:2side	*ENG	

2519	[Thick 2: Envir Correct. Table]		
2-519-015	Separation DC:1side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-519-016	Separation DC:2side	*ENG	
2519	[Thick 2: Edge Envir Correct.]		
2-519-019	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]

2521	[Thick 3:Bias]		
	Adjusts the DC voltage of the discharge plate for thick 3 paper.		
2-521-003	Separation DC:1 side	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]
2-521-004	Separation DC:2side	*ENG	

2523	[Thick 3:Bias:BW]		
	Adjusts the current for the paper transfer roller for thick paper 3 in black-and-white mode.		
2-523-003	Paper Transfer: 1 side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]
2-523-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>7</b> / 1 uA/step]

2527	[Thick 3:Bias:FC]			
	Adjusts the current for the paper transfer roller for thick paper 3 in full color mode.			
2-527-003	Paper Transfer: 1 side	*ENG	[0 to 200 / <b>11</b> / 1 uA/step]	
2-527-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]	

2531	[Thick 3:Size Correction:BW]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2523 and SP2527 are multiplied by these SP values.			
2-531-003	PaperTransfer: 1 Side: S 1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-531-004	PaperTransfer:2Side:S1	*ENG		
2-531-007	PaperTransfer:1Side:S2	*ENG	[100 to 995 / <b>122</b> / 5%/step]	
2-531-008	PaperTransfer:2Side:S2	*ENG	[100 to 995 / <b>186</b> / 5%/step]	
2-531-011	PaperTransfer:1Side:S3	*ENG	[100 to 995 / <b>156</b> / 5%/step]	
2-531-012	PaperTransfer:2Side:S3	*ENG	[100 to 995 / <b>271</b> / 5%/step]	
2-531-015	PaperTransfer:1Side:S4	*ENG	[100 to 995 / <b>170</b> / 5%/step]	
2-531-016	PaperTransfer:2Side:S4	*ENG	[100 to 995 / <b>357</b> / 5%/step]	

2532	[Thick 3:Size Correction:FC]	[Thick 3:Size Correction:FC]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2523 and SP2527 are multiplied by these SP values.				
2-532-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]		
2-532-004	Paper Transfer:2Side:S1	*ENG			

2-532-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>118</b> / 5%/step]
2-532-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>200</b> / 5%/step]
2-532-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>140</b> / 5%/step]
2-532-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>278</b> / 5%/step]
2-532-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-532-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>389</b> / 5%/step]

2533	[Thick 3:Size-Env.Correct:BW]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-533-003	PaperTransfer: 1 Side: S 1	*ENG	[1 to 100 / <b>75</b> / 1/step]	
2-533-004	PaperTransfer:2Side:S1	*ENG	[1 to 100 / <b>76</b> / 1/step]	
2-533-007	PaperTransfer:1Side:S2	*ENG	[1 to 100 / <b>77</b> / 1/step]	
2-533-008	PaperTransfer:2Side:S2	*ENG	[1 to 100 / <b>78</b> / 1/step]	
2-533-011	PaperTransfer:1Side:S3	*ENG	[1 to 100 / <b>79</b> / 1/step]	
2-533-012	PaperTransfer:2Side:S3	*ENG	[1 to 100 / <b>80</b> / 1/step]	
2-533-015	PaperTransfer:1Side:S4	*ENG	[1 to 100 / <b>81</b> / 1/step]	
2-533-016	PaperTransfer:2Side:S4	*ENG	[1 to 100 / <b>82</b> / 1/step]	

2534	[Thick 3:Size-Env.Correct:FC]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-534-003	Paper Transfer: 1 Side: S 1	*ENG	[1 to 100 / <b>75</b> / 1/step]	
2-534-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>76</b> / 1/step]	
2-534-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>77</b> / 1/step]	
2-534-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>78</b> / 1/step]	
2-534-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>79</b> / 1/step]	

2-534-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>80</b> / 1/step]
2-534-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>81</b> / 1/step]
2-534-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / <b>82</b> / 1/step]

2535	[Thick 3: Leading Edge Correct.]			
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.			
2-535-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-535-004	Paper Transfer:2side	*ENG		
2-535-007	Separation DC:1 side	*ENG		
2-535-008	Separation DC:2side	*ENG		

2536	[Thick 3: SW Timing Lead Edge]			
Adjusts the bias/voltage switch timing of the paper transfer roller/discharge pat the paper leading edge between the erase margin area and the image area.				
2-536-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	
2-536-004	Paper Transfer:2side	*ENG		
2-536-007	Separation DC:1 side	*ENG		
2-536-008	Separation DC:2side	*ENG		

2537	[Thick 3:Trail Edge Correction]  Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			
2-537-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-537-004	Paper Transfer:2side	*ENG		
2-537-007	Separation DC:1 side	*ENG		
2-537-008	Separation DC:2side	*ENG		

2538	[Thick 3: SW Timing Trail Edge]				
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.				
2-538-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]		
2-538-004	Paper Transfer:2side	*ENG			
2-538-007	Separation DC:1 side	*ENG			
2-538-008	Separation DC:2side	*ENG			

2539	[Thick 3: Envir Correct. Table]			
	Adjusts the environment coefficient for each mode. When the environment is detected as MM, SP2651 and SP2652 are multiplied by these SP values.			
2-539-015	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]	
2-539-016	Separation DC:2side	*ENG		
2539	[Thick 3: Edge Envir Correct.]			
2-539-019	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]	
2-539-020	Separation DC:2side	*ENG		

2541	[OHP:Bias]				
	Adjusts the DC voltage of the discharge plate for OHP.				
2-541-003	Separation DC	*ENG	[0 to 4000 / <b>0</b> / 10 -V/step]		

2543	[OHP:Bias:BW]			
	Adjusts the current for the paper transfer roller for OHP in black-and-white mode.			
2-543-003	Paper Transfer	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]	

2547	[OHP:Bias:FC]			
	Adjusts the current for the paper transfer roller for OHP in full color mode.			
2-547-003	Paper Transfer	*ENG	[0 to 200 / <b>10</b> / 1 uA/step]	

2551	[OHP:SizeCorrection:BW]				
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2543 and SP2547 are multiplied by these SP values.				
2-551-003	PaperTransfer:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]		
2-551-007	PaperTransfer:S2	*ENG	[100 to 995 / <b>122</b> / 5%/step]		
2-551-011	PaperTransfer:S3	*ENG	[100 to 995 / <b>156</b> / 5%/step]		
2-551-015	PaperTransfer:S4	*ENG	[100 to 995 / <b>189</b> / 5%/step]		

2552	[OHP:SizeCorrection:FC]				
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.				
2-552-003	PaperTransfer:S1	*ENG	[100 or 995 / <b>100</b> / 5%/step]		
2-552-007	PaperTransfer:S2	*ENG	[100 or 995 / <b>118</b> / 5%/step]		
2-552-011	PaperTransfer:S3	*ENG	[100 or 995 / <b>164</b> / 5%/step]		
2-552-015	PaperTransfer:S4	*ENG	[100 or 995 / <b>182</b> / 5%/step]		

2553	[OHP:Size-Env.Correct:BW]  Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2543 and SP2547 are multiplied by these SP values.			
2-553-003	PaperTransfer:S1	*ENG	[1 to 100 / <b>83</b> / 1/step]	
2-553-007	PaperTransfer:S2	*ENG	[1 to 100 / <b>84</b> / 1/step]	
2-553-011	PaperTransfer:S3	*ENG	[1 to 100 / <b>85</b> / 1/step]	
2-553-015	PaperTransfer:S4	*ENG	[1 to 100 / <b>86</b> / 1/step]	

2554	[OHP:Size-Env.Correct:FC]				
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.				
2-554-003	PaperTransfer:S1	*ENG	[1 to 100 / <b>83</b> / 1/step]		
2-554-007	PaperTransfer:S2	*ENG	[1 to 100 / <b>84</b> / 1/step]		

2-	-554-011	PaperTransfer:S3	*ENG	[1 to 100 / <b>85</b> / 1/step]
2-	-554-015	PaperTransfer:S4	*ENG	[1 to 100 / <b>86</b> / 1/step]

2555	[OHP:Leading Edge Correction]			
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.			
2-555-003	Paper Transfer	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-555-007	Separation DC	*ENG		

2556	[OHP:Switch Timing Lead Edge]			
	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.			
2-556-003	Paper Transfer	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	
2-556-007	Separation DC	*ENG		

2557	[OHP:Trail Edge Correction]			
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			
2-557-003	Paper Transfer	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-557-007	Separation DC	*ENG		

2558	[OHP:SwitchTimingTrailEdge]			
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			
2-558-003	Paper Transfer	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	
2-558-007	Separation DC	*ENG		

2559	[OHP: Environment Correct Table]		
2-559-015	Separation DC	*ENG	[1 to 100 / <b>30</b> / 1/step]
2559	[OHP: Edge Environment Correc.]		

2-559-019 Separation DC *ENG [1 to 100 / <b>30</b> / 1/step]	
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2561	[Special 1:Bias]  Adjusts the DC voltage of the discharge plate for special paper 1.		
	Standard: 260 mm/sec, Low: 85 mm/sec		
2-561-001	Separation DC: Std Spd: 1 Side	*ENG	[0 to 4000 / <b>2000</b> / 10 -V/step]
2-561-002	Separation DC: Std Spd: 2Side	*ENG	
2-561-003	Separation DC: Low Spd: 1 Side	*ENG	
2-561-004	Separation DC: Low Spd: 2Side	*ENG	

2563	[Special 1:Bias:BW]		
	Adjusts the current for the paper transfer roller for special paper 1 in black-and-white mode.		
2-563-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / * / 1 uA/step]  *C306: <b>21</b> *C406: <b>24</b>
2-563-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / * / 1 uA/step]  *C306:16  *C406:18
2-563-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / <b>10</b> / 1 uA/step]
2-563-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / <b>8</b> / 1 uA/step]
2-563-201	Paper Transfer: Std Spd 2: 1 Side	*ENG	[0 to 200 / <b>30</b> / 1 uA/step]
2-563-202	Paper Transfer: Std Spd 2: 2Side	*ENG	[0 to 200 / <b>22</b> / 1 uA/step]

2567	[Special 1:Bias:FC]			
	Adjusts the current for the paper transfer roller for special paper 1 in full color mode.			
2-567-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / * / 1 -uA/step] *C306: <b>22</b> *C406: <b>25</b>	
2-567-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / * / 1 -uA/step] *C306: <b>18</b> *C406: <b>20</b>	
2-567-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / 11 / 1 -uA/step]	
2-567-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / <b>10</b> / 1 -uA/step]	

2571	[Special1:SizeCorrection:BW]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-571-001	Paper Transfer: Std/Mid Spd: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-571-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	
2-571-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	
2-571-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	
2-571-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>120</b> / 5%/step]
2-571-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>175</b> / 5%/step]
2-571-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>130</b> / 5%/step]

2-571-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>213</b> / 5%/step]
2-571-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>140</b> / 5%/step]
2-571-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>275</b> / 5%/step]

2572	[Special 1:SizeCorrection:FC]				
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.				
2-572-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]		
2-572-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG			
2-572-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG			
2-572-004	Paper Transfer: Low Spd: 2Side:S1	*ENG			
2-572-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>118</b> / 5%/step]		
2-572-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>150</b> / 5%/step]		
2-572-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>130</b> / 5%/step]		
2-572-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>180</b> / 5%/step]		
2-572-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>140</b> / 5%/step]		
2-572-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>250</b> / 5%/step]		

2573	[Special 1: Size-Env. Correct: BW]  Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-573-001	PaperTransfer:Standard: 1 Sid:S1	*ENG	[1 to 100 / <b>21</b> / 1%/step]	
2-573-002	PaperTransfer:Standard: 2Sid:S1	*ENG	[1 to 100 / <b>22</b> / 1%/step]	
2-573-003	PaperTransfer:Low: 1 Side:S1	*ENG	[1 to 100 / <b>25</b> / 1%/step]	
2-573-004	PaperTransfer:Low: 2Side:S1	*ENG	[1 to 100 / <b>26</b> / 1%/step]	
2-573-007	PaperTransfer:Low: 1 Side:S2	*ENG	[1 to 100 / <b>27</b> / 1%/step]	
2-573-008	PaperTransfer:Low: 2Side:S2	*ENG	[1 to 100 / <b>28</b> / 1%/step]	
2-573-011	PaperTransfer:Low: 1 Side:S3	*ENG	[1 to 100 / <b>29</b> / 1%/step]	
2-573-012	PaperTransfer:Low: 2Side:S3	*ENG	[1 to 100 / <b>30</b> / 1%/step]	
2-573-015	PaperTransfer:Low: 1 Side:S4	*ENG	[1 to 100 / <b>31</b> / 1%/step]	
2-573-016	PaperTransfer:Low: 2Side:S4	*ENG	[1 to 100 / <b>32</b> / 1%/step]	

2574	[Special 1:Size-Env.Correct:FC]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-574-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[1 to 100 / <b>23</b> / 1/step]	
2-574-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[1 to 100 / <b>24</b> / 1/step]	

2-574-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[1 to 100 / <b>25</b> / 1/step]
2-574-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>26</b> / 1/step]
2-574-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>27</b> / 1/step]
2-574-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / 28 / 1/step]
2-574-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>29</b> / 1/step]
2-574-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-574-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>31</b> / 1/step]
2-574-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>32</b> / 1/step]

2575	[Special 1:LeadingEdgeCorrect.]	
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.	

2-575-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-575-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-575-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-575-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-575-005	Separation DC: Std Spd: 1 Side	*ENG	
2-575-006	Separation DC: Std Spd: 2Side	*ENG	
2-575-007	Separation DC: Low Spd: 1 Side	*ENG	
2-575-008	Separation DC: Low Spd: 2Side	*ENG	

2576	[Special 1: SW Timing Lead Edge]
	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.

2-576-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-576-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-576-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-576-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-576-005	Separation DC: Std Spd: 1 Side	*ENG	
2-576-006	Separation DC: Std Spd: 2Side	*ENG	
2-576-007	Separation DC: Low Spd: 1 Side	*ENG	
2-576-008	Separation DC: Low Spd: 2Side	*ENG	

2577	[Special 1:TrailEdgeCorrection]
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.

2-577-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-577-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-577-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-577-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-577-005	Separation DC: Std Spd: 1 Side	*ENG	
2-577-006	Separation DC: Std Spd: 2Side	*ENG	
2-577-007	Separation DC: Low Spd: 1 Side	*ENG	
2-577-008	Separation DC: Low Spd: 2Side	*ENG	

2578	[Special 1:SwitchTimingTrailEdge]
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.

2-578-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-578-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-578-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-578-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-578-005	Separation DC: Std Spd: 1 Side	*ENG	
2-578-006	Separation DC: Std Spd: 2side	*ENG	
2-578-007	Separation DC: Low Spd: 1 Side	*ENG	
2-578-008	Separation DC: Low Spd: 2Side	*ENG	

2579	[Special 1:EnvCorrectionTable]		
2-579-013	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-579-014	Separation DC: Std Spd: 2side	*ENG	
2-579-015	Separation DC: Low Spd: 1 Side	*ENG	
2-579-016	Separation DC: Low Spd: 2Side	*ENG	
2579	[Special 1:EdgeEnvir Correc.]		

2-579-017	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>50</b> / 1/step]
2-579-018	Separation DC: Std Spd: 2side	*ENG	
2-579-019	Separation DC: Low Spd: 1 Side	*ENG	
2-579-020	Separation DC: Low Spd: 2Side	*ENG	

2581	[Special 2:Bias]		
	Adjusts the DC voltage of the discharge plate for special paper 2.		plate for special paper 2.
2-581-001	Separation DC: Std Spd: 1 Side	*ENG	[0 to 4000 / <b>2000</b> / 10 -V/step]
2-581-002	Separation DC: Std Spd: 2Side	*ENG	
2-581-003	Separation DC: Low Spd: 1 Side	*ENG	
2-581-004	Separation DC: Low Spd: 2Side	*ENG	

2583	[Special 2:Bias:BW]		
	Adjusts the current for the paper transfer roller for special paper 2 in black-and-white mode.		
2-583-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / * / 1 uA/step] *C306:19 *C406:22
2-583-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / * / 1 uA/step]  *C306:16  *C406:18
2-583-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / 11 / 1 uA/step]

2-583-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / 11 / 1 uA/step]
2-583-201	Paper Transfer: Std Spd 2: 1 Side	*ENG	[0 to 200 / <b>26</b> / 1 uA/step]
2-583-202	Paper Transfer: Std Spd 2: 2Side	*ENG	[0 to 200 / <b>22</b> / 1 uA/step]

2587	[Special 2:Bias:FC]  Adjusts the current for the paper transfer roller for special paper 2 in full color mod		
2-587-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / 22 / 1 uA/step]  *C306:22  *C406:25
2-587-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / 18 / 1 uA/step]  *C306:18  *C406:20
2-587-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / 13 / 1 uA/step]
2-587-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / 13 / 1 uA/step]

2591	[Special2:SizeCorrection:BW]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-591-001	Paper Transfer: Std/Mid Spd: 1 Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-591-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	
2-591-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	
2-591-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	

2-591-007	Paper Transfer: Low Spd: 1 Side: S2	*ENG	[100 to 995 / <b>120</b> / 5%/step]
2-591-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>175</b> / 5%/step]
2-591-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>140</b> / 5%/step]
2-591-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>213</b> / 5%/step]
2-591-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-591-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>275</b> / 5%/step]

2592	[Special 2:SizeCorrection:FC]  Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-592-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-592-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	
2-592-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG	
2-592-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	
2-592-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>118</b> / 5%/step]
2-592-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-592-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>136</b> / 5%/step]
2-592-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>154</b> / 5%/step]

2-592-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>140</b> / 5%/step]
2-592-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>250</b> / 5%/step]

2593	[Special 2:Size-Env.Correct:BW]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-593-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[1 to 100 / <b>33</b> / 1/step]	
2-593-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[1 to 100 / <b>34</b> / 1/step]	
2-593-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[1 to 100 / <b>37</b> / 1/step]	
2-593-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>38</b> / 1/step]	
2-593-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>39</b> / 1/step]	
2-593-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>40</b> / 1/step]	
2-593-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>41</b> / 1/step]	
2-593-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>42</b> / 1/step]	
2-593-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>43</b> / 1/step]	
2-593-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>44</b> / 1/step]	

2594	[Special 2:Size-Env.Correct:FC]
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.

2-594-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[1 to 100 / <b>35</b> / 1/step]
2-594-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[1 to 100 / <b>36</b> / 1/step]
2-594-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[1 to 100 / <b>37</b> / 1/step]
2-594-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>38</b> / 1/step]
2-594-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>39</b> / 1/step]
2-594-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>40</b> / 1/step]
2-594-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>41</b> / 1/step]
2-594-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>42</b> / 1/step]
2-594-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>43</b> / 1/step]
2-594-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>44</b> / 1/step]

2595	[Special 2:LeadingEdgeCorrect.]
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.

2-595-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-595-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-595-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-595-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-595-005	Separation DC: Std Spd: 1 Side	*ENG	
2-595-006	Separation DC: Std Spd: 2Side	*ENG	
2-595-007	Separation DC: Low Spd: 1 Side	*ENG	
2-595-008	Separation DC: Low Spd: 2Side	*ENG	

2596	[Special 2: SW Timing Lead Edge]
	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.

2-596-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-596-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG *ENG	
2-596-003	Paper Transfer: Low Spd: 1 Side		
2-596-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-596-005	Separation DC: Std Spd: 1 Side	*ENG	
2-596-006	Separation DC: Std Spd: 2Side	*ENG	
2-596-007	Separation DC: Low Spd: 1 Side	*ENG	
2-596-008	Separation DC: Low Spd: 2Side	*ENG	

2597	[Special2:TrailEdgeCorrection]
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.

		İ	
2-597-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-597-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-597-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-597-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-597-005	Separation DC: Std Spd: 1 Side	*ENG	
2-597-006	Separation DC: Std Spd: 2Side	*ENG	
2-597-007	Separation DC: Low Spd: 1 Side	*ENG	
2-597-008	Separation DC: Low Spd: 2Side	*ENG	

2598	[Special 2: SWTiming Trail Edge]
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.

2-598-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-598-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-598-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-598-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-598-005	Separation DC: Std Spd: 1 Side	*ENG	
2-598-006	Separation DC: Std Spd: 2side	*ENG	
2-598-007	Separation DC: Low Spd: 1 Side	*ENG	
2-598-008	Separation DC: Low Spd: 2Side	*ENG	

2599	[Special 2:EnvCorrectionTable]		
2-599-013	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-599-014	Separation DC: Std Spd: 2side	*ENG	
2-599-015	Separation DC: Low Spd: 1 Side	*ENG	
2-599-016	Separation DC: Low Spd: 2Side	*ENG	
2599	[Special 2:EdgeEnvCorrection]		

2-5	599-01 <i>7</i>	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-5	599-018	Separation DC: Std Spd: 2side	*ENG	
2-5	599-019	Separation DC: Low Spd: 1 Side	*ENG	
2-5	599-020	Separation DC: Low Spd: 2Side	*ENG	

2601	[Special 3:Bias]		
	Adjusts the DC voltage of the discharge plate for special paper 3.		ate for special paper 3.
2-601-001	Separation DC: Std Spd: 1 Side	*ENG	[0 to 4000 / <b>2000</b> / 10 -V/step]
2-601-002	Separation DC: Std Spd: 2Side	*ENG	
2-601-003	Separation DC: Low Spd: 1 Side	*ENG	
2-601-004	Separation DC: Low Spd: 2Side	*ENG	

2603	[Special 3:Bias:BW]  Adjusts the current for the paper transfer roller for special paper 3 in black-and-white mode.		
2-603-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / <b>20</b> / 1 uA/step]
2-603-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / <b>16</b> / 1 uA/step]
2-603-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / <b>10</b> / 1 uA/step]
2-603-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / <b>8</b> / 1 uA/step]

2-603-201	Paper Transfer: Std Spd 2: 1 Side	*ENG	[0 to 200 / <b>26</b> / 1 uA/step]
2-603-202	Paper Transfer: Std Spd 2: 2Side	*ENG	[0 to 200 / <b>22</b> / 1 uA/step]

2607	[Special 3:Bias:FC]		
	Adjusts the current for the paper transfer roller for special paper 3 in full color mode.		
2-607-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 200 / <b>22</b> / 1 uA/step]
2-607-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	[0 to 200 / <b>18</b> / 1 uA/step]
2-607-003	Paper Transfer: Low Spd: 1 Side	*ENG	[0 to 200 / 11 / 1 uA/step]
2-607-004	Paper Transfer: Low Spd: 2Side	*ENG	[0 to 200 / <b>10</b> / 1 uA/step]

2611	[Special 3:SizeCorrection:BW]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-611-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-611-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	
2-611-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG	
2-611-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	
2-611-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>130</b> / 5%/step]
2-611-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>163</b> / 5%/step]

2-611-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-611-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>250</b> / 5%/step]
2-611-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-611-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>375</b> / 5%/step]

2612	[Special 3:SizeCorrection:FC]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-612-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-612-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG		
2-612-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG		
2-612-004	Paper Transfer: Low Spd: 2Side:S1	*ENG		
2-612-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[100 to 995 / <b>136</b> / 5%/step]	
2-612-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[100 to 995 / <b>180</b> / 5%/step]	
2-612-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[100 to 995 / <b>150</b> / 5%/step]	
2-612-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[100 to 995 / <b>250</b> / 5%/step]	
2-612-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]	
2-612-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[100 to 995 / <b>350</b> / 5%/step]	

2613	[Special 3:Size-Env.Correct:BW]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-613-001	Paper Transfer: Std/Mid Spd: 1Side:S1	*ENG	[1 to 100 / <b>21</b> / 1/step]	
2-613-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[1 to 100 / <b>22</b> / 1/step]	
2-613-003	Paper Transfer: Low Spd: 1 Side: S1	*ENG	[1 to 100 / <b>47</b> / 1/step]	
2-613-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>48</b> / 1/step]	
2-613-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>49</b> / 1/step]	
2-613-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>50</b> / 1/step]	
2-613-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>51</b> / 1/step]	
2-613-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>52</b> / 1/step]	
2-613-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>53</b> / 1/step]	
2-613-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>54</b> / 1/step]	

2614	[Special 3:Size-Env.Correct:FC]		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-614-001	Paper Transfer: Std/Mid Spd: 1 Side:S1	*ENG	[1 to 100 / <b>45</b> / 1/step]
2-614-002	Paper Transfer: Std/Mid Spd: 2Side:S1	*ENG	[1 to 100 / <b>46</b> / 1/step]

2-614-003	Paper Transfer: Low Spd: 1 Side:S1	*ENG	[1 to 100 / <b>47</b> / 1/step]
2-614-004	Paper Transfer: Low Spd: 2Side:S1	*ENG	[1 to 100 / <b>48</b> / 1/step]
2-614-007	Paper Transfer: Low Spd: 1 Side:S2	*ENG	[1 to 100 / <b>49</b> / 1/step]
2-614-008	Paper Transfer: Low Spd: 2Side:S2	*ENG	[1 to 100 / <b>50</b> / 1/step]
2-614-011	Paper Transfer: Low Spd: 1 Side:S3	*ENG	[1 to 100 / <b>51</b> / 1/step]
2-614-012	Paper Transfer: Low Spd: 2Side:S3	*ENG	[1 to 100 / <b>52</b> / 1/step]
2-614-015	Paper Transfer: Low Spd: 1 Side:S4	*ENG	[1 to 100 / <b>53</b> / 1/step]
2-614-016	Paper Transfer: Low Spd: 2Side:S4	*ENG	[1 to 100 / <b>54</b> / 1/step]

2615	[Special 3: LeadingEdgeCorrect.]	
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.	

2-615-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-615-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-615-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-615-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-615-005	Separation DC: Std Spd: 1 Side	*ENG	
2-615-006	Separation DC: Std Spd: 2Side	*ENG	
2-615-007	Separation DC: Low Spd: 1 Side	*ENG	
2-615-008	Separation DC: Low Spd: 2Side	*ENG	

2616	[Special 3: SW Timing Lead Edge]	
	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.	

2-616-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-616-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-616-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-616-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-616-005	Separation DC: Std Spd: 1 Side	*ENG	
2-616-006	Separation DC: Std Spd: 2Side	*ENG	
2-616-007	Separation DC: Low Spd: 1 Side	*ENG	
2-616-008	Separation DC: Low Spd: 2Side	*ENG	

2617	[Special 3:TrailEdgeCorrection]
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.

2-617-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-617-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-617-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-617-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-617-005	Separation DC: Std Spd: 1 Side	*ENG	
2-617-006	Separation DC: Std Spd: 2Side	*ENG	
2-617-007	Separation DC: Low Spd: 1 Side	*ENG	
2-617-008	Separation DC: Low Spd: 2Side	*ENG	

2618	[Special 3: SWTiming Trail Edge]
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.

2-618-001	Paper Transfer: Std/Mid Spd: 1 Side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-618-002	Paper Transfer: Std/Mid Spd: 2Side	*ENG	
2-618-003	Paper Transfer: Low Spd: 1 Side	*ENG	
2-618-004	Paper Transfer: Low Spd: 2Side	*ENG	
2-618-005	Separation DC: Std Spd: 1 Side	*ENG	
2-618-006	Separation DC: Std Spd: 2side	*ENG	
2-618-007	Separation DC: Low Spd: 1 Side	*ENG	
2-618-008	Separation DC: Low Spd: 2Side	*ENG	

2619	[Special 3:EnvCorrectionTabl	e]	
2-619-013	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-619-014	Separation DC: Std Spd: 2side	*ENG	
2-619-015	Separation DC: Low Spd: 1 Side	*ENG	
2-619-016	Separation DC: Low Spd: 2Side	*ENG	
2619	[Special 3: Edge Envir Correc.]		

2-619-017	Separation DC: Std Spd: 1 Side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-619-018	Separation DC: Std Spd: 2side	*ENG	
2-619-019	Separation DC: Low Spd: 1 Side	*ENG	
2-619-020	Separation DC: Low Spd: 2Side	*ENG	

2621	[Special 4: Bias]			
	Adjusts the DC voltage of the discharge plate for thick 2 paper.			
2-621-003	Separation DC:1 side	*ENG	[0 to 4000 / <b>2000</b> / 10 -V/step]	
2-621-004	Separation DC:2side	*ENG		

2623	[Special 4: Bias: BW]			
	Adjusts the current for the paper transfer roller for thick 2 paper in black-and-white mode.			
2-623-003	Paper Transfer: 1 side	*ENG	[0 to 200 / <b>14</b> / 1 uA/step]	
2-623-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]	

2627	[Special 4: Bias: FC]			
	Adjusts the current for the paper transfer roller for thick 2 paper in full color mode.			
2-627-003	PaperTransfer: 1 side	*ENG	[0 to 200 / <b>15</b> / 1 uA/step]	
2-627-004	PaperTransfer:2side	*ENG	[0 to 200 / 11 / 1 uA/step]	

2631	[Special 4: SizeCorrection:BW]  Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-631-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-631-004	Paper Transfer:2Side:S1	*ENG		

2-631-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-631-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>156</b> / 5%/step]
2-631-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>107</b> / 5%/step]
2-631-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>167</b> / 5%/step]
2-631-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-631-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>278</b> / 5%/step]

2632	[Special 4: SizeCorrection:FC]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-632-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-632-004	Paper Transfer:2Side:S1	*ENG		
2-632-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-632-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>164</b> / 5%/step]	
2-632-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>120</b> / 5%/step]	
2-632-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>277</b> / 5%/step]	
2-632-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>130</b> / 5%/step]	
2-632-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>364</b> / 5%/step]	

2633	[Special 4: Size-Env.Correct:BW]			
Adjusts the size correction coefficient table for the paper transfer roller current f each paper size.				
2-633-003	Paper Transfer: 1 Side: S1	*ENG	[1 to 100 / <b>59</b> / 1/step]	
2-633-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>60</b> / 1/step]	
2-633-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>61</b> / 1/step]	
2-633-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>62</b> / 1/step]	
2-633-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>55</b> / 1/step]	

2-633-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>56</b> / 1/step]
2-633-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>57</b> / 1/step]
2-633-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / 58 / 1/step]

2634	[Special 4: Size-Env.Correct:FC]				
	Adjusts the size correction coefficient table for the paper transfer roller current feach paper size.				
2-634-003	Paper Transfer: 1 Side: S1	*ENG	[1 to 100 / <b>59</b> / 1/step]		
2-634-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>60</b> / 1/step]		
2-634-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>61</b> / 1/step]		
2-634-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>62</b> / 1/step]		
2-634-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>63</b> / 1/step]		
2-634-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>64</b> / 1/step]		
2-634-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>65</b> / 1/step]		
2-634-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / <b>66</b> / 1/step]		

2635	[Special 4: LeadingEdgeCorrect.]		
Adjusts the correction to the paper transfer roller current at the paper leading ed in each mode.			fer roller current at the paper leading edge
2-635-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-635-004	Paper Transfer:2side	*ENG	
2-635-007	Separation DC:1 side	*ENG	
2-635-008	Separation DC:2side	*ENG	

2636	[Special 4: SW Timing Lead Edge]
	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.

2-636-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-636-004	Paper Transfer:2side	*ENG	
2-636-007	Separation DC:1 side	*ENG	
2-636-008	Separation DC:2side	*ENG	

2637	[Special 4: TrailEdgeCorrection]			
Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			aper transfer roller current for the paper	
2-637-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-637-004	Paper Transfer:2side	*ENG		
2-637-007	Separation DC:1 side	*ENG		
2-637-008	Separation DC:2side	*ENG		

2638	[Special 4: SWTiming Trail Edge]		
Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.			aper transfer roller current for the paper
2-638-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-638-004	Paper Transfer:2side	*ENG	
2-638-007	Separation DC:1 side	*ENG	
2-638-008	Separation DC:2side	*ENG	

2639	[Special 4: EnvCorrectionTable]		
2-639-015	Separation DC:1side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-639-016	Separation DC:2side	*ENG	
2639	[Special 4: Edge Envir Correc.]		
2-639-019	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-639-020	Separation DC:2side	*ENG	

2641	[Special 5: Bias]		
	Adjusts the DC voltage of the discharge plate for thick2 paper.		
2-641-003	Separation DC:1 side	*ENG	[0 to 4000 / <b>2000</b> / 10 -V/step]
2-641-004	Separation DC:2side	*ENG	

2643	[Special 5: Bias: BW]		
	Adjusts the current for the paper transfer roller for thick 2 paper in black-and-white mode.		
Middle: 182 mm/sec, Low: 85 mm/sec			
2-643-003	Paper Transfer: 1 side	*ENG	[0 to 200 / 11 / 1 uA/step]
2-643-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>8</b> / 1 uA/step]

2647	[Thick2:Bias:FC]		
	Adjusts the current for the paper transfer roller for thick 2 paper in full color mode.		
2-647-003	Paper Transfer: 1 side	*ENG	[0 to 200 / <b>12</b> / 1 uA/step]
2-647-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]

2651	[Special 5: SizeCorrection:BW]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-651-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-651-004	Paper Transfer:2Side:S1	*ENG	
2-651-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-651-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>163</b> / 5%/step]
2-651-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>136</b> / 5%/step]
2-651-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>250</b> / 5%/step]
2-651-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>164</b> / 5%/step]
2-651-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>313</b> / 5%/step]

2652	[Special 5: SizeCorrection:FC]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.		
2-652-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-652-004	Paper Transfer:2Side:S1	*ENG	
2-652-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>100</b> / 5%/step]
2-652-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>200</b> / 5%/step]
2-652-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>138</b> / 5%/step]
2-652-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>278</b> / 5%/step]
2-652-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>154</b> / 5%/step]
2-652-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>389</b> / 5%/step]

2653	[Special 5: Size-Env.Correct:BW]		
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-653-003	Paper Transfer: 1 Side: S1	*ENG	[1 to 100 / <b>67</b> / 1/step]
2-653-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>68</b> / 1/step]
2-653-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>69</b> / 1/step]
2-653-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>70</b> / 1/step]
2-653-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>71</b> / 1/step]
2-653-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>72</b> / 1/step]
2-653-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>73</b> / 1/step]
2-653-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / <b>74</b> / 1/step]

2654	[Special 5: Size-Env.Correct:FC]  Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.		
2-654-003	Paper Transfer: 1 Side: S 1	*ENG	[1 to 100 / <b>67</b> / 1/step]

2-654-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>68</b> / 1/step]
2-654-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>69</b> / 1/step]
2-654-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>70</b> / 1/step]
2-654-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>71</b> / 1/step]
2-654-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>72</b> / 1/step]
2-654-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>73</b> / 1/step]
2-654-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / <b>74</b> / 1/step]

2655	[Special 5: LeadingEdgeCorrect.]  Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode.		
2-655-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-655-004	Paper Transfer:2side	*ENG	
2-655-007	Separation DC:1 side	*ENG	
2-655-008	Separation DC:2side	*ENG	

2656	[Special 5: SW Timing Lead Edge]  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.		
2-656-003	Paper Transfer: 1 side		[0 to 50 / <b>0</b> / 2 mm/step]
2-656-004	Paper Transfer:2side	*ENG	
2-656-007	Separation DC:1 side	*ENG	
2-656-008	Separation DC:2side	*ENG	

2657	[Special 5: TrailEdgeCorrection]
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2-657-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]
2-657-004	Paper Transfer:2side	*ENG	
2-657-007	Separation DC:1 side	*ENG	
2-657-008	Separation DC:2side	*ENG	

2658	[Special 5: SWTiming Trail Edge]  Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.		
2-658-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-658-004	Paper Transfer:2side	*ENG	
2-658-007	Separation DC:1 side	*ENG	
2-658-008	Separation DC:2side	*ENG	

2659	[Special 5: EnvCorrectionTable]		
2-659-015	Separation DC:1side	*ENG	[1 to 100 / <b>30</b> / 1/step]
2-659-016	Separation DC:2side	*ENG	
	[Special 5: Edge Envir Correc.]		
2659	[Special 5: Edge Envir Correc	p.]	
<b>2659</b> 2-659-019	[Special 5: Edge Envir Correct Separation DC:1side	*ENG	[1 to 100 / <b>30</b> / 1/step]

2661	[Special 6: Bias]		
	Adjusts the DC voltage of the discharge plate for thick2 paper.		
2-661-003	Separation DC:1 side	*ENG	[0 to 4000 / <b>2000</b> / 10-V/step]
2-661-004	Separation DC:2side	*ENG	

2663	[Special 6: Bias: BW]
	Adjusts the current for the paper transfer roller for thick 2 paper in black-and-white mode.

2-663-00	3 Paper Transfer: 1 side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]
2-663-00	4 Paper Transfer:2side	*ENG	[0 to 200 / <b>7</b> / 1 uA/step]

2667	[Special 6: Bias: FC]		
	Adjusts the current for the paper transfer roller for thick 2 paper in full color mode.		
2-667-003	Paper Transfer: 1 side	*ENG	[0 to 200 / 11 / 1 uA/step]
2-667-004	Paper Transfer:2side	*ENG	[0 to 200 / <b>9</b> / 1 uA/step]

2671	[Special 6: SizeCorrection:BW]			
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-671-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-671-004	Paper Transfer:2Side:S1	*ENG		
2-671-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>122</b> / 5%/step]	
2-671-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>186</b> / 5%/step]	
2-671-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>156</b> / 5%/step]	
2-671-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>271</b> / 5%/step]	
2-671-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>170</b> / 5%/step]	
2-671-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>357</b> / 5%/step]	

2672	[Special 6: SizeCorrection:FC]  Adjusts the size correction coefficient for the paper transfer roller current for each paper size.			
2-672-003	Paper Transfer: 1 Side: S1	*ENG	[100 to 995 / <b>100</b> / 5%/step]	
2-672-004	Paper Transfer:2Side:S1	*ENG		
2-672-007	Paper Transfer: 1 Side: S2	*ENG	[100 to 995 / <b>118</b> / 5%/step]	
2-672-008	Paper Transfer:2Side:S2	*ENG	[100 to 995 / <b>200</b> / 5%/step]	
2-672-011	Paper Transfer: 1 Side: S3	*ENG	[100 to 995 / <b>140</b> / 5%/step]	

2-672-012	Paper Transfer:2Side:S3	*ENG	[100 to 995 / <b>278</b> / 5%/step]
2-672-015	Paper Transfer: 1 Side: S4	*ENG	[100 to 995 / <b>150</b> / 5%/step]
2-672-016	Paper Transfer:2Side:S4	*ENG	[100 to 995 / <b>389</b> / 5%/step]

2673	[Special 6: Size-Env.Correct:BW]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-673-003	Paper Transfer: 1 Side: S1	*ENG	[1 to 100 / <b>75</b> / 1/step]	
2-673-004	Paper Transfer:2Side:S1	*ENG	[1 to 100 / <b>76</b> / 1/step]	
2-673-007	Paper Transfer: 1 Side: S2	*ENG	[1 to 100 / <b>77</b> / 1/step]	
2-673-008	Paper Transfer:2Side:S2	*ENG	[1 to 100 / <b>78</b> / 1/step]	
2-673-011	Paper Transfer: 1 Side: S3	*ENG	[1 to 100 / <b>79</b> / 1/step]	
2-673-012	Paper Transfer:2Side:S3	*ENG	[1 to 100 / <b>80</b> / 1/step]	
2-673-015	Paper Transfer: 1 Side: S4	*ENG	[1 to 100 / <b>81</b> / 1/step]	
2-673-016	Paper Transfer:2Side:S4	*ENG	[1 to 100 / <b>82</b> / 1/step]	

2674	[Special 6: Size-Env.Correct:FC]			
	Adjusts the size correction coefficient table for the paper transfer roller current for each paper size.			
2-674-003	PaperTransfer: 1 Side: S 1	*ENG	[1 to 100 / <b>75</b> / 1/step]	
2-674-004	PaperTransfer:2Side:S1	*ENG	[1 to 100 / <b>76</b> / 1/step]	
2-674-007	PaperTransfer:1Side:S2	*ENG	[1 to 100 / <b>77</b> / 1/step]	
2-674-008	PaperTransfer:2Side:S2	*ENG	[1 to 100 / <b>78</b> / 1/step]	
2-674-011	PaperTransfer:1Side:S3	*ENG	[1 to 100 / <b>79</b> / 1/step]	
2-674-012	PaperTransfer:2Side:S3	*ENG	[1 to 100 / <b>80</b> / 1/step]	
2-674-015	PaperTransfer:1Side:S4	*ENG	[1 to 100 / <b>81</b> / 1/step]	
2-674-016	PaperTransfer:2Side:S4	*ENG	[1 to 100 / <b>82</b> / 1/step]	

2675	[Special 6: LeadingEdgeCorrect.]			
Adjusts the correction to the paper transfer roller current at the paper leading ed in each mode.				
2-675-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-675-004	Paper Transfer:2side	*ENG		
2-675-007	Separation DC:1 side	*ENG		
2-675-008	Separation DC:2side	*ENG		

2676	[Special 6: SWTimingLeadEdge]			
	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.			
2-676-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]	
2-676-004	Paper Transfer:2side	*ENG		
2-676-007	Separation DC:1 side	*ENG		
2-676-008	Separation DC:2side	*ENG		

2677	[Special 6: TrailEdgeCorrection]			
Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.				
2-677-003	Paper Transfer: 1 side	*ENG	[0 to 995 / <b>100</b> / 5%/step]	
2-677-004	Paper Transfer:2side	*ENG		
2-677-007	Separation DC:1 side	*ENG		
2-677-008	Separation DC:2side	*ENG		

2678	[Special 6: SWTimingTrailEdge]
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode.

2-678-003	Paper Transfer: 1 side	*ENG	[0 to 50 / <b>0</b> / 2 mm/step]
2-678-004	Paper Transfer:2side	*ENG	
2-678-007	Separation DC:1side	*ENG	
2-678-008	Separation DC:2side	*ENG	

2679	[Special 6: EnvCorrectionTable]			
2-679-015	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]	
2-679-016	Separation DC:2side	*ENG		
2679	[Special 6: Edge Envir Correc.]			
2-679-019	Separation DC:1 side	*ENG	[1 to 100 / <b>30</b> / 1/step]	
2-679-020	Separation DC:2side	*ENG		

2690	[ITB Contact Setting]		
	Sets the image transfer belt contact for each paper.		
2-690-001	Thick 1	*ENG	[0 or 1 / <b>0</b> / 1/step]
2-690-002	Thick2	*ENG	
2-690-003	Thick3	*ENG	
2-690-014	Special4	*ENG	
2-690-015	Special5	*ENG	
2-690-016	Specialó	*ENG	

2900	[Job End: Drum Idling Time]		
2-900-001	Standard Speed	*ENG	[0 to 30 / <b>0</b> / 1 s/step]
2-900-002	Middle Speed	*ENG	
2-900-003	Low Speed	*ENG	

2901	[Fus.Reload:DrumIdleTimeOffset]			
	Offset coverage for idling rotation time of drum when fusing down reloads.			
2-901-001	Coverage:0-6%	*ENG	[-60 to 300 / <b>0</b> / 1 sec/step]	
2-901-002	Coverage:6-10%	*ENG	[-60 to 300 / <b>-11</b> / 1 sec/step]	
2-901-003	Coverage: 10-20%	*ENG	[-60 to 300 / <b>-26</b> / 1 sec/step]	
2-901-004	Coverage:20-40%	*ENG	[-60 to 300 / <b>-21</b> / 1 sec/step]	
2-901-005	Coverage:40%over	*ENG	[-60 to 300 / <b>-21</b> / 1 sec/step]	

2905	[Dev Rvs Time]			
2-905-003	Bk ENG [0 to 200 / <b>0</b> / 10 msec/step]			
	Sets the clutch on time at drum motor reverse.			
2-905-004	Color ENG [0 to 200 / <b>0</b> / 10 msec/step]			
	Sets the time of development roller reverse rotation when color development motor rotates in reverse.			

2905	[Dev Rvs Counter]			
2-905-005	ALL ENG [0 to 400000 / 61420 / 10 mm/step]			
	Rotation threshold to determine if development roller reverse is required or not.			

2905	[Dev Rvs Counter]			
2-905-006	Bk ENG [0 to 99999999 / 0 / 1 mm/step]			
	Rotation counter (Bk) to determine if development roller reverse is required or not.			
2-905-007	Color ENG [0 to 999999999 / 0 / 1 mm/step]			
	Rotation counter (Color) to determine if development roller reverse is required or not.			

2905	[Dev pre-drive : ON/OFF]		
2-905-010	ON/OFF	*ENG	[0 or 1 / <b>0</b> / 1/step]

2907	[ACS Setting (FC)]				
	-				
2-907-001	Continuous Bk Pages	*ENG	[0 to 10 / <b>0</b> / 1 sheet/step]		

2915	[Gain Set: Bk OPC Drum]		
2-915-001	Standard Speed 1	*ENG	[0 or 1 / <b>0</b> / 1/step]
2-915-002	Low Speed	*ENG	[0 or 1 / <b>1</b> / 1/step]
2-915-003	Standard Speed2	*ENG	[0 or 1 / <b>0</b> / 1/step]
2-915-004	Middle Speed	*ENG	[0 or 1 / <b>0</b> / 1/step]

2916	[Gain Set: Color OPC Drum]		
2-916-001	Standard Speed 1	*ENG	[0 or 1 / <b>0</b> / 1/step]
2-916-002	Low Speed	*ENG	[0 or 1 / 1 / 1/step]
2-916-003	Middle Speed	*ENG	[0 or 1 / <b>0</b> / 1/step]

2930	[Paper Transfer: Bias Limiter]			
Adjusts the threshold between high resistance (division 1) and low resist (division 2) at the paper transfer roller.				
2-930-001	Bias	*ENG	[0 to 7000 / 6000 / 10 V/step]	

2960	[Process Down Interval]			
	Adjusts the additional time for ending the machine's process.			
2-960-001	Additional Time	*ENG	[0 to 10 / <b>0</b> / 1 sec/step]	

2990	[Print Duty Control]			
2-990-001	Duty Control Status *ENG [0 or 1 / 0 / 1/step]			
	Displays the Duty limitation status of the current printing.			
	0: Not limited			
	1: Limited			

2-990-002	Exec Interval: Duty Control	*ENG	[30 to 3600 / <b>30</b> / 1 sec/step]
	Sets the determination time intexecuted or not.	terval to de	termine if the printing Duty limitation is
2-990-004	Forced Process Down Thresh: No Duty Control	*ENG	[0 to 5000 / <b>0</b> / 1 page/step]
	Sets the forced shutdown thre	shold wher	n the printing Duty is not limited.
2-990-005	Down-time BW: No Duty Control	*ENG	[0 to 120 / <b>0</b> / 1 sec/step]
2-990-006	Down-time FC: No Duty Control	*ENG	
2-990-007	Forced Process Down Thresh: Duty Control	*ENG	[0 to 5000 / <b>3</b> / 1 page/step]
	Sets the forced shutdown thre	shold wher	n the printing Duty is limited.
2-990-008	Down-time BW: Duty Control	*ENG	[0 to 120 / <b>0</b> / 1 sec/step]
2-990-009	Down-time FC: Duty Control	*ENG	[0 to 120 / <b>64</b> / 1 sec/step]
2-990-010	Correction Coefficient	*ENG	[-1.0 to -1.0 / <b>-0.5</b> / 0.1/step]
2-990-011	Execution Temperature	*ENG	[20.0 to 70.0 / <b>42.0</b> / 0.1 deg/step]
	Sets the temperature threshold  0: Not execute	to execut	e the printing Duty limitation.
2-990-012	Cancellation Temp. Threshold	*ENG	[0.0 to 20.0 / <b>1.0</b> / 0.1 deg/step]
	Sets the temperature threshold limitation execution) to cance		es with the temperature of the printing Duty g Duty limitation.
2-990-013	ON/OFF setting	*ENG	[0 or 1 / 1 / 1/step]
	Control or not control the prin 0: Not control 1: Control	ting Duty li	mitation.
2-990-014	Duty Control: Down-time_BW	*ENG	[0 to 120 / <b>0</b> / 1 sec/step]

2-990-015	Duty Control: Down-time_FC	*ENG	[0 to 120 / <b>0</b> / 1 sec/step]
2-990-016	Execution Temp. Upper Threshold	*ENG	[0.0 to 99.0 / <b>42.0</b> / 0.1 deg/step]
2-990-017	Execution Temp. Lower Threshold	*ENG	[0.0 to 99.0 / <b>38.0</b> / 0.1 deg/step]

## 3

## Main SP Tables-3

## SP3-XXX (Process)

3011	[Manual ProCon:Exe]		
3-011-001	Normal ProCon	ENG	[- / <b>-</b> / -] [Execute]
3-011-002	Toner Density Adjustment	ENG	[- / <b>-</b> / -] [Execute]
3-011-003	ACC RunTime ProCon	ENG	[- / <b>-</b> / -] [Execute]
3-011-004	Full MUSIC	ENG	[- / <b>-</b> / -] [Execute]
3-011-005	Normal MUSIC	ENG	[- / <b>-</b> / -] [Execute]
3-011-011	Normal ProCon BW	ENG	[- / <b>-</b> / -] [Execute]

3012	[ProCon Execute Result: Display]
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3-012-001	History:Last	*ENG	Displays the result of the latest process control
3-012-002	History:Last 2	*ENG	execution.  For details, refer to "Process Control Self-
3-012-003	History:Last 3	*ENG	Check Result" in Troubleshooting chapter.
3-012-004	History:Last 4	*ENG	[0 to 99999999 / <b>0</b> / 1/step]
3-012-005	History:Last 5	*ENG	
3-012-006	History:Last 6	*ENG	_
3-012-007	History:Last 7	*ENG	
3-012-008	History:Last 8	*ENG	
3-012-009	History:Last 9	*ENG	
3-012-010	History:Last 10	*ENG	

3030	[TD Sensor Initial Set: Exe	ecute]	
3-030-001	Execute:ALL	ENG	[- / <b>-</b> / -] [Execute]
3-030-002	Execute:Color	ENG	[- / <b>-</b> / -] [Execute]
3-030-003	Execute:Bk	ENG	[- / <b>-</b> / -] [Execute]
3-030-004	Execute:C	ENG	[- / <b>-</b> / -] [Execute]
3-030-005	Execute:M	ENG	[- / <b>-</b> / -] [Execute]
3-030-006	Execute:Y	ENG	[- / <b>-</b> / -] [Execute]

3031	[TD Sen. Ini. Set: Result: Disp]
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3-031-00	From Left: Y,M,C,Bk	*ENG	Displays the execution result of TD sensor initialization.
			[0 to 9999 / <b>0</b> / 1/step]

3050	[Force Tnr Supply:Exe]		
3-050-001	Execute:ALL	ENG	[- / <b>-</b> / -] [Execute]
3-050-002	Execute:Color	ENG	[- / <b>-</b> / -] [Execute]
3-050-003	Execute:Bk	ENG	[- / <b>-</b> / -] [Execute]
3-050-004	Execute:C	ENG	[- / <b>-</b> / -] [Execute]
3-050-005	Execute:M	ENG	[- / <b>-</b> / -] [Execute]
3-050-006	Execute:Y	ENG	[- / <b>-</b> / -] [Execute]
3-050-021	Supply Quantity:Bk	*ENG	[0.0 to 5.0 / <b>0.5</b> / 0.1 wt%/step]
3-050-022	Supply Quantity:C	*ENG	
3-050-023	Supply Quantity:M	*ENG	
3-050-024	Supply Quantity:Y	*ENG	
3-050-033	Repeat Count	*ENG	[0 to 255 / <b>8</b> / 1 times/step]

3072	[TD Sensor Check]		
3-072-001	Exe All Colors	ENG	[- / <b>-</b> / -] [Execute]

3073	[TD Sensor Check: Display]
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3-073-001	mu Count:Bk	*ENG	[0 to 65535 / <b>0</b> / 1/step]
3-073-002	mu Count:C	*ENG	
3-073-003	mu Count:M	*ENG	
3-073-004	mu Count:Y	*ENG	

3074	[ID Sensor Check: Exe]		
3-074-001	All Sensors	ENG	[- / <b>-</b> / -] [Execute]

3075	[IID Sensor Check: Display]		
3-075-001	Vsg reg(front)	*ENG	[0.00 to 5.50 / <b>0</b> / 0.01 V/step]
3-075-002	Vsg reg(center)	*ENG	
3-075-003	Vsg reg(rear)	*ENG	
3-075-011	Voffset(front)	*ENG	
3-075-012	Voffset(center)	*ENG	
3-075-013	Voffset(rear)	*ENG	

3100	[Toner End Detection: Set]		
3-100-001	ON/OFF	*ENG	Sets if NE/TE is detected or not.  [0 or 1 / 0 / 1/step]  0:Detect, 1:NotDetect
3-100-002	NE Detection Select	*ENG	Sets NE/TE detection mode.  [0 or 1 / 0 / 1/step]  0:ALL, 1:TESensor

3101	[Toner Status: Display]
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3-101-001	Bk	*ENG	Displays the toner remaining status.
3-101-002	С	*ENG	[0 to 2 / <b>2</b> / 1/step]
3-101-003	М	*ENG	0: Full, 1: NE, 2:TE
3-101-004	Υ	*ENG	

3102	[Toner Remaining: Displa	y]	
3-102-001	Toner Supply Motor Drive Time: Bk	*ENG	Displays the toner remaining amount calculated with motor driving time.
3-102-002	Toner Supply Motor Drive Time: C	*ENG	[0.000 to 500.000 / <b>0</b> / 0.001 g/step]
3-102-003	Toner Supply Motor Drive Time: M	*ENG	
3-102-004	Toner Supply Motor Drive Time: Y	*ENG	
3-102-011	Pixel: Bk	*ENG	Displays the toner remaining amount calculated
3-102-012	Pixel: C	*ENG	with image processing coverage.  [0.000 to 500.000 / <b>0</b> / 0.001 g/step]
3-102-013	Pixel: M	*ENG	[close is control / <b>c</b> / close : <b>g</b> / close ]
3-102-014	Pixel: Y	*ENG	
3-102-021	Replenishment Amount: Bk	*ENG	Displays the toner amount in a new bottle.  [0 to 500 / 0 / 1 g/step]
3-102-022	Replenishment Amount:	*ENG	
3-102-023	Replenishment Amount:	*ENG	
3-102-024	Replenishment Amount: Y	*ENG	

3110	[NE Detect: Toner Remain Thresh]		
	Sets threshold of toner remaining for NE detection.		
3-110-001	Bk	*ENG	[0 to 500 / <b>23</b> / 1 g/step]

3-110-002	С	*ENG	[0 to 500 / <b>10</b> / 1 g/step]
3-110-003	М	*ENG	
3-110-004	Υ	*ENG	

3121	[TE Counter: Display]		
3-121-001	Bk	*ENG	Displays the number of no toner detections with
3-121-002	С	*ENG	end sensor. [0 to 99 / <b>0</b> / 1 times/step]
3-121-003	М	*ENG	[c to // / C / T minosy stop]
3-121-004	Υ	*ENG	

3123	[Toner End Sen Status: Display]		
3-123-021	Latest Output: Bk	ENG	Displays the latest output with end sensor.
3-123-022	Latest Output: C	ENG	[0 or 1 / <b>0</b> / 1/step]
3-123-023	Latest Output: M	ENG	0: Not output, 1: Output
3-123-024	Latest Output: Y	ENG	

3131	[Vt TE Thresh]		
3-131-001	Delta Vt Thresh	*ENG	Sets toner end threshold to sum delta Vt after NE.  [0.00 to 5.00 / 0.50 / 0.01 V/step]
3-131-002	Delta Vt Sum Thresh	*ENG	Sets toner end threshold for TE detection delta Vt after NE.  [0 to 99 / 10 / 1 V/step]
3-131-011	Delta Vt Thresh Before NE	*ENG	Sets toner end threshold to sum delta Vt before NE.  [0.00 to 5.00 / 0.50 / 0.01 V/step]
3-131-012	Delta Vt Sum Thresh Before NE	*ENG	Sets toner end threshold for TE detecion delta Vt before NE. [0 to 99 / 10 / 1 V/step]

3-131-021	High TC Delta Vt Thresh	*ENG	[0.00 to 5.00 / <b>0.30</b> / 0.01 V/step]
3-131-022	High TC Delta Vt Sum Thresh	*ENG	[0 to 99/3/1 V/step]
3-131-023	High TC Delta Vt Thresh Before NE	*ENG	[0.00 to 5.00 / <b>0.70</b> / 0.01 V/step]
3-131-024	High TC Delta Vt Sum Thresh Before NE	*ENG	[0 to 99 / <b>10</b> / 1 V/step]
3-131-031	Low TC Delta Vt Thresh	*ENG	[0.00 to 5.00/ <b>0.30</b> / 0.01 V/step]
3-131-032	Low TC Delta Vt Sum Thresh	*ENG	[0 to 99 / <b>3</b> / 1 V/step]
3-131-033	Low TC Delta Vt Thresh Before NE	*ENG	[0.00 to 5.00 / <b>0.70</b> / 0.01 V/step]
3-131-034	Low TC Delta Vt Sum Thresh Before NE	*ENG	[0 to 99 / <b>10</b> / 1 V/step]
3-131-041	TC Thresh	*ENG	[0.0 to 25.5 / <b>4.0</b> / 0.1 wt%/step]

3132	[Delta Vt Sum: Display]		
3-132-001	Bk	*ENG	Displays sum of delta Vt for each color.
3-132-002	С	*ENG	[0.00 to 99.00 / <b>0</b> / 0.01/step]
3-132-003	М	*ENG	
3-132-004	Υ	*ENG	

3200	[Toner Density: Display]		
3-200-001	Bk	*ENG	Displays toner density (wt%) for each color.
3-200-002	С	*ENG	[0.0 to 25.5 / <b>0</b> / 0.1 wt%/step]
3-200-003	М	*ENG	
3-200-004	Υ	*ENG	

3201	[TnrDensity]
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3-201-001	Upper TC	*ENG	Sets the upper limit for the control range of toner density (wt%).  [1.0 to 15.0 / <b>8.5</b> / 0.1 wt%/step]
3-201-002	Lower TC	*ENG	Sets the lower limit for the control range of toner density (wt%).  [1.0 to 15.0 / 4.0 / 0.1 wt%/step]

3206	[TD Sensor Bulk Corr.: Set]		
3-206-001	Abs. Humidity Cnver. Coef.: Bk	*ENG	[0.0000 to 6.5535 / <b>0.4945</b> / 0.0001 g/cm3/step]
3-206-002	Abs. Humidity Cnver. Coef.: C	*ENG	
3-206-003	Abs. Humidity Cnver. Coef.: M	*ENG	
3-206-004	Abs. Humidity Cnver. Coef.: Y	*ENG	
3-206-011	Color Conversion Coef.: Bk	*ENG	[0 to 200 / <b>100</b> / 1%/step]
3-206-012	Color Conversion Coef.: C	*ENG	
3-206-013	Color Conversion Coef.: M	*ENG	
3-206-014	Color Conversion Coef.: Y	*ENG	
3-206-021	Weight Coefficient	*ENG	
3-206-031	Offset: Bk	*ENG	[-2.0000 to 2.0000 / <b>0</b> / 0.0001 g/cm3/
3-206-032	Offset: C	*ENG	step]
3-206-033	Offset: M	*ENG	
3-206-034	Offset: Y	*ENG	

3-206-041	Conversion Coeff. Beta: Bk	*ENG	[-999.0 to 0.0 / <b>-1.0</b> / 0.1 count/g/cm3/ step]
3-206-042	Conversion Coeff. Beta:	*ENG	
3-206-043	Conversion Coeff. Beta:	*ENG	
3-206-044	Conversion Coeff. Beta: Y	*ENG	

3210	[TD.Sens:Vt :Disp]		
3-210-001	Current: Bk	*ENG	Displays the latest TD sensor output for each
3-210-002	Current: C	*ENG	color. [0.00 to 5.50 / <b>0</b> / 0.01 V/step]
3-210-003	Current: M	*ENG	[[0.00   0.00   0   0.01   1/5   0.05
3-210-004	Current: Y	*ENG	

3212	[Vt Shift: Set]		
3-212-001	TC Cor.(ON/OFF)	*ENG	[0 or 1 / 1 / 1/step]

3213	[Vt Shift :Set]		
3-213-001	TC Cor.(ON/OFF)	*ENG	[0 or 1 / 1 / 1/step] 0:OFF, 1:ON
3-213-021	Low Speed TC Correction: Bk	*ENG	[-0.50 to 0.50 / <b>0</b> / 0.01 V/step]
3-213-022	Low Speed TC Correction: C	*ENG	
3-213-023	Low Speed TC Correction: M	*ENG	
3-213-024	Low Speed: TC Correction: Y	*ENG	
3-213-031	Std Speed 2 TC Correction: Bk	*ENG	

3214	[Vt Save :Set]		
3-214-001	Dot Coverage Thresh	*ENG	[0 to 100 / <b>20</b> / 1%/step]

3230	[Vtref: Display/Set]		
3-230-001	Current: Bk	*ENG	Displays/Sets the target value of current TD
3-230-002	Current: C	*ENG	sensor output voltage. [0.00 to 5.00 / <b>2.50</b> / 0.01 V/step]
3-230-003	Current: M	*ENG	[2.55 .5 5.55 / <b>2.55</b> / 6.61 // 6.6p]
3-230-004	Current: Y	*ENG	

3232	[Vtref Correct:Pixel]		
3-232-001	ON/OFF	*ENG	[0 or 1 / 1 / 1 / step] 0:OFF, 1:ON
3-232-011	Low Coverage Coefficient: Bk	*ENG	Sets the coefficient Vtref to determine the Vtref correction value with low image coverage.
3-232-012	Low Coverage Coefficient: C	*ENG	[0.0 to 5.0 / <b>0.3</b> / 0.1/step]
3-232-013	Low Coverage Coefficient: M	*ENG	
3-232-014	Low Coverage Coefficient: Y	*ENG	
3-232-021	High Coverage Coefficient: Bk	*ENG	Sets the coefficient Vtref to determine the Vtref correction value with high image coverage.
3-232-022	High Coverage Coefficient: C	*ENG	[0.0 to 5.0 / <b>0.4</b> / 0.1/step]
3-232-023	High Coverage Coefficient: M	*ENG	
3-232-024	High Coverage Coefficient: Y	*ENG	

3-232-040	Initial ProCon Interval	*ENG	Sets process control flag and executes process control by determining the high image coverage is successive if the cumulative average (M) of image coverage (SP3224-009 to 012) is more than the specified value.  [0 to 255 / 6 / 1 times/step]
3-232-041	High Coverage Thresh	*ENG	This SP is referenced when an output of high image coverage.  [0 to 100 / 60 / 1%/step]
3-232-050	ProCon Interval	*ENG	[0 to 255 / <b>14</b> / 1 times/step]
3-232-060	Low Coverage Thresh	*ENG	This SP is referenced when an output of low image coverage.  [0.0 to 20.0 / 3.0 / 0.1%/step]
3-232-070	TC Upper Limit Correction	*ENG	Sets Vtref lower limit (TC upper limit) which can be canceled temporarily by determining the low image coverage is successive if the cumulative average (L) of image coverage (SP3224-013 to 016) is less than the specified value.  [0.0 to 5.0 / 0.5 / 0.1 wt%/step]
3-232-071	TC Upper Limit:Display:Bk	*ENG	Displays Vtref lower limit (TC upper limit) which can be canceled temporarily by determining
3-232-072	TC Upper Limit:Display:C	*ENG	the low image coverage is successive if the cumulative average (L) of image coverage (SP3224-013 to 016) is less than the specified
3-232-073	TC Upper Limit:Display:M	*ENG	value. [1.0 to 15.0 / <b>8.5</b> / 0.1 wt%/step]
3-232-074	TC Upper Limit:Display:Y	*ENG	

3234	[Vtref Corr :Disp/Set]		
3-234-001	ON/OFF	*ENG	Controls On/Off for potential Vtref correction.
			[0 or 1 / <b>1</b> / 1/step]
			0:OFF, 1:ON

3-234-011	Correction Amount (+): Bk	*ENG	Sets Vtref correction value for (+) side to control toner density to lower with developer gamma
3-234-012	Correction Amount (+):	*ENG	in potential control. [0.00 to 1.00 / <b>0.05</b> / 0.01 V/step]
3-234-013	Correction Amount (+):	*ENG	
3-234-014	Correction Amount (+): Y	*ENG	
3-234-021	Correction Amount (-): Bk	*ENG	Sets Vtref correction value for (-) side to control toner density to lower with developer gamma
3-234-022	Correction Amount (-):	*ENG	in potential control. [0.00 to 1.00 / <b>0.05</b> / 0.01 V/step]
3-234-023	Correction Amount (-):	*ENG	
3-234-024	Correction Amount (-):	*ENG	
3-234-031	P Rank 1 Threshold	*ENG	[0.00 to 2.00 / <b>0.15</b> / 0.01/step]
3-234-032	P Rank 2 Threshold	*ENG	[0.00 to 2.00 / <b>0.05</b> / 0.01/step]
3-234-033	P Rank 3 Threshold	*ENG	[-2.00 to 0.00 / <b>-0.05</b> / 0.01/step]
3-234-034	P Rank 4 Threshold	*ENG	[-2.00 to 0.00 / <b>-0.15</b> / 0.01/step]
3-234-041	T Rank 1 Threshold	*ENG	[-1.00 to 0.00 / <b>-0.20</b> / 0.01 V/step]
3-234-042	T Rank 2 Threshold	*ENG	[0.00 to 1.00 / <b>0.20</b> / 0.01 V/step]
3-234-050	Correction Coefficient	*ENG	[1.0 to 5.0 / <b>2.0</b> / 0.1/step]

3250	[Image Area: Display]		
3-250-001	Latest: Bk	*ENG	Displays image area of the latest page.
3-250-002	Latest: C	*ENG	[0 to 9999 / <b>0</b> / 1 cm2/step]
3-250-003	Latest: M	*ENG	
3-250-004	Latest: Y	*ENG	

3251	[Dot Coverage: Display]		
3-251-001	Latest: Bk	*ENG	Displays image coverage of the latest page.
3-251-002	Latest: C	*ENG	[0.00 to 100.00 / <b>0.00</b> / 0.01%/step]
3-251-003	Latest: M	*ENG	
3-251-004	Latest: Y	*ENG	
3-251-011	Accumulate: Average: S: Bk	*ENG	Displays the cumulative average (S) of image coverage for the latest page.
3-251-012	Accumulate: Average: S: C	*ENG	[0.00 to 100.00 / <b>5.00</b> / 0.01%/step]
3-251-013	Accumulate: Average: S: M	*ENG	
3-251-014	Accumulate: Average: S: Y	*ENG	
3-251-021	Accumulate: Average: M: Bk	*ENG	Displays the cumulative average (M) of imag coverage for the latest page.
3-251-022	Accumulate: Average: M: C	*ENG	[0.00 to 100.00 / <b>5.00</b> / 0.01%/step]
3-251-023	Accumulate: Average: M: M	*ENG	
3-251-024	Accumulate: Average: M: Y	*ENG	
3-251-031	Accumulate: Average: L: Bk	*ENG	Displays the cumulative average (L) of image coverage for the latest page.
3-251-032	Accumulate: Average: L: C	*ENG	[0.00 to 100.00 / <b>5.00</b> / 0.01%/step]
3-251-033	Accumulate: Average: L: M	*ENG	
3-251-034	Accumulate: Average: L: Y	*ENG	
3-251-041	Accumulate Page: Set:	*ENG	Sets the cumulative pages (S). [1 to 255 / 5 / 1 sheets/step]

3-251-042   Accumulate Page: Set:   *ENG   Sets the cumulative pages (M).   [1 to 500 / 10 / 1 sheets/step]     3-251-043   Accumulate Page: Set: L   *ENG   Sets the cumulative pages (L).   [1 to 999 / 50 / 1 sheets/step]     3-251-051   Accumulate Page: Set:   *ENG   Sets the cumulative pages (S2).   [1 to 255 / 40 / 1 sheets/step]     3-251-052   Accumulate Page: Set:   *ENG   Sets the cumulative pages (M2).   [1 to 500 / 10 / 1 sheets/step]     3-251-053   Accumulate Page: Set:   *ENG   Sets the cumulative pages (L2).   [1 to 999 / 50 / 1 sheets/step]     3-251-151   Accumulate: Average:   *ENG   [0.00 to 100.00 / 0 / 0.01%/step]     3-251-152   Accumulate: Average:   *ENG   [0.00 to 100.00 / 0 / 0.01%/step]     3-251-153   Accumulate: Average:   *ENG   [0.00 to 100.00 / 0 / 0.01%/step]     3-251-154   Accumulate: Average:   *ENG   [0.00 to 100.00 / 0 / 0.01%/step]     3-251-154   Accumulate: Average:   *ENG   [0.00 to 100.00 / 0 / 0.01%/step]				
[1 to 999 / 50 / 1 sheets/step]  3-251-051 Accumulate Page: Set: S2  *ENG Sets the cumulative pages (S2). [1 to 255 / 40 / 1 sheets/step]  3-251-052 Accumulate Page: Set: M2  *ENG Sets the cumulative pages (M2). [1 to 500 / 10 / 1 sheets/step]  3-251-053 Accumulate Page: Set: *ENG Sets the cumulative pages (L2). [1 to 999 / 50 / 1 sheets/step]  3-251-151 Accumulate: Average: *ENG [0.00 to 100.00 / 0 / 0.01%/step]  3-251-152 Accumulate: Average: *ENG [0.00 to 100.00 / 0 / 0.01%/step]  3-251-153 Accumulate: Average: *ENG [0.00 to 100.00 / 0 / 0.01%/step]  3-251-154 Accumulate: Average: *ENG [0.00 to 100.00 / 0 / 0.01%/step]	3-251-042	_	*ENG	
S2	3-251-043	Accumulate Page: Set: L	*ENG	
M2	3-251-051	_	*ENG	
L2	3-251-052		*ENG	
Bk  3-251-152	3-251-053		*ENG	
C  3-251-153 Accumulate: Average: *ENG [0.00 to 100.00 / <b>0</b> / 0.01%/step]  M  3-251-154 Accumulate: Average: *ENG [0.00 to 100.00 / <b>0</b> / 0.01%/step]	3-251-151		*ENG	[0.00 to 100.00 / <b>0</b> / 0.01%/step]
M  3-251-154 Accumulate: Average: *ENG [0.00 to 100.00 / <b>0</b> / 0.01%/step]	3-251-152		*ENG	[0.00 to 100.00 / <b>0</b> / 0.01%/step]
	3-251-153		*ENG	[0.00 to 100.00 / <b>0</b> / 0.01%/step]
	3-251-154		*ENG	[0.00 to 100.00 / <b>0</b> / 0.01%/step]

3252	[Accumulate Image Area: Display]			
3-252-001	Latest: Bk	*ENG	Displays accumulate of image area.	
3-252-002	Latest: C	*ENG	[0 to 65535 / <b>0</b> / 1 cm <sup>2</sup> /step]	
3-252-003	Latest: M	*ENG		
3-252-004	Latest: Y	*ENG		
3-252-011	Developer: Bk	*ENG	[0 to 4294967295 / <b>0</b> / 1 cm2/step]	
3-252-012	Developer: C	*ENG		
3-252-013	Developer: M	*ENG		
3-252-014	Developer: Y	*ENG		

3260	[Temperature/Humidity: Display]			
3-260-001	Temperature: Display	ENG	Displays the temperature of environment sensor output  [-5.0 to 45.0 / 0 / 0.1 deg/step]	
3-260-002	Relative Humidity: Display	ENG	Displays the relative humidity of environment sensor output.  [0.0 to 100.0 / <b>0</b> / 0.1%RH/step]	
3-260-003	Absolute Humidity: Display	ENG	Displays the absolute humidity of environment sensor output.  [0.00 to 100.00 / 0 / 0.01 g/m3/step]	

3310	[ID.Sen. Detection: Voffset]			
3-310-001	Voffset reg	*ENG	Displays output voltage of normal reflection light at ID sensor LED off.  [0.00 to 5.50 / <b>0</b> / 0.01 V/step]	
3-310-011	Voffset dif	*ENG	Displays output voltage of diffused reflection light at ID sensor LED off.  [0.00 to 5.50 / <b>0</b> / 0.01 V/step]	
3-310-021	Voffset TM(Front)	*ENG	Displays output voltage of normal reflection	
3-310-022	Voffset TM(Center)	*ENG	light at TM_Front, TM_Center or TM_Rear sensor LED off.	
3-310-023	Voffset TM(Rear)	*ENG	[0.00 to 5.50 / <b>0</b> / 0.01 V/step]	

3311	[ID.Sen. Detection :Vmin]			
3-311-001	Vmin_K	*ENG	Displays Vmin output of tone pattern for black.	
			[0.000 to 5.000 / <b>0</b> / 0.001/step]	

3312	[ID.Sen. Detection: Vct]		
3-312-001	Vct_reg	*ENG	Displays the normal reflection output of crosstalk.
			[0.000 to 5.000 / <b>0</b> / 0.001 V/step]

3-312-011	Vct_dif	*ENG	Displays the diffused reflection output of crosstalk.
			[0.000 to 5.000 / <b>0</b> / 0.001 V/step]

3320	[Vsg Adj: Execute]		
3-320-001	ID/TM Sensor	ENG	[- / <b>-</b> / -] [Execute]

3321	[Vsg Adj. Result: Vsg]		
3-321-001	Vsg reg	*ENG	Displays normal reflection light output from bared belt with Vsg adjustment.  [0.00 to 5.50 / 4.00 / 0.01 V/step]
3-321-011	Vsg dif	*ENG	Displays diffused reflection light output from bared belt with Vsg adjustment.  [0.00 to 5.50 / 0.00 / 0.01 V/step]
3-321-021	Vsg reg(BW)	*ENG	Displays normal reflection light output from bared belt with Vsg adjustment.  [0.00 to 5.50 / 4.00 / 0.01 V/step]
3-321-031	Vsg dif(BW)	*ENG	Displays diffused reflection light output from bared belt with Vsg adjustment.  [0.00 to 5.50 / 0.00 / 0.01 V/step]
3-321-041	Vsg TM(Front)	*ENG	Displays normal reflection light output from
3-321-042	Vsg TM(Center)	*ENG	bared belt with Vsg adjustment (TM_Front, TM_Center or TM_Rear sensor).
3-321-043	Vsg TM(Rear)	*ENG	[0.00 to 5.50 / <b>4.00</b> / 0.01 V/step]

3322	[Vsg Adj. Result: Ifsg]			
	Displays the result value of the Vsg adjustment for each sensor.			
3-322-001	Ifsg	*ENG	Displays Vsg adjusted ID sensor LED current.  [0.000 to 50.000 / 27.000 / 0.001 mA/ step]	

3-322-011	Ifsg (minimum)	*ENG	Displays Vsg adjusted ID sensor LED current.  [0.000 to 50.000 / 27.000 / 0.001 mA/ step]
3-322-021	Ifsg: TM(Front)	*ENG	Displays Vsg adjusted ID sensor LED current
3-322-022	Ifsg: TM(Center)	*ENG	(TM_Front, TM_Center or TM_Rear sensor). [0.000 to 50.000 / <b>27.000</b> / 0.001 mA/
3-322-023	Ifsg: TM(Rear)	*ENG	step]

3323	[Vsg Adj. Result: Display]		
3-323-001	Latest	*ENG	Displays Vsg adjustment execution result.
3-323-002	Latest 1	*ENG	[0 to 999 / <b>0</b> / 1/step]
3-323-003	Latest 2	*ENG	
3-323-004	Latest 3	*ENG	
3-323-005	Latest 4	*ENG	
3-323-006	Latest 5	*ENG	
3-323-007	Latest 6	*ENG	
3-323-008	Latest 7	*ENG	
3-323-009	Latest 8	*ENG	
3-323-010	Latest 9	*ENG	

3330	[ID Sen. Sensitivity Coef.: Set]		
3-330-001	K2(Latest)	*ENG	Displays the latest value for the sensitivity correction coefficient (K2) of ID sensor.  [0.0000 to 5.0000 / 0.5280 / 0.0001/step]
3-330-011	K5(Latest)	*ENG	Displays the latest value for the sensitivity correction coefficient (K5) of ID sensor.  [0.0000 to 10.0000 / 2.0000 / 0.0001/ step]

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3-331-021	K2: Check	*ENG	[0.000 to 1.000 / <b>0.528</b> / 0.001/step]
3-331-031	Diffuse Ratio Correction Coef.	*ENG	[0.75 to 1.35 / <b>1.00</b> / 0.01/step]
3-331-041	Vct_reg Check:Slope	*ENG	[0.0000 to 1.0000 / <b>0.0000</b> / 0.0001 V/mA/step]
3-331-046	Vct_reg Check:Xint	*ENG	[0.0 to 25.5 / <b>0.0</b> / 0.1 mA/step]
3-331-051	Vct_dif Check:Slope	*ENG	[0.0000 to 1.0000 / <b>0.0000</b> / 0.0001V/mA/step]
3-331-056	Vct_dif Check:Xint	*ENG	[0.0 to 25.5 / <b>0.0</b> / 0.1 mA/step]

3400	[Toner Supply Type Select]		
3-400-001	Bk	*ENG	Selects toner supply mode.
3-400-002	С	*ENG	[0 to 4 / <b>4</b> / 1/step]
3-400-003	М	*ENG	0: FIXED 2: PID
3-400-004	Υ	*ENG	4: DANC

3411	[Toner Supply Qty : Displ	ay]	
3-411-001	Bk	ENG	Displays the latest value of toner supply
3-411-002	С	ENG	quantity from toner supply calculation.  [0.0 to 40000.0 / <b>0</b> / 0.1 mg/step]
3-411-003	М	ENG	[ero to too coto, <b>c</b> , err mg, step]
3-411-004	Υ	ENG	

3420	[Developer Weight: Set]		
3-420-001	Developer Weight: Bk	*ENG	Sets the developer weight.
			[50 to 2000 / <b>120</b> / 1 g/step]

3421	[Toner Supply Ability: Set]
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3-421-001	Bk	*ENG	Sets toner supply ability to developer from sub hopper.
3-421-002	С	*ENG	[0.001 to 2.000 / <b>0.469</b> / 0.001 g/sec/
3-421-003	М	*ENG	step]
3-421-004	Υ	*ENG	
3-421-011	Coefficient 1	*ENG	[0.50 to 2.00 / 1.00 / 0.01/step]
3-421-012	Coefficient 2	*ENG	
3-421-013	Coefficient 3	*ENG	
3-421-014	Coefficient 4	*ENG	
3-421-015	Coefficient 5	*ENG	
3-421-016	Coefficient 6	*ENG	
3-421-017	Coefficient 7	*ENG	
3-421-018	Coefficient 8	*ENG	
3-421-019	Coefficient 9	*ENG	
3-421-020	Coefficient 10	*ENG	
3-421-021	Unit Time	*ENG	[0 to 60000 / <b>3000</b> / 1 msec/step]
3-421-031	Environment Threshold:	*ENG	Sets absolute humidity threshold 1 for supply ability correction.  [0.0 to 65.0 / 17.0 / 0.1 g/m3/step]
3-421-032	Environment Threshold: 2	*ENG	Sets absolute humidity threshold 2 for supply ability correction.  [0.0 to 65.0 / 29.0 / 0.1 g/m3/step]
3-421-033	Environment Threshold: 3	*ENG	Sets absolute humidity threshold 3 for supply ability correction.  [0.0 to 65.0 / 34.0 / 0.1 g/m3/step]
3-421-041	Environment Coefficient	*ENG	Sets environment correction coefficient 1that corrects supply ability by absolute humidity.  [0.50 to 2.00 / 1.04 / 0.01/step]

3-421-042	Environment Coefficient 2	*ENG	Sets environment correction coefficient 2 or 3 that corrects supply ability by absolute
3-421-043	Environment Coefficient 3	*ENG	humidity. [0.50 to 2.00 / <b>1.00</b> / 0.01/step]
3-421-044	Environment Coefficient 4	*ENG	Sets environment correction coefficient 4 that corrects supply ability by absolute humidity.  [0.50 to 2.00 / <b>0.96</b> / 0.01/step]

3422	[Toner Supply Limits :Set]		
3-422-001	Max Supply Rate:Bk	*ENG	Sets the maximum toner supply rate.
3-422-002	Max Supply Rate:C	*ENG	[0 to 255 / <b>100</b> / 1%/step]
3-422-003	Max Supply Rate:M	*ENG	
3-422-004	Max Supply Rate:Y	*ENG	
3-422-011	Min Supply Time: Bk	*ENG	Sets the minimum toner supply rate.
3-422-012	Min Supply Time: C	*ENG	[0 to 255 / <b>100</b> / 1 msec/step]
3-422-013	Min Supply Time: M	*ENG	
3-422-014	Min Supply Time: Y	*ENG	

3432	[DrvTime: Setting]		
3-432-001	DriveTime(Maximum)	*ENG	Sets the maximum continuous supply time.
			[0 to 1500 / <b>800</b> / 1 msec/step]

3440	[Fixed Supply Mode]		
3-440-001	Fixed Rate: Bk	*ENG	Sets toner supply ratio for fixed supply mode.
3-440-002	Fixed Rate: C	*ENG	[0 to 100 / <b>10</b> / 1%/step]
3-440-003	Fixed Rate: M	*ENG	
3-440-004	Fixed Rate: Y	*ENG	

3450	[Toner Supply PID: Setting]
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3-450-001	Vt Proportion Coef.: Bk	*ENG	Sets supply coefficient to supply toner
3-450-002	Vt Proportion Coef.: C	*ENG	proportionate to Vt-Vtref at toner supply control.
3-450-003	Vt Proportion Coef.: M	*ENG	[0 to 2550 / <b>40</b> / 1/step]
3-450-004	Vt Proportion Coef.: Y	*ENG	
3-450-011	Pixel Proportion Coef. 1 : Bk	*ENG	Sets supply coefficient to supply toner proportionate to output imaging pixel (PxI) at
3-450-012	Pixel Proportion Coef. 1:	*ENG	toner supply control. [0.00 to 2.55 / <b>0.60</b> / 0.01/step]
3-450-013	Pixel Proportion Coef. 1:	*ENG	
3-450-014	Pixel Proportion Coef. 1:	*ENG	
3-450-021	Pixel Proportion Coef. 2: Bk	*ENG	Displays the current value of pixel proportionality coefficient 2 for supply
3-450-022	Pixel Proportion Coef. 2: C	*ENG	coefficient to supply toner proportionate to the pixel (PxI) of output image at toner supply control.
3-450-023	Pixel Proportion Coef. 2: M	*ENG	[0.00 to 2.55 / <b>1.00</b> / 0.01/step]
3-450-024	Pixel Proportion Coef. 2: Y	*ENG	
3-450-031	Correction Coeffient: 1	*ENG	Sets the supply coefficient to supply toner proportionate to the pixel (PxI) of output image at toner supply control.
			[0.00 to 2.55 / 1.00 / 0.01/step]
3-450-032	Correction Coeffient: 2	*ENG	[0.00 to 2.55 / <b>0.50</b> / 0.01/step]
3-450-033	Correction Coeffient: 3	*ENG	[0.00 to 2.55 / <b>0.00</b> / 0.01/step]
3-450-034	Correction Coeffient: 4	*ENG	[0.00 to 2.55 / <b>0.25</b> / 0.01/step]
3-450-035	Correction Coeffient: 5	*ENG	[0.00 to 2.55 / <b>0.50</b> / 0.01/step]

3-450-041	Pixel Proportion Coef. 3: Bk	*ENG	Displays the current value of pixel proportionality coefficient 3 for supply
3-450-042	Pixel Proportion Coef. 3: C	*ENG	coefficient to supply toner proportionate to the pixel (PxI) of output image at toner supply control.
3-450-043	Pixel Proportion Coef. 3: M	*ENG	[0.70 to 1.30 / <b>1.00</b> / 0.01/step]
3-450-044	Pixel Proportion Coef. 3: Y	*ENG	
3-450-051	Correction Value 1	*ENG	Sets the supply coefficient to supply toner proportionate to the pixel (PxI) of output image at toner supply control.  [-0.10 to 0.00 / -0.01 / 0.01/step]
3-450-052	Correction Value 2	*ENG	[0.00 to 0.10 / <b>0.01</b> / 0.01/step]
3-450-061	Pixel Proportion Coef.	*ENG	[0.00 to 1.00 / <b>0.35</b> / 0.01/step]
3-450-071	I_Vt_Coef: Bk	*ENG	Sets the supply coefficient to supply toner
3-450-072	I_Vt_Coef: C	*ENG	proportionate to the pixel (PxI) of output image at toner supply control.
3-450-073	I_Vt_Coef: M	*ENG	[0 to 2550 / <b>500</b> / 1/step]
3-450-074	I_Vt_Coef: Y	*ENG	
3-450-081	Si:Bk	*ENG	Sets the supply coefficient to supply toner
3-450-082	Si:C	*ENG	according to the accumulation of Vt-Vtref differences at toner supply control.
3-450-083	Si:M	*ENG	[-255.00 to 255.00 / <b>0.00</b> / 0.01/step]
3-450-084	Si:Y	*ENG	
3-450-091	Vt Sum Times: Bk	*ENG	Displays the accumulation of Vt-Vtref
3-450-092	Vt Sum Times: C	*ENG	differences. [1 to 255 / <b>20</b> / 1 times/step]
3-450-093	Vt Sum Times: M	*ENG	[ 1. 15 255 / <b>25</b> / 1 mmss/ stop]
3-450-094	Vt Sum Times: Y	*ENG	

3460	[Toner Supply Ctrl: DANC: Set]	
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3-460-011	Minimum Supply Time	*ENG	Sets the DANC minimum supply time.  [0 to 250 / 100 / 1 msec/step]
3-460-012	Maximum Supply Time	*ENG	Sets the DANC maximum supply time.  [0 to 1000 / 200 / 1 msec/step]
3-460-022	SMITH: Supply Amount: Bk	*ENG	Sets the supply quantity at Smith model.  [1 to 500 / 129 / 1 mg/step]
3-460-111	Transfer Rate: Bk	*ENG	Sets the inverse of transfer rate to make up for
3-460-112	Transfer Rate: C	*ENG	the reverse transfer of ANC. [1.00 to 1.50 / <b>1.00</b> / 0.01/step]
3-460-113	Transfer Rate: M	*ENG	[
3-460-114	Transfer Rate: Y	*ENG	

3461	[Toner Supply Ctrl: DANC: Set]		
3-461-001	PI Rate	*ENG	Changes the request values of PI at one time.  [5 to 200 / 100 / 1%/step]
3-461-011	PI: P Gain: Bk	*ENG	Sets I gain. [0.0000 to 1.0000 / <b>0.0100</b> / 0.0001/step]
3-461-012	P Limits: Ratio: Up: Bk	*ENG	Sets P gain. [0.00 to 1.00 / <b>0.10</b> / 0.01/step]
3-461-013	P Limits: Ratio: Low: Bk	*ENG	Sets P gain. [0.00 to 1.00 / <b>0.20</b> / 0.01/step]
3-461-021	Pl: I Gain: Bk	*ENG	Sets the limit for the I or P request value (supply plus side).  [0.000 to 0.100 / 0.0100 / 0.0001/step]
3-461-022	I Limits: Ratio: Up: Bk	*ENG	Sets the limit for the I or P request value (supply plus side).  [0.00 to 1.00 / 0.10 / 0.01/step]
3-461-023	I Limits: Ratio: Low: Bk	*ENG	Sets the limit for the I request value (supply minus side).  [0.00 to 1.00 / 0.30 / 0.01/step]

3-461-052	AW:AWIpni:Bk	*ENG	
3-461-102	Pl: Line Spd Corr.: StdSpd1: Bk	*ENG	[0 to 2000 / <b>100</b> / 1/step]
3-461-103	PI: Line Spd Corr.: StdSpd2: Bk	*ENG	[0.05 to 1.00 / * / 0.01/step]  *C306:1.00  *C406:0.84
3-461-104	PI: Line Spd Corr.: LowSpd: Bk	*ENG	[0.05 to 1.00 / * / 0.01/step]  *C306:1.00  *C406:0.71
3-461-121	SMITH: Gain: Bk	*ENG	[0.05 to 1.00 / * / 0.01/step]  *C306: <b>0.50</b> *C406: <b>0.35</b>
3-461-122	SMITH: Ratio: Std Speed 1: Bk	*ENG	[0.00 to 2.00 / 1.00 / 0.01/step]
3-461-123	SMITH: Ratio: Std Speed 2: Bk	*ENG	[0.00 to 1.00 / 1.00 / 0.01/step]
3-461-124	SMITH: Ratio: Low Speed: Bk	*ENG	[0.00 to 1.00 / 1.00 / 0.01/step]

3462	[TonerSupply :DANC]		
3-462-001	ANC: Rate	*ENG	Sets the request value of ANC to change the all ANC filters at one time.  [0 to 200 / 100 / 1%/step]  100: normal control, 0: without ANC
3-462-101	ANC:Gain: Bk	*ENG	Sets the of all ANC filters. [0.00 to 2.00 / 1.00 / 0.01/step]
3-462-102	ANC: Ratio: Std Speed 1: Bk	*ENG	[0.05 to 1.00 / 1.00 / 0.01/step]
3-462-103	ANC: Ratio: Std Speed 2: Bk	*ENG	Sets the liner speed correction to the gain of all ANC filters (Low speed).  [0.05 to 1.00 / 1.00 / 0.01/step]

3-462-104	ANC: Ratio: Low	*ENG	[0.05 to 1.00 / <b>1.00</b> / 0.01/step]
	Speed: Bk		

3463	[Toner Supply Ctrl: DAN	C: Set]	
3-463-101	Integral: I: Save: Bk	*ENG	Sets the value for I storage corresponding to
3-463-102	Integral: I: Save: C	*ENG	the power off/on. [-1000.0000 to 1000.0000 / <b>0.0000</b> /
3-463-103	Integral: I: Save: M	*ENG	0.0001/step]
3-463-104	Integral: I: Save: Y	*ENG	
3-463-111	ANC:Ref Save: Bk	*ENG	Sets the value for ANC storage corresponding
3-463-112	ANC:Ref Save: C	*ENG	to the power off/on. [-1000.0000 to 1000.0000 / <b>0.0000</b> /
3-463-113	ANC:Ref Save: M	*ENG	0.0001/step]
3-463-114	ANC:Ref Save: Y	*ENG	
3-463-201	Save_DANC: Bk	*ENG	Displays the image area of the latest page.
3-463-202	Save_DANC: C	*ENG	[0 to 9999 / <b>0</b> / 1 cm2/step]
3-463-203	Save_DANC: M	*ENG	
3-463-204	Save_DANC: Y	*ENG	

3500	[ImgQltyAdj :ON/OFF]		
3-500-001	ALL	*ENG	Sets to off for the execution determination of all
3-500-002	Process Control	*ENG	image processing adjustments, potential controls, MUSIC condition adjustments, or TD
3-500-003	MUSIC	*ENG	sensor initial settings.
3-500-004	TD Sensor Initial Set	*ENG	[0 or 1 / 1 / 1/step] 0:OFF, 1:ON

3501	[Toner End Prohibition Setting]		
3-501-001	Process Control	*ENG	[0 or 1 / 1 / 1/step]
3-501-002	MUSIC	*ENG	0:Permit, 1:Forbid
3-501-003	TC Adjustment	*ENG	

3509	[ImgQltyAdj :ModeSelect]		
	Specifies the process control operation mode (B/W or Full-color).		
	Note		
	<ul> <li>Setting this SP to the B/W priority applies the image quality adjustment for B/W only without MUSIC. It reduces the warm-up time and color toner consumption.</li> </ul>		
	However, the first copy time in full-color printing will be longer because the adjustment for full-color is executed at full-color jobs.		
3-509-011	FC/BW Mode Priority *ENG [0 or 1 / 1 / 1/step] Setting 0:Permit, 1:Forbid		

3510	[Image Quality Adj.: Exec Flag]		
3-510-001	MUSIC	*ENG	[0 to 2 / 0 / 1/step]

3520	[ImgQltyAdj :Interval]		
3-520-001	During Job	*ENG	Sets the interval pages for image quality adjustment detection during job.  [0 to 100 / 5 / 1 pages/step]
3-520-002	During Stand-by	*ENG	Sets the interval pages for image quality adjustment detection during the stand-by mode.  [0 to 100 / 10 / 1 minutes/step]

3521	[Drum Stop Time :Disp]		
	Displays the ending time of image processing (year, month, day, hour, and minute).		
3-521-001	Year:Col	*ENG	[0 to 99 / <b>0</b> / 1 year/step]
3-521-002	Month:Col	*ENG	[1 to 12 / 1 / 1 month/step]
3-521-003	Day:Col	*ENG	[1 to 31 / 1 / 1 day/step]
3-521-004	Hour:Col	*ENG	[0 to 23 / <b>0</b> / 1 hour/step]
3-521-005	Minute:Col	*ENG	[0 to 59 / <b>0</b> / 1 minute/step]

3522	[Drum Stop:Environment:Display]
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3-522-001	Temperature	*ENG	Displays the temperature at the end of the image processing.  [-1280.0 to 1270.0 / <b>0</b> / 0.1 deg/step]
3-522-002	Relative Humidity	*ENG	Displays the relative humidity at the end of the image processing.  [0.0 to 1000.0 / <b>0</b> / 0.1%RH/step]
3-522-003	Absolute Humidity	*ENG	Displays the absolute humidity at the end of the image processing.  [0.0 to 1000.0 / <b>0</b> / 0.1 g/m3/step]

3522	[Drum Stop Environ :Disp]		
3-522-011	Temperature:Col	*ENG	Displays the temperature at the end of the image processing.  [-1280.0 to 1270.0 / 0 / 0.1 deg/step]
3-522-012	Rel Humidity:Col	*ENG	Displays the relative humidity at the end of the image processing.  [0.0 to 1000.0 / <b>0</b> / 0.1%RH/step]
3-522-013	Abs Humidity:Col	*ENG	Displays the absolute humidity at the end of the image processing.  [0.0 to 1000.0 / 0 / 0.1 g/m^3/step]

3522	[Rapi_timer]		
3-522-100	Time Setting	ENG	[0 to 255 / <b>30</b> / 1 sec/step]

3529	[ProCon Auto Exe Interval: Set]		
3-529-001	Development Gamma Correction	*ENG	Sets on/off for the developer gamma correction or the environment correction of
3-529-002	Environment Correction	*ENG	process control execution interval.  [0 or 1 / 1 / 1/step]  0:OFF, 1:ON

3-529-003	Absolute Humidity Threshold	*ENG	Sets absolute humidity threshold for the environment correction of process control execution interval.  [0.0 to 99.0 / 4.3 / 0.1 g/m^3/step]
3-529-004	Maximum Correction Times	*ENG	Sets the maximum number of times for interrupt or job end process control.  [0 to 99 / 4 / 1 counts/step]
3-529-005	Execution Counter	ENG	Displays the maximum counter for interrupt or job end process control.  [0 to 255 / 0 / 1 counts/step]
3-529-006	Page Counter: BW	*ENG	Displays the page counter of process control.
3-529-007	Page Counter: FC	*ENG	[0 to 5000 / <b>0</b> / 1 sheets/step]

3530	[Power ON ProCon :Set]		
3-530-001	Non-use Time Setting	*ENG	[0 to 1440 / <b>360</b> / 1 minute/step]
3-530-002	Temperature Range Threshold	*ENG	[0 to 99 / <b>10</b> / 1 deg/step]
3-530-003	Relative Humidity Range Thresh	*ENG	[0 to 99 / <b>50</b> / 1%RH/step]
3-530-004	Absolute Humidity Range Thresh	*ENG	[0 to 99 / <b>6</b> / 1 g/m^3/step]
3-530-005	Interval:BW	*ENG	[0 to 5000 / <b>250</b> / 1 sheets/step]
3-530-006	Interval:FC	*ENG	[0 to 5000 / <b>100</b> / 1 sheets/step]
3-530-007	Page Counter: BW	*ENG	[0 to 5000 / <b>0</b> / 1 sheets /step]
3-530-008	Page Counter: FC	*ENG	
3-530-009	Non-use Time Setting(Long)	*ENG	[0 to 65535 / <b>2880</b> / 1 min/step]

3531	[Non-useTime Procon :Set]		
	Sets the non-use time setting, temperature, relative humidity, absolute humidity or page interval as the threshold of process control execution determination at power on.		
3-531-001	Non-use Time Setting	*ENG	[0 to 1440 / <b>360</b> / 1 minute/step]
3-531-002	Temperature Range Threshold	*ENG	[0 to 99 / <b>10</b> / 1 deg/step]
3-531-003	Relative Humidity Range Thresh	*ENG	[0 to 99 / <b>50</b> / 1%RH/step]
3-531-004	Absolute Humidity Range Thresh	*ENG	[0 to 99 / <b>6</b> / 1 g/m3/step]
3-531-005	Maximum Execution Number	*ENG	[0 to 99 / <b>10</b> / 1 times/step]

3533	[Interrupt ProCon :Set]		
3-533-001	Interval:Set:BW	*ENG	Sets the page interval for interrupt process control.  [0 to 5000 / 500 / 1 sheets/step]
3-533-002	Interval: Display: BW	*ENG	Displays the page interval for interrupt process control.  [0 to 5000 / 500 / 1 sheets/step]
3-533-003	Correction (Short): BW	*ENG	Sets the correction coefficient (Short) of page interval for interrupt process control.  [0.00 to 1.00 / 0.10 / 0.01/step]
3-533-004	Correction (Mid.): BW	*ENG	Sets the correction coefficient (Mid) of page interval for interrupt process control.  [0.00 to 1.00 / 1.00 / 0.01/step]
3-533-011	Interval:Set:FC	*ENG	Sets the page interval for interrupt process control.  [0 to 5000 / 200 / 1 sheets/step]

3-533-012	Interval: Display:FC	*ENG	Displays the page interval for interrupt process control.  [0 to 5000 / 200 / 1 sheets/step]
3-533-013	Correction (Short): FC	*ENG	Sets the correction coefficient (Short) of page interval for interrupt process control.  [0.00 to 1.00 / 0.25 / 0.01/step]
3-533-014	Correction (Mid.): FC	*ENG	Sets the correction coefficient (Mid) of page interval for interrupt process control.  [0.00 to 1.00 / 1.00 / 0.01/step]

3534	[JobEnd ProCon :Set]		
3-534-001	Interval:Set:BW	*ENG	Sets the page interval for job end process control.  [0 to 5000 / 250 / 1 sheets/step]
3-534-002	Interval: Display:BW	*ENG	Displays the page interval for job end process control.  [0 to 5000 / 250 / 1 sheets/step]
3-534-003	Correction (Short): BW	*ENG	Sets the correcting coefficient (Short) for job end process control.  [0.00 to 1.00 / 0.20 / 0.01/step]
3-534-004	Correction (Mid.): BW	*ENG	Sets the correcting coefficient (Mid) for job end process control.  [0.00 to 1.00 / 1.00 / 0.01/step]
3-534-011	Interval:Set:FC	*ENG	Sets the page interval for job end process control.  [0 to 1000 / 100 / 1 sheets/step]
3-534-012	Interval: Display:FC	*ENG	Displays the page interval for job end process control.  [0 to 5000 / 100 / 1 sheets/step]
3-534-013	Correction (Short): FC	*ENG	Sets the correcting coefficient (Short) for job end process control.  [0.00 to 1.00 / 0.50 / 0.01/step]

3-534-014	Correction (Mid.): FC	*ENG	Sets the correcting coefficient (Mid) for job end
			process control.
			[0.00 to 1.00 / <b>1.00</b> / 0.01/step]

3539	[Dev Agitating Time :Set	]	
3-539-001	Agitating Time	*ENG	Sets the developer agitating time.  [0 to 3000 / 10 / 1 sec/step]
3-539-010	ON/OFF(Abs Humidity Reference)	*ENG	Sets on/off for absolute humidity correction of the developer agitating time.  [0 or 1 / 1 / 1/step]  0:OFF, 1:ON
3-539-011	Absolute Humidity Reference: 1	*ENG	[0 to 3000 / <b>0</b> / 1 sec/step]
3-539-012	Absolute Humidity Reference: 2	*ENG	[0 to 3000 / <b>0</b> / 1 sec/step]
3-539-013	Absolute Humidity Reference: 3	*ENG	[0 to 3000 / <b>5</b> / 1 sec/step]
3-539-014	Absolute Humidity Reference: 4	*ENG	[0 to 3000 / <b>5</b> / 1 sec/step]
3-539-015	Absolute Humidity Reference: 5	*ENG	[0 to 3000 / <b>5</b> / 1 sec/step]
3-539-016	Absolute Humidity Reference: 6	*ENG	[0 to 3000 / <b>5</b> / 1 sec/step]
3-539-021	Absolute Humidity Threshold: 1	*ENG	[0.0 to 65.0 / <b>4.0</b> / 0.1 g/m^3/step]
3-539-022	Absolute Humidity Threshold: 2	*ENG	[0.0 to 65.0 / <b>8.0</b> / 0.1 g/m^3/step]
3-539-023	Absolute Humidity Threshold: 3	*ENG	[0.0 to 65.0 / <b>12.0</b> / 0.1 g/m <sup>3</sup> /step]
3-539-024	Absolute Humidity Threshold: 4	*ENG	[0.0 to 65.0 / <b>16.0</b> / 0.1 g/m^3/step]

3-539-025	Absolute Humidity Threshold: 5	*ENG	[0.0 to 65.0 / <b>24.0</b> / 0.1 g/m3/step]
3-539-030	ON/OFF(Non-use Time Reference)	*ENG	Sets on/off for non-use time correction of the developer agitating time.  [0 or 1 / 1 / 1/step]  0:OFF, 1:ON
3-539-031	Non-use Time Reference: 1	*ENG	[0 to 3000 / <b>0</b> / 1 sec/step]
3-539-032	Non-use Time Reference: 2	*ENG	
3-539-033	Non-use Time Reference: 3	*ENG	
3-539-034	Non-use Time Reference: 4	*ENG	
3-539-035	Non-use Time Reference: 5	*ENG	
3-539-036	Non-use Time Reference: 6	*ENG	
3-539-037	Non-use Time Reference: 7	*ENG	
3-539-038	Non-use Time Reference: 8	*ENG	
3-539-039	Non-use Time Reference: 9	*ENG	[0 to 3000 / <b>5</b> / 1 sec/step]
3-539-040	Non-use Time Reference: 10	*ENG	[0 to 3000 / <b>10</b> / 1 sec/step]
3-539-041	Non-use Time Threshhold: 1	*ENG	[0 to 30000 / <b>15</b> / 1 min/step]
3-539-042	Non-use Time Threshhold:2	*ENG	[0 to 30000 / <b>30</b> / 1 min/step]
3-539-043	Non-use Time Threshhold:3	*ENG	[0 to 30000 / <b>60</b> / 1 min/step]

3-539-044	Non-use Time Threshhold:4	*ENG	[0 to 30000 / <b>120</b> / 1 min/step]
3-539-045	Non-use Time Threshhold:5	*ENG	[0 to 30000 / <b>240</b> / 1 min/step]
3-539-046	Non-use Time Threshhold:6	*ENG	[0 to 30000 / <b>360</b> / 1 min/step]
3-539-047	Non-use Time Threshhold:7	*ENG	[0 to 30000 / <b>720</b> / 1 min/step]
3-539-048	Non-use Time Threshhold:8	*ENG	[0 to 30000 / <b>1440</b> / 1 min/step]
3-539-049	Non-use Time Threshhold:9	*ENG	[0 to 30000 / <b>2880</b> / 1 min/step]
3-539-050	ON/OFF(Dot Coverage Reference)	*ENG	Sets on/off for image area correction of the developer agitating time.  [0 to 1 / 1 / 1/step]  0:OFF, 1:ON
3-539-051	Dot Coverage Reference: 1	*ENG	[0 to 3000 / <b>0</b> / 1 sec/step]
3-539-052	Dot Coverage Reference: 2	*ENG	[0 to 3000 / <b>0</b> / 1 sec/step]
3-539-053	Dot Coverage Reference: 3	*ENG	[0 to 3000 / <b>5</b> / 1 sec/step]
3-539-054	Dot Coverage Reference: 4	*ENG	[0 to 3000 / <b>5</b> / 1 sec/step]
3-539-055	Dot Coverage Reference: 5	*ENG	[0 to 3000 / <b>10</b> / 1 sec/step]
3-539-056	Dot Coverage Reference: 6	*ENG	[0 to 3000 / <b>10</b> / 1 sec/step]
3-539-061	Dot Coverage Threshold: 1	*ENG	[0 to 100 / <b>10</b> / 1%/step]
3-539-062	Dot Coverage Threshold: 2	*ENG	[0 to 100 / <b>20</b> / 1%/step]

3-539-063	Dot Coverage Threshold: 3	*ENG	[0 to 100 / <b>40</b> / 1%/step]
3-539-064	Dot Coverage Threshold: 4	*ENG	[0 to 100 / <b>60</b> / 1%/step]
3-539-065	Dot Coverage Threshold: 5	*ENG	[0 to 100 / <b>80</b> / 1%/step]
3-539-099	Upper Limit	*ENG	Sets the upper limit of the developer agitating time.  [O to 3600 / 30 / 1 sec/step]

3541	[Music Interval :Set]		
3-541-001	Page Counter: BW	*ENG	[0 to 5000 / <b>0</b> / 1 sheets/step]
3-541-002	Page Counter: FC	*ENG	

3550	[Refresh Mode]		
3-550-001	Required Area: Bk	*ENG	Displays the image area requiring the refresh.
3-550-002	Required Area: C	*ENG	[0 to 65535 / - / 1 cm^2/step]
3-550-003	Required Area: M	*ENG	
3-550-004	Required Area: Y	*ENG	
3-550-011	Dev. Motor Rotation: Display: Bk	*ENG	Displays the developer motor rotation between the refresh mode executions.
3-550-012	Dev. Motor Rotation: Display: C	*ENG	[0.0 to 1000.0 / <b>0</b> / 0.1 m/step]
3-550-013	Dev. Motor Rotation: Display: M	*ENG	
3-550-014	Dev. Motor Rotation: Display: Y	*ENG	
3-550-021	Rotation Threshold	*ENG	Sets the threshold of refresh mode execution determination.
			[0.0 to 1000.0 / <b>0.1</b> / 0.1 m/step]

3-550-031	Reflesh Threshold: Bk	*ENG	Sets the refresh execution threshold at toner density adjustment.  [0 to 255 / 25 / 1 cm^2/m/step]
3-550-032	Reflesh Threshold: C	*ENG	Sets the refresh execution threshold at toner
3-550-033	Reflesh Threshold: M	*ENG	density adjustment. [0 to 255 / <b>25</b> / 1 cm^2/m/step]
3-550-034	Reflesh Threshold: Y	*ENG	[[0.10.2007, 207, 1.0111, 27, 117, 0.104]
3-550-041	Job End Area Coefficient	*ENG	[0.1 to 25.5 / <b>1.0</b> / 0.1/step]
3-550-042	Job End Vb Coefficient	*ENG	[0 to 100 / <b>34</b> / 1%/step]
3-550-043	Job End Length	*ENG	[0 to 99 / <b>77</b> / 1 mm/step]
3-550-044	Job End Supply	*ENG	[0.000 to 1.000 / <b>0.450</b> / 0.001 mg/cm <sup>2</sup> / step]
3-550-081	Consumption Counts (Max)	*ENG	Sets the upper limit of number of toner refreshes performs at the same time of process control.  [0 to 50 / 0 / 1/step]
3-550-121	Refresh Page Threshold: Bk	*ENG	[0 to 200 / <b>100</b> / 1 page/step]
3-550-122	Refresh Page Threshold: Col	*ENG	[0 to 200 / <b>100</b> / 1 page/step]
3-550-131	Refresh Page Counter Bk	*ENG	[0 to 999999 / <b>0</b> / 1 page/step]
3-550-132	Refresh Page Counter C	*ENG	[0 to 999999 / <b>0</b> / 1 page/step]
3-550-133	Refresh Page Counter M	*ENG	[0 to 999999 / <b>0</b> / 1 page/step]
3-550-134	Refresh Page Counter Y	*ENG	[0 to 999999 / <b>0</b> / 1 page/step]

3553	[Transfer Belt cleaning]
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3-553-001	Transfer Idle Time Temp.: H	*ENG	[0.0 to 3.0 / <b>0.0</b> / 0.1 revolutions/step]
3-553-002	Transfer Idle Time Temp.: M	*ENG	
3-553-003	Transfer Idle Time Temp.: L	*ENG	
3-553-004	Transfer Idle Time Temp.: L: ON	*ENG	
3-553-005	Temperature Threshold:T2	*ENG	[20 to 30 / <b>25</b> / 1 deg/step]
3-553-006	Temperature Threshold:T1	*ENG	[0 to 15 / <b>15</b> / 1 deg/step]
3-553-007	Temperature Threshold:T3	*ENG	[0 to 30 / <b>18</b> / 1 deg/step]

3555	[Execution Interval: Set]		
3-555-001	Charge AC Control Counter: FC	*ENG	[0 to 2000 / <b>500</b> / 1 page/step]
3-555-002	Charge AC Control Counter: Bk	*ENG	[0 to 2000 / <b>500</b> / 1 page/step]

3600	[Select ProCon]		
3-600-001	Potential Control	*ENG	Sets the potential control mode.  [0 or 1 / 1 / 1/step]  0:FIXED, 1:CONTROL
3-600-002	LD Control	*ENG	Sets the LD control mode.  [0 or 3 / 1 / 1/step]  0:OFF, 1:ON

3-600-003	TC Adj. Mode	*ENG	Sets the execution timing for toner density adjustment process control.  [0 to 3 / 3 / 1/step]  0:Do Not Execute  1:1st Power On  2:1st Power On & Job End
3-600-004	ACC Before ProCon	*ENG	Selects the performance same as the process control executed before ACC.  [0 to 3 / 2 / 1/step]  0:Not Execute  1:Process Control  2:TC Control
3-600-060	Vsg ITB Prev Pattern Corr.	*ENG	[0 to 2 / <b>2</b> / 1/step]

3610	[Charging AC Control: Display]		
3-610-001	Standard Speed: Bk	*ENG	Displays the charged AC control value
3-610-002	Standard Speed: C	*ENG	determined by charged AC control.  [0.00 to 3.00 / <b>210</b> / 0.01 kV/step]
3-610-003	Standard Speed: M	*ENG	[[:::0] [:::0] [:::0]
3-610-004	Standard Speed: Y	*ENG	

3611	[Charging DC Control: Display] Displays charged DC bias determined by process control.			
3-611-001	Standard Speed: Bk	*ENG	[300 to 1000 / <b>700</b> / 1 -V/step]	
3-611-002	Standard Speed: C	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]	
3-611-003	Standard Speed: M	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]	
3-611-004	Standard Speed: Y	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]	
3-611-011	Mid Speed: Bk	*ENG	[300 to 1000 / <b>700</b> / 1 -V/step]	
3-611-012	Mid Speed: C	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]	
3-611-013	Mid Speed: M	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]	

3-611-014	Mid Speed: Y	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]
3-611-021	Low Speed: Bk	*ENG	[300 to 1000 / <b>700</b> / 1 -V/step]
3-611-022	Low Speed: C	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]
3-611-023	Low Speed: M	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]
3-611-024	Low Speed: Y	*ENG	[300 to 1000 / <b>690</b> / 1 -V/step]
3-611-051	Std Speed: BW	*ENG	[300 to 1000 / <b>700</b> / 1 -V/step]
3-611-061	Mid Speed: BW	*ENG	[300 to 1000 / <b>700</b> / 1 -V/step]
3-611-071	Low Speed: BW	*ENG	[300 to 1000 / <b>700</b> / 1 -V/step]
3-611-081	Std Speed2: BW	*ENG	[300 to 1000 / <b>700</b> / 1 -V/step]

3612	[Dev DC Control: Display	<u>'</u> ]	
3-612-001	Std Speed: Bk	*ENG	Displays developer bias determined by process
3-612-002	Std Speed: C	*ENG	control.   [200 to 800 / <b>550</b> / 1 -V/step]
3-612-003	Std Speed: M	*ENG	[250.5500, 500, 1,75.5]
3-612-004	Std Speed: Y	*ENG	
3-612-011	Mid Speed: Bk	*ENG	Displays developer bias determined by process
3-612-012	Mid Speed: C	*ENG	control.   [200 to 800 / <b>550</b> / 1 -V/step]
3-612-013	Mid Speed: M	*ENG	[250.5500, 500, 1,75.5]
3-612-014	Mid Speed: Y	*ENG	
3-612-021	Low Speed: Bk	*ENG	Displays developer bias determined by process
3-612-022	Low Speed: C	*ENG	control.   [200 to 800 / <b>550</b> / 1 -V/step]
3-612-023	Low Speed: M	*ENG	
3-612-024	Low Speed: Y	*ENG	
3-612-041	Vb Limit	*ENG	[0 to 500 / <b>50</b> / 1 V/step]

3-612-051	Std Speed: BW	*ENG	Displays developer bias determined by process
3-612-061	Mid Speed: BW	*ENG	control.   [200 to 800 / <b>550</b> / 1 -V/step]
3-612-071	Low Speed: BW	*ENG	[ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [
3-612-081	Std Speed2: BW	*ENG	

3613	[LD Power Control: Disp	lay]	
3-613-001	Std Speed: Bk	*ENG	Displays the LD power determined by process
3-613-002	Std Speed: C	*ENG	control. [0 to 200 / <b>100</b> / 1%/step]
3-613-003	Std Speed: M	*ENG	[6 16 200 / 100 / 170/ 8104]
3-613-004	Std Speed: Y	*ENG	
3-613-011	Mid Speed: Bk	*ENG	
3-613-012	Mid Speed: C	*ENG	
3-613-013	Mid Speed: M	*ENG	
3-613-014	Mid Speed: Y	*ENG	
3-613-021	Low Speed: Bk	*ENG	Displays the LD power determined by process
3-613-022	Low Speed: C	*ENG	control. [0 to 200 / <b>100</b> / 1%/step]
3-613-023	Low Speed: M	*ENG	[6.6.256, 1.66, 1.6, 6.66]
3-613-024	Low Speed: Y	*ENG	
3-613-051	Std Speed: BW	*ENG	
3-613-061	Mid Speed: BW	*ENG	
3-613-071	Std Speed: BW	*ENG	
3-613-081	Std Speed2: BW	*ENG	
3-613-101	ProCon Corr: Bk	*ENG	[0 to 200 / <b>160</b> / 1%/step]
3-613-102	ProCon Corr: C	*ENG	
3-613-103	ProCon Corr: M	*ENG	
3-613-104	ProCon Corr: Y	*ENG	

3619	[Img Bias: Line Spd Corr:	Set]	
3-619-001	Vb Coef: Std Speed: Bk	*ENG	[0.00 to 2.55 / * / 0.01/step]  *C306: <b>0.42</b> *C406: <b>0.52</b>
3-619-002	Vb Coef: Std Speed: C	*ENG	[0.00 to 2.55 / <b>1.00</b> / 0.01/step]
3-619-003	Vb Coef: Std Speed: M	*ENG	
3-619-004	Vb Coef: Std Speed: Y	*ENG	
3-619-005	Vb Coef: Low Speed: Bk	*ENG	[0.00 to 2.55 / * / 0.01/step]  *C306: <b>0.41</b> *C406: <b>0.48</b>
3-619-006	Vb Coef: Low Speed: C	*ENG	[0.00 to 2.55 / <b>1.00</b> / 0.01/step]
3-619-007	Vb Coef: Low Speed: M	*ENG	
3-619-008	Vb Coef: Low Speed: Y	*ENG	
3-619-011	Vb Offset: Std Speed: Bk	*ENG	[-1000 to 1000 / * / 1 V/step]  *C306: <b>283</b> *C406: <b>264</b>
3-619-012	Vb Offset: Std Speed: C	*ENG	[-1000 to 1000 / * / 1 V/step]
3-619-013	Vb Offset: Std Speed: M	*ENG	*C306: <b>44</b> *C406: <b>45</b>
3-619-014	Vb Offset: Std Speed: Y	*ENG	
3-619-015	Vb Offset: Low Speed: Bk	*ENG	[-1000 to 1000 / * / 1 V/step]  *C306: <b>215</b> *C406: <b>200</b>

3-619-016	Vb Offset: Low Speed: C	*ENG	[-1000 to 1000 / * / 1 V/step] *C306:- <b>37</b>
3-619-017	Vb Offset: Low Speed:	*ENG	*C406: <b>-44</b>
3-619-018	Vb Offset: Low Speed: Y	*ENG	
3-619-021	Vb Coef: Standard Speed 2: Bk	*ENG	[0.00 to 2.55 / <b>0.51</b> / 0.01/step]
3-619-024	Vb Coef: Mid Speed: Std Speed 2	*ENG	[0.00 to 2.55 / <b>0.69</b> / 0.01/step]
3-619-025	Vb Coef: Low Speed: Std Speed 2	*ENG	[0.00 to 2.55 / <b>0.55</b> / 0.01/step]
3-619-026	Vb Coef: Std Speed 2: Std Speed 2	*ENG	[0.00 to 2.55 / <b>0.85</b> / 0.01/step]
3-619-031	Vb Offset: Std Speed 2: Bk	*ENG	[-1000 to 1000 / <b>234</b> / 1 V/step]
3-619-034	Vb Offset: Mid Speed: Std Speed 2	*ENG	[-1000 to 1000 / <b>112</b> / 1 V/step]
3-619-035	Vb Offset: Low Speed: Std Speed 2	*ENG	[-1000 to 1000 / <b>107</b> / 1 V/step]
3-619-036	Vb Offset: Std Speed 2: Std Speed 2	*ENG	[-1000 to 1000 / <b>68</b> / 1 V/step]
3-619-041	Vb Coef: Mid Speed: Bk	*ENG	[0.00 to 2.55 / <b>0.47</b> / 0.01/step]
3-619-042	Vb Coef: Mid Speed: C	*ENG	[0.00 to 2.55 / <b>1.00</b> / 0.01/step]
3-619-043	Vb Coef: Mid Speed: M	*ENG	
3-619-044	Vb Coef: Mid Speed: Y	*ENG	
3-619-045	Vb Offset: Mid Speed: Bk	*ENG	[-1000 to 1000 / <b>265</b> / 1 V/step]

3-619-046	Vb Offset: Mid Speed: C	*ENG	[-1000 to 1000 / <b>15</b> / 1 V/step]
3-619-047	Vb Offset: Mid Speed: M	*ENG	
3-619-048	Vb Offset: Mid Speed: Y	*ENG	

3620	[ProCon Target M/A]		
3-620-001	Maximum M/A:Bk	*ENG	[0.250 to 0.750 / <b>0.436</b> / 0.001 mg/cm2/ step]
3-620-002	Maximum M/A:C	*ENG	[0.250 to 0.750 / <b>0.412</b> / 0.001 mg/cm2/ step]
3-620-003	Maximum M/A:M	*ENG	[0.250 to 0.750 / <b>0.471</b> / 0.001 mg/cm2/ step]
3-620-004	Maximum M/A:Y	*ENG	[0.250 to 0.750 / <b>0.464</b> / 0.001 mg/cm2/ step]
3-620-051	Maximum M/A:BW	*ENG	[0.250 to 0.750 / <b>0.383</b> / 0.001 mg/cm2/ step]

3622	[Development Potential: Display]		
3-622-001	Bk	*ENG	Displays the development potential.
3-622-002	С	*ENG	[0 to 800 / <b>0</b> / 1 V/step]
3-622-003	М	*ENG	
3-622-004	Υ	*ENG	
3-622-021	Bk:BW	*ENG	
3-622-051	Upper Limit: Bk	*ENG	Sets the development potential upper limit.(K) [400 to 800 / 738 / 1 V/step]
3-622-052	Upper Limit: C	*ENG	Sets the development potential upper limit.(C) [400 to 800 / 650 / 1 V/step]

3-622-053	Upper Limit: M	*ENG	Sets the development potential upper limit.(M) [400 to 800 / 650 / 1 V/step]
3-622-054	Upper Limit: Y	*ENG	Sets the development potential upper limit.(Y) [400 to 800 / 650 / 1 V/step]
3-622-061	Lower Limit: Bk	*ENG	Sets the development potential lower limit.(K) [0 to 400 / 250 / 1 V/step]
3-622-062	Lower Limit: C	*ENG	Sets the development potential lower limit.(C) [0 to 400 / 300 / 1 V/step]
3-622-063	Lower Limit: M	*ENG	Sets the development potential lower limit.(M) [0 to 400 / 300 / 1 V/step]
3-622-064	Lower Limit: Y	*ENG	Sets the development potential lower limit.(Y) [0 to 400 / 300 / 1 V/step]

3623	[LD Power :Set]		
3-623-001	Standard Speed Slope: Bk	*ENG	[-1000 to 1000 / * / 1/step] *C306: <b>186</b>
3-623-002	Standard Speed Slope: C	*ENG	*C406: <b>228</b>
3-623-003	Standard Speed Slope: M	*ENG	
3-623-004	Standard Speed Slope: Y	*ENG	
3-623-011	Standard Speed Offset: Bk	*ENG	[-1000 to 1000 / * / 1/step]  *C306: <b>6</b> *C406:- <b>8</b>
3-623-012	Standard Speed Offset: C	*ENG	[-1000 to 1000 / * / 1/step] *C306: <b>8</b>
3-623-013	Standard Speed Offset: M	*ENG	*C406:- <b>8</b>
3-623-014	Standard Speed Offset: Y	*ENG	

3-623-021	Mid. Speed Slope: Bk	*ENG	[-1000 to 1000 / <b>231</b> / 1/step]
3-623-022	Mid. Speed Slope: C	*ENG	
3-623-023	Mid. Speed Slope: M	*ENG	
3-623-024	Mid. Speed Slope: Y	*ENG	
3-623-031	Mid. Speed Offset: Bk	*ENG	[-1000 to 1000 / <b>-14</b> / 1/step]
3-623-032	Mid. Speed Offset: C	*ENG	
3-623-033	Mid. Speed Offset: M	*ENG	
3-623-034	Mid. Speed Offset: Y	*ENG	
3-623-041	Low Speed Slope:K	*ENG	[-1000 to 1000 / * / 1/step]
3-623-042	Low Speed Slope:C	*ENG	*C306: <b>144</b>
3-623-043	Low Speed Slope:M	*ENG	*C406: <b>154</b>
3-623-044	Low Speed Slope:Y	*ENG	
3-623-051	Low Speed Offset: Bk	*ENG	[-1000 to 1000 / * / 1/step]
			*C306: <b>26</b>
			*C406:1 <b>2</b>
3-623-052	Low Speed Offset: C	*ENG	[-1000 to 1000 / * / 1/step]
3-623-053	Low Speed Offset: M	*ENG	*C306: <b>28</b>
3-623-054	Low Speed Offset: Y	*ENG	*C406: <b>12</b>
3-623-061	Standard Speed 2 Slope: Bk	*ENG	[-1000 to 1000 / <b>249</b> / 1/step]
3-623-071	Standard Speed 2 Offset: Bk	*ENG	[-1000 to 1000 / <b>-22</b> / 1/step]

3624	[TC Adj. Mode: Set]		
3-624-001	Target(Upper Limit)	*ENG	Sets the upper limit of the target range of developer gamma adjustment for toner density adjustment process control.  [0.00 to 1.00 / 0.15 / 0.01 mg/cm2/-kV/step]

3-624-002	Target(Lower Limit)	*ENG	Sets the lower limit of the target range of developer gamma adjustment for toner density adjustment process control.  [-1.00 to 0.00 / -0.15 / 0.01 mg/cm2/-kV/step]
3-624-021	Consump Pattern Duty:Bk	*ENG	Sets LD Duty of consumption pattern for toner density adjustment process control.
3-624-022	Consump Pattern Duty:C	*ENG	[0 to 15 / <b>15</b> / 1/step]
3-624-023	Consump Pattern Duty:M	*ENG	
3-624-024	Consump Pattern Duty:Y	*ENG	
3-624-031	Max Adj. Counts:PowerON	*ENG	Sets the upper limit of number of consumptions for toner density adjustment process control.  [0 to 10 / 1 / 1/step]
3-624-032	Max Counts:Job In	*ENG	[0 to 10 / <b>0</b> / 1/step]
3-624-033	Max Counts:Printing	*ENG	[0 to 10 / <b>0</b> / 1/step]
3-624-034	Max Adj. Counts:Jobend	*ENG	Sets the upper limit of number of consumptions for toner density adjustment process control.  [0 to 10 / 1 / 1/step]
3-624-035	Max Adj. Counts:ACC	*ENG	[0 to 10 / 3 / 1/step]
3-624-036	Max Adj. Counts:Initialized	*ENG	
3-624-040	Max Adj. Counts:TE Check	*ENG	[0 to 10 / 1 / 1/step]
3-624-051	Supply Gain(Bk)	*ENG	Sets the supply gain for toner density
3-624-052	Supply Gain(C)	*ENG	adjustment process control.  [0.0 to 1.0 / <b>0.5</b> / 0.1/step]
3-624-053	Supply Gain(M)	*ENG	[5.5 15 1.5 / 6.6 / 5.1 / 5164]
3-624-054	Supply Gain(Y)	*ENG	

3-624-061	Consump Gain(Bk)	*ENG	Sets the consumption gain for toner density
3-624-062	Consump Gain(C)	*ENG	adjustment process control.  [0.0 to 1.0 / <b>0.5</b> / 0.1/step]
3-624-063	Consump Gain(M)	*ENG	[[0.0 10 1.0 / 0.0 / 0.1 / 310]]
3-624-064	Consump Gain(Y)	*ENG	

3627	[ID Pattern Extraction :Set]			
3-627-001	Edge Detection Threshold :Bk	*ENG	[0.0 to 5.0 / <b>2.5</b> / 0.1 V/step]	
3-627-002	Edge Detection Threshold :C	*ENG		
3-627-003	Edge Detection Threshold :M	*ENG		
3-627-004	Edge Detection Threshold :Y	*ENG		
3-627-011	Edge Upper Limit	*ENG	[0 to 255 / * / 1 point/step]  *C306: <b>34</b> *C406: <b>28</b>	
3-627-012	Edge Upper Limit: Std Speed 2	*ENG	[0 to 255 / <b>24</b> / 1 point/step]	
3-627-021	Edge Lower Limit	*ENG	[0 to 255 / * / 1 point/step] *C306:14 *C406:12	
3-627-022	Edge Lower Limit: Std Speed 2	*ENG	[0 to 255 / <b>10</b> / 1 point/step]	
3-627-031	Vsg Upper Threshold	*ENG	[0.000 to 5.000 / <b>4.800</b> / 0.001 V/step]	
3-627-041	Vsg Lower Threshold	*ENG	[0.000 to 5.000 / <b>3.000</b> / 0.001 V/step]	

3628	[ID Pattern Timing :Set]
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3-628-001	Scan: YMCK	*ENG	Sets the process control pattern detection timing with ID sensor.  [-500.0 to 500.0 / 0.0 / 0.1 mm/step]
3-628-002	Detection Delay Time	*ENG	Sets the detection delay time of paper transfer.  [0 to 2500 / 0 / 1 msec/step]
3-628-003	Delay Time	*ENG	Sets the ID pattern delay time.  [0 to 2500 / * / 1 msec/step]  *C306: <b>701</b> *C406: <b>641</b>
3-628-004	MUSIC Delay Time	*ENG	Sets the MUSIC delay time. [-2500 to 2500 / 150 / 1 msec/step]
3-628-005	Delay Time: Std Speed 2	*ENG	[0 to 2500 / <b>592</b> / 1 msec/step]

3630	[Dev gamma :Disp/Set]		
3-630-001	Current:Bk	*ENG	Displays the latest developer gamma.
3-630-002	Current:C	*ENG	[0.10 to 6.00 / <b>0.90</b> / 0.01 mg/cm2/-kV/ step]
3-630-003	Current:M	*ENG	- sop <sub>1</sub>
3-630-004	Current:Y	*ENG	
3-630-011	Target:Bk	*ENG	Displays the target value of developer gamma.
3-630-012	Target:C	*ENG	[0.50 to 2.55 / <b>0.90</b> / 0.01 mg/cm2/-kV/ step]
3-630-013	Target:M	*ENG	3341
3-630-014	Target:Y	*ENG	
3-630-061	Toner Density: Bk	*ENG	Displays the toner density calculated with TD
3-630-062	Toner Density: C	*ENG	sensor output. [0.0 to 25.5 / <b>0</b> / 0.1 wt%/step]
3-630-063	Toner Density: M	*ENG	
3-630-064	Toner Density: Y	*ENG	

[Development Start Vk :Display]	
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3-631-001	Bk	*ENG	Displays the latest developer starting voltage.
3-631-002	С	*ENG	[-300 to 300 / <b>0</b> / 1 -V/-kV/step]
3-631-003	М	*ENG	
3-631-004	Υ	*ENG	

3700	[New Unit Detection]		
3-700-001	ON/OFF Setting	*ENG	Sets if new unit is detected or not.
			[0 or 1 / <b>1</b> / 1/step]

3 <i>7</i> 01	[Manual New Unit Set]		
3-701-093	# ITB Unit	*ENG	
3-701-102	# ITB Cleaning Unit	*ENG	
3-701-109	# PTR Unit	*ENG	
3-701-115	# Fusing Unit	*ENG	
3-701-116	Fusing Belt	*ENG	
3-701-118	Pressure Roller	*ENG	
3-701-142	Waste Toner Bottle	*ENG	
3-701-206	DF Friction Pad	*ENG	
3-701-207	DF Pickup Roller	*ENG	
3-701-208	DF Feed Roller	*ENG	
3-701-220	Toner Sub Hopper:Bk	*ENG	
3-701-221	Toner Sub Hopper:C	*ENG	
3-701-222	Toner Sub Hopper:M	*ENG	
3-701-223	Toner Sub Hopper:Y	*ENG	

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3-710-001	Control Method: Selection	*ENG	Sets the select mode if control is done or not with HST memory.
			[0 or 1 / <b>1</b> / 1/step]
			0:NotUse, 1:Use

3800	[Waste Toner Full Detection]			
3-800-001	Condition	*ENG	[0 to 4 / 0 / 1/step]	
3-800-002	Print Page After Near Full	*ENG	[0 to 10000 / <b>0</b> / 1 sheet/step]	
3-800-003	Volume Count 1 After Near Full	*ENG	[0.0 to 100000.0 / <b>0.0</b> / 0.1/step]	
3-800-005	Volume Count 2 After Near Full	*ENG	[0.0 to 1000000.0 / <b>0.0</b> / 0.1/step]	
3-800-007	Volume Count After Replacement	*ENG	[0.0 to 1000000.0 / <b>0.0</b> / 0.1/step]	
3-800-012	Remaining daysThreshold	*ENG	Sets the day threshold from toner near end detection to toner full message.  [0 to 255 / 15 / 1/step]	
3-800-020	Mechanical Full Detection Date	*ENG	[0 to 1 / 0 / 1/step]	

3810	[Paper Interval Ext.: Low Spd]			
	Parameters of calculation for enlargement ratio of paper gap.			
3-810-001	Formula: Slope	*ENG	[0 to 100 / <b>10</b> / 1%/step]	
3-810-002	Formula: Intercept	*ENG	[-2000 to 2000 / <b>0</b> / 1%/step]	
3-810-003	Formula: Upper Limit	*ENG	[100 to 2000 / <b>100</b> / 1%/step]	

## Main SP Tables-4

## SP4-XXX (Scanner)

4008	[Sub Scan Magnification Adj.]			
	Adjusts the sub-scan magnification by changing the scanner motor speed.			
4-008-001	-	*ENG	[-1.0 to 1.0 / <b>0.0</b> / 0.1%/step]	

4010	[Sub Scan Registration Adj.]				
	Adjusts the leading edge registration by changing the scanning start timing in the scan direction.				
4-010-001	-	*ENG	[-1.0 to 1.0 / <b>0.0</b> / 0.1 mm/step]		

4011	[Main Scan Registration Adj.]			
	Adjusts the side-to-side registration by changing the scanning start timing in the mascan direction.			
4-011-001	-	*ENG	[-2.0 to 2.0 / <b>0.0</b> / 0.1 mm/step]	

4012 [Scanner Erase Margin: Scale]				
	Sets the blank margin at each side for erasing the original shadow caused by the gap between the original and the scale.			
4-012-001	Book: Sub Scan Leading Edge (Left)	*ENG	[0.0 to 3.0 / <b>0.0</b> / 0.1 mm/step]	
4-012-002	Book: Sub Scan Trailing Edge (Right)	*ENG	[0.0 to 3.0 / <b>0.0</b> / 0.1 mm/step]	
4-012-003	Book: Main Scan Leading Edge (Rear)	*ENG	[0.0 to 3.0 / <b>0.0</b> / 0.1 mm/step]	
4-012-004	Book: Main Scan Trailing Edge (Front)	*ENG	[0.0 to 3.0 / <b>0.0</b> / 0.1 mm/step]	

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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 / A3 or DLT			
4-013-001	Lamp OFF	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	
4-013-002	Lamp ON	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	

4014	[Scan]			
	Execute the scanner free fun with each mode.			
4-014-001	HP Detection Enable	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	
4-014-002	HP Detection Disable	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	
4-014-003	HP Detec. On (FC 600dpi LG)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	
4-014-004	HP Detec. On (BW 600dpi LG)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	
4-014-005	HP Detec. On (FC 1200dpi LG)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON	

4016	[DF Scan]		
	-		
4-016-001	HP Detec. On (FC 600x300 LG Duplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON
4-016-002	HP Detec. On (BW 600x300 LG Duplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON
4-016-003	HP Detec. On (FC 600x600 LG Duplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON
4-016-004	HP Detec. On (BW 600x600 LG Duplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON

4-016-005	HP Detec. On (FC 600x200 LG Duplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON
4-016-006	HP Detec. On (FC 600x300 LG Simplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON
4-016-007	HP Detec. On (BW 600x300 LG Simplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON
4-016-008	HP Detec. On (FC 600x600 LG Simplex)	ENG	[0 or 1 / 0 / 1/step] 0:OFF, 1:ON
4-016-009	HP Detec. On (BW 600x600 LG Simplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON
4-016-010	HP Detec. On (FC 600x200 LG Simplex)	ENG	[0 or 1 / <b>0</b> / 1/step] 0:OFF, 1:ON

4020	[DF Dust Check]		
4-020-001	Detection ON/OFF	*ENG	Turns the ARDF scan glass dust check on/off.  [0 or 1 / 1 / 1 step]  0: OFF, 1: ON
4-020-002	Detection Level	*ENG	Selects the detect level.  [0 to 8 / 4 / 1 step]  0: lowest detection level  8: highest detection level
4-020-003	Correction 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	[Scanner Erase Margin]				
	Sets the Mask for Original.  These SPs set the area to be masked during platen (book) mode scanning.				
4-400-001	Book: Sub Scan Leading Edge (Left)	*ENG	[0.0 to 3.0 / <b>1.0</b> / 0.1 mm/step]		
4-400-002	Book: Sub Scan Leading Edge (Right)	*ENG	[0.0 to 3.0 / <b>1.0</b> / 0.1 mm/step]		
4-400-003	Book: Main Scan Leading Edge (Rear)	*ENG	[0.0 to 3.0 / <b>1.0</b> / 0.1 mm/step]		
4-400-004	Book: Main Scan Trailing Edge (Front)	*ENG	[0.0 to 3.0 / <b>1.0</b> / 0.1 mm/step]		
4400	[ADF Adj. Original Erase Ma	rgin]			
4-400-005	Sub Scan Leading Edge (Left)	*ENG	[0.0 to 3.0 / <b>1.6</b> / 0.1 mm/step]		
4-400-007	Main Scan Leading Edge (Rear)	*ENG	[0.0 to 3.0 / <b>1.6</b> / 0.1 mm/step]		
4-400-008	Main Scan Trailing Edge (Front)	*ENG	[0.0 to 3.0 / <b>1.6</b> / 0.1 mm/step]		

4417	[IPU Test Pattern]				
	Selects the IPU test pattern.				
4-417-001	Test Pattern	ENG	[0 to 8 / <b>0</b> / 1/step]		
			0: Scanned image		
			1: Gradation main scan A		
			2: Patch 16C		
			3: Grid pattern A		
			4: Slant grid pattern B		
			5: Slant grid pattern C		
			6: Slant grid pattern D		
			7: Scanned+Slant Grid C		
			8: Scanned+Slant Grid D		

4429	[Select Copy Data Security]		
4-429-001	Copying	*ENG	[0 to 3 / <b>3</b> / 1/step]
4-429-002	Scanning	*ENG	[0 to 3 / <b>3</b> / 1/step]
4-429-003	Fax Operation	*ENG	[0 to 3 / <b>3</b> / 1/step]

4460	[Digital AE]			
	Adjusts the background level.			
4-460-001	Low Limit Value	*ENG	[0 to 1023 / <b>364</b> / 1/step]	
4-460-002	Background Level	*ENG	[512 to 1535 / <b>932</b> / 1/step]	

4501	[ACC Target Density Notch]			
	Selects the ACC result.			
4-501-001	Copy: Bk: Text	*ENG	[0 to 10 / 5 / 1 /step]	
4-501-002	Copy: C: Text	*ENG	10: Darkest density	
4-501-003	Copy: M: Text	*ENG		
4-501-004	Copy: Y: Text	*ENG		
4-501-005	Copy: Bk: Photo	*ENG		
4-501-006	Copy: C: Photo	*ENG		
4-501-007	Copy: M: Photo	*ENG		
4-501-008	Copy: Y: Photo	*ENG		

4505	[ACC Machine Diff. Corr:Bright]			
	Adjusts the offset correction for light areas of the ACC pattern.			
4-505-001	Text:Bk	*ENG	[-128 to 127 / <b>0</b> / 1 /step]	
4-505-002	Text:C	*ENG		
4-505-003	Text:M	*ENG		
4-505-004	Text:Y	*ENG		

4-505-005	Photo:Bk	*ENG	[-128 to 127 / <b>0</b> / 1 /step]
4-505-006	Photo:C	*ENG	
4-505-007	Photo:M	*ENG	
4-505-008	Photo:Y	*ENG	

4506	[ACC Machine Diff. Corr:Dark]			
	Adjusts the offset correction for dark areas of the ACC pattern.			
4-506-001	Text:Bk	*ENG	[-128 to 127 / <b>0</b> / 1 /step]	
4-506-002	Text:C	*ENG		
4-506-003	Text:M	*ENG		
4-506-004	Text:Y	*ENG		
4-506-005	Photo:Bk	*ENG	[-128 to 127 / <b>0</b> / 1 /step]	
4-506-006	Photo:C	*ENG		
4-506-007	Photo:M	*ENG		
4-506-008	Photo:Y	*ENG		

4540	[Printor Vector Correction(1)]				
	Corrects the printer coverage of 12 hues (RY, YR, YG, etc. ×4 Colors [R, G, B, Option]) for 48 parameters.				
4-540-001	RY Phase:Option	*ENG	Specifies the printer vector correction value.  [0 to 255 / 0 / 1/step]		
4-540-002	RY Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]		
4-540-003	RY Phase:G	*ENG			
4-540-004	RY Phase:B	*ENG			
4-540-005	YR Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]		

4-540-006	YR Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-007	YR Phase:G	*ENG	
4-540-008	YR Phase:B	*ENG	
4-540-009	YG Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-010	YG Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-011	YG Phase:G	*ENG	
4-540-012	YG Phase:B	*ENG	
4-540-013	GY Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-014	GY Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-015	GY Phase:G	*ENG	
4-540-016	GY Phase:B	*ENG	
4-540-017	GC Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1 /step]
4-540-018	GC Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-019	GC Phase:G	*ENG	
4-540-020	GC Phase:B	*ENG	
4-540-021	CG Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-022	CG Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-023	CG Phase:G	*ENG	
4-540-024	CG Phase:B	*ENG	
4-540-025	CB Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-026	CB Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-027	CB Phase:G	*ENG	
4-540-028	CB Phase:B	*ENG	
4-540-029	BC Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]

4-540-030	BC Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-031	BC Phase:G	*ENG	
4-540-032	BC Phase:B	*ENG	
4-540-033	BM Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-034	BM Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-035	BM Phase:G	*ENG	
4-540-036	BM Phase:B	*ENG	
4-540-037	MB Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-038	MB Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-039	MB Phase:G	*ENG	
4-540-040	MB Phase:B	*ENG	
4-540-041	MR Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-042	MR Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-043	MR Phase:G	*ENG	
4-540-044	MR Phase:B	*ENG	
4-540-045	RM Phase:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-046	RM Phase:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-047	RM Phase:G	*ENG	
4-540-048	RM Phase:B	*ENG	
4-540-049	WHITE:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
4-540-050	WHITE:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-051	WHITE:G	*ENG	
4-540-052	WHITE:B	*ENG	
4-540-053	BLACK:Option	*ENG	[0 to 255 / <b>0</b> / 1/step]
	!		!

4-540-054	BLACK:R	*ENG	[-255 to 255 / <b>0</b> / 1/step]
4-540-055	BLACK:G	*ENG	
4-540-056	BLACK:B	*ENG	

4541	[Photo Correction]			
	-			
4-541-001	Copied Photo	*ENG	[0 or 1 / <b>0</b> / 1/step]	

4550	[Scan Apli:Txt/Chart]  Sets the text/chart MTF level of the scanner application.			
4-550-005	MTF: 0(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-550-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-550-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-550-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-550-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]	

4551	[Scan Apli:Txt]  Sets the text MTF level of the scanner application.			
4-551-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-551-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-551-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-551-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-551-009	Ind Dot Erase: O(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / 0 / 1/step]	

4552	[Scan Apli:Txt Dropout]			
	Sets the text dropout color MTF level of the scanner application.			
4-522-005	MTF: 0(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-522-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-522-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-522-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-522-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]	

4553	[Scan Apli:Txt/Photo]  Sets the text/photo MTF level of the scanner application.		
4-533-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]
4-533-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]
4-533-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-533-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-533-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]

4554	[Scan Apli:Photo]			
	application.			
4-554-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-554-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-554-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-554-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	

4-554-009	Ind Dot Erase: O(x1) 1-7	*ENG	[0 to 7 / <b>0</b> / 1/step]	
	(Weak-Strong)			

4565	[Scan Apli:GrayScale]			
	Sets the Grayscale MTF level of the scanner application.			
4-565-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-565-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-565-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-565-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-565-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]	

4570	[Scan Apli:Col Txt/Photo]			
	Sets the color text/photo MTF level of the scanner application.			
4-570-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-570-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-570-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-570-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-570-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]	

4571	[Scan Apli:Col Gloss Photo]			
	Sets the color gloss photo MTF level of the scanner application.			
4-571-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-571-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	

4-571-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-571-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-571-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]

4572	[Scan Apli:AutoCol]			
	Sets the automatic color MTF level of the scanner application.			
4-572-005	MTF: 0(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-572-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-572-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-572-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-572-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]	

4580	[Fax Apli:Txt/Chart]			
	Sets the text/chart MTF level of the fax application.			
4-580-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]	
4-580-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]	
4-580-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-580-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]	
4-580-009	Ind Dot Erase: O(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / 0 / 1/step]	
4-580-010	Texture Erase: 0 (Fix), 1-2	*ENG	[0 to 2 / <b>0</b> / 1/step]	

4581	[Fax Apli:Txt]
	Sets the text MTF level of the fax application.

4-581-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]
4-581-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]
4-581-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-581-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-581-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]

4582	[Fax Apli:Txt/Photo]  Sets the text/photo MTF level of the fax application.		
4-582-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]
4-582-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]
4-582-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-582-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-582-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / 0 / 1/step]
4-582-010	Texture Erase: 0 (Fix), 1-2	*ENG	[0 to 2 / <b>0</b> / 1/step]

4583	[Fax Apli:Photo]  Sets the photo MTF level of the fax application.		
4-583-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]
4-583-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]
4-583-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-583-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]

	Ind Dot Erase: O(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]
4-583-010	Texture Erase: 0 (Fix), 1-2	*ENG	[0 to 2 / <b>0</b> / 1/step]

4584	[Fax Apli: Special Original 1]		
	Sets the original 1 MTF level of the fax application.		
4-584-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]
4-584-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]
4-584-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-584-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-584-009	Ind Dot Erase: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]

4585	[Fax Apli: Special Original 2]		
	Sets the original 2 MTF level of the fax application.		
4-585-005	MTF: O(FF) 1-15 (Weak- Strong)	*ENG	[0 to 15 / <b>8</b> / 1/step]
4-585-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>4</b> / 1/step]
4-585-007	Brightness: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-585-008	Contrast: 1-255	*ENG	[1 to 255 / <b>128</b> / 1/step]
4-585-009	Ind Dot Erase 0(x1)/ 1-7 (Weak-Strong)	*ENG	[0 to 7 / <b>0</b> / 1/step]

4606	[White Level Peak Target]			
	Adjusts the white peak level of the color 600.			
4-606-001	Color 600	*ENG	[0 to 1024 / <b>784</b> / 1 digit /step]	

4607	[White Level Peak Target]			
	Adjusts the white peak level of the color 1200.			
4-607-001	Color 1200	*ENG	[0 to 1024 / <b>784</b> / 1 digit/step]	

4608	[White Level Peak Target]			
	Adjusts the white peak level of black.			
4-608-001	BW	*ENG	[0 to 1024 / <b>784</b> / 1 digit/step]	

4609	[Gray Balance Adj.: R]		
	Displays the adjustment value of the gray balance for red.		
4-609-001	Book Scan	*ENG	[-384 to 255 / <b>-89</b> / 1 digit/step]
4-609-002	DF Scan	*ENG	[-384 to 255 / <b>-89</b> / 1 digit/step]

4610	[Gray Balance Adj.: G]  Displays the adjustment value of the gray balance for green.			
4-610-001	Book Scan	*ENG	[-384 to 255 / <b>-76</b> / 1 digit/step]	
4-610-002	DF Scan *ENG [-384 to 255 / <b>-76</b> / 1 digit/step]			
4610	[Gray Balance Adj.: BW]			
4-610-003	Book Scan	*ENG	[-384 to 255 / <b>-92</b> / 1 digit/step]	
4-610-004	DF Scan	*ENG	[-384 to 255 / <b>-92</b> / 1 digit/step]	

4611	[Gray Balance Adj.: B]		
	Displays the adjustment value of the gray balance for blue.		
4-611-001	Book Scan	*ENG	[-384 to 255 / <b>-85</b> / 1 digit/step]
4-611-002	DF Scan	*ENG	

4645	[Scan Adjust Error]
	Displays the error value of the scanning adjustment.

4-645-001	White level	ENG	[0 to 65535 / <b>0</b> / 1/step]
4-645-002	Black level	ENG	

4647	[Scanner Hard Error]		
	Displays the result of the SBU connection check.		
4-647-001	Power-ON	ENG	[0 to 65535 / <b>0</b> / 1/step]
			0: OK, Other: SBU connection check failure
			If the SBU connection check fails, SC144
			occurs.

4688	[ADF Adjustment Density]		
	-		
4-688-001	-	*ENG	[50 to 150 / <b>100</b> / 1%/step]

4802	[DF Shading FreeRun]  Executes the document feeder shading free run.		
4-802-001	Lamp OFF	ENG	Turns off the scanner lamp.  [0 or 1 / 0 / 1/step]  [Execute]
4-802-002	Lamp ON	ENG	Turns on the scanner lamp.  [0 or 1 / 0 / 1/step]  [Execute]

4804	[Home Position]		
4-804-00	-	ENG	[0 or 1 / <b>0</b> / 1/step]

4806	[Carriage Retract Operation]	
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4-806-001	-	ENG	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.
			[-/-/-]
			[Execute]

4813	[LED White Level Peak Target]		
	Adjusts the target value of the LED white level peak.		
4-813-001	Color 600	*ENG	[0 to 1023 / <b>784</b> / 1 digit /step]
4-813-002	Color 1200	*ENG	[0 to 1023 / <b>784</b> / 1 digit/step]
4-813-003	BW	*ENG	[0 to 1023 / <b>540</b> / 1 digit/step]

4902	[Display ACC Data]		
	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 / <b>0</b> / 1 /step]		
4-902-001	R_DATA1	*ENG	Photo C Patch Level 1 (8-bit)
4-902-002	G_DATA1	*ENG	Photo M Patch Level 1 (8-bit)
4-902-003	B_DATA1	*ENG	Photo Y Patch Level 1 (8-bit)
4-902-004	R_DATA2	*ENG	Photo C Patch Level 17 (8-bit)
4-902-005	G_DATA2	*ENG	Photo M Patch Level 17(8-bit)
4-902-006	B_DATA2	*ENG	Photo Y Patch Level 17 (8-bit)

4903	[Filter Setting]		
4-903-001	Ind Dot Erase:Black & White: Text	*ENG	[0 to 7 / <b>0</b> / 1/step]
4-903-002	Ind Dot Erase:Black & White: Generation Copy	*ENG	[0 to 7 / <b>0</b> / 1/step]

4905	[Select Gradation Level]					
	Selects the gradation level.					
4-905-001	-	*ENG	[0 to 255 / <b>0</b> / 1/step]			

4918	[Man Gamma Adj]					
	Adjusts the offset data of the printer gamma for yellow in Photo mode.					
	Replacement and Adjustment for how to use.					
4-918-009	- ENG [-/-/-]					
			[Execute]			

4930	[Coverage Ctrl: Text]					
	Sets the total regulation value.					
4-930-001	Copy: Full Color 1	*ENG	[0 to 400 / <b>200</b> / 1 /step]			
4-930-002	Copy: Full Color 2	*ENG	[0 to 400 / <b>200</b> / 1 /step]			
4-930-003	Copy: Single Color	*ENG	[0 to 400 / <b>100</b> / 1 /step]			
4-930-004	Copy: Color Conversion	*ENG	[0 to 400 / <b>180</b> / 1 /step]			
4-930-005	Coverage Ctrl OFF	*ENG	[0 to 400 / <b>400</b> / 1 /step]			

4931	[Coverage Ctrl: Photo]					
	Sets the total regulation value.					
4-931-001	Copy: Full Color 1 *ENG		[0 to 400 / <b>240</b> / 1 /step]			
4-931-002			[0 to 400 / <b>260</b> / 1 /step]			
4-931-003			[0 to 400 / 100 / 1 /step]			
4-931-004	Copy: Color Conversion	*ENG	[0 to 400 / <b>200</b> / 1 /step]			
4-931-005	Coverage Ctrl OFF	*ENG	[0 to 400 / <b>400</b> / 1 /step]			

4938	[ACS: Erase Margin]	
	-	

4-938-001	Copy: Sub Scan Leading Edge (Left)	*ENG	[0 to 31 / 10 / 1 mm/step]
4-938-002	Copy: Sub Scan Leading Edge (Right)	*ENG	[0 to 31 / 10 / 1 mm/step]
4-938-003	Copy: Main Scan Leading Edge (Rear)	*ENG	[0 to 31 / <b>10</b> / 1 mm/step]
4-938-004	Copy: Main Scan Leading Edge (Front)	*ENG	[0 to 31 / 10 / 1 mm/step]
4-938-005	Scan: Sub Scan Leading Edge (Left)	*ENG	[0 to 31 / <b>15</b> / 1 mm/step]
4-938-006	Scan: Sub Scan Trailing Edge (Right)	*ENG	[0 to 31 / <b>15</b> / 1 mm/step]
4-938-007	Scan: Main Scan Leading Edge (Rear)	*ENG	[0 to 31 / <b>15</b> / 1 mm/step]
4-938-008	Scan: Main Scan Trailing Edge (Front)	*ENG	[0 to 31 / <b>15</b> / 1 mm/step]

4939	[ACS:Color Range]		
4-939-001	-	*ENG	[-2 to 2 / <b>0</b> / 1/step]

4993	[Highlight Correction]				
4-993-001	Sensitivity Selection	*ENG	Selects the Highlight correction level.  [0 to 9 / 4 / 1 / step]  0: weakest sensitivity  9: strongest sensitivity		
4-993-002	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 Detect Level Adj.]				
	Selects the definition level be	on level between Text and Photo for high compression PDF.			
4-994-001	High Compression PDF	*ENG	[0 to 2 / 1 / 1 /step]		
			0: Text priority		
			1: Normal		
			2: Photo priority		

4996	[WhitePaperDetectLevel]				
	Adjusts the white paper detect level.				
4-996-001	- *ENG		[0 to 6 / 3 / 1/step]		

## Main SP Tables-5

## SP5-XXX (Mode)

5009	[Add display language]					
5-009-201	1-8	*CTL	[0 to 255 / <b>0</b> / 1 /step]			
5-009-202	9-16	*CTL	[0 to 255 / <b>0</b> / 1 /step]			
5-009-203	17-24	*CTL	[0 to 255 / <b>0</b> / 1 /step]			
5-009-204	25-32	*CTL	[0 to 255 / <b>0</b> / 1 /step]			
5-009-205	33-40	*CTL	[0 to 255 / <b>0</b> / 1 /step]			
5-009-206	41-48	*CTL	[0 to 255 / <b>0</b> / 1 /step]			
5-009-207	49-56	*CTL	[0 to 255 / <b>0</b> / 1 /step]			

5024	[mm/inch Display selection]		
5-024-001	0:mm 1:inch	*CTL	[0 to 1 / 0 / 1 /step]

5045	[Accounting Counter]		
	Selects the counting method.		
	Note		
	<ul> <li>The counting method can be changed only once, regardless of whether the counter value is negative or positive.</li> </ul>		
5-045-001	Counter Method	*CTL	[0 to 7 / 1 / 1 /step]
			0: Developments
			1: Prints
			2: Coverage
			7: Coverage (YMC)

3

5047	[Paper Display]		
	Turns on or off the printed paper display on the LCD.		
5-047-001	Backing Paper	*CTL	[0 or 1 / <b>0</b> / - /step]
			0: OFF, 1:ON

5051	[Toner Refill Detection Display]		
5-051-001		*CTL	[0 or 1 / <b>0</b> / 1 /step]

5055	[Display IP add]		
		4	
5-055-001		*CTL	[0 or 1 / <b>0</b> / 1 /step]

5071	[Set Bypass Paper Size Display]		
	Enables or disables the bypass paper size display for confirmation		
5-071-001	-	*CTL	[0 or 1 / <b>0</b> / - /step] 0: Disable, 1: Enable

Turn on or off the paper size confirmation pop-up on the LED. This pop-up prevents mismatching between a paper size selected by the operation panel and an actual paper size on the by-pass tray.

5074	[Home Key Customization]		
5-074-001	User Setting	*CTL	[0 or 1 / <b>0</b> / 1 /step]
5-074-002	Login Setting	*CTL	[0 or 255 / 0 / 1 /step]
5-074-050	Show Home Edit	*CTL	[0 or 2 / 0 / 1 /step]
5-074-091	Function Setting	*CTL	[0 or 2 / 0 / 1 /step]
5-074-092	Product ID	*CTL	[0 or 0xfffffff / 0 / 1 /step]
5-074-093	Application screen ID	*CTL	[0 or 255 / 0 / 1 /step]

5076	[Copy:LT/LG Mixed Sizes Setting]
	Enable or Disable the setting of the copy paper size combined with LT and LG.

5-076-001	0:OFF 1:ON	*CTL	[0 or 1 / * / - /step]
			*0: Disable (Default for other than NA)
			1: Enable (Default for NA)

5081	[ServiceSP Entry Code Settting]		
5-081-001	*CTL [-/-/-/step]		

5083	[LED Light Switch Setting]		
5-083-001	Toner Near End	*CTL	[0 to 1 / 0 / 1 /step]
5-083-002	Waste Toner Near End	*CTL	[ 0 to 1 / 0 / 1 /step]

5113	[Optional Counter Type]		
5-113-001	Default Optional Counter Type	*CTL	[0 to 8 / 0 / 1 /step] This program specifies the counter type.  0: None, 1: Key card (RK 3, 4)  2: Key card (down), 3: Prepaid card  4: Coin lock, 5: MF key card  8: Key counter + Vendor  9: Bar-code Printer
5-113-002	External Optional Counter Type	*CTL	[0 to 3 / 0 / 1 /step] 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]		
5-114-001	MF Key Card Extension	*CTL	[0: Not installed / 1: Installed (scanning accounting)]

5118	[Disable Copying]				
	This program disables copying.				
5-118-001	-	*CTL	[0: Enabled / 1: Disabled]		

5120	[Mode Clear Opt. Counter Removal]				
	This program updates the information on the optional counter. When you in remove an optional counter, check the settings.				
5-120-001	0:Yes 1:StandBy 2:No	1:StandBy 2:No *CTL [0: Yes (removed) / 1: Standby (installed but not used)/ 2: No (not removed)]			

5121	[Counter Up Timing]		
This program specifies when the counter goes up. The settings refer to "paper and "paper exit" respectively.			
5-121-001	0:Feed 1:Exit	*CTL	[0: Feed / 1: Exit]

5127	[APS Mode]			
	This program disables the APS.			
5-127-001	-	*CTL	[0 or 1 / <b>0</b> / 1/step]  0: Not disabled 1: Disabled	
			O. NOI disabled 1. Disabled	

5128	[Code Mode With Key/Card Option]		
5-128-001	-	*CTL	[0 or 1 / <b>0</b> / 1/step]
			0: not used in combination
			1: used in combination

5131	[Paper Size/Type Selection]	
	The program selects a paper size system from the following alternatives: the AB system (0), the LT system (1), and the AF system (2).	

3

5-131-001	-	*ENG	[0 to 2 / * / 1/step]
			*NA:1
			EU, AS, CHN, TWN, KOR:2

5150	[Bypass Length Setting]			
	Specifies whether or not to use bypass tray as the banner sheet tray.			
5-150-001	0: OFF 1: ON	CTL	[0 to 2 / 0 / 1/step]	
			0: Off	
			1: Banner Sheet	
			2: Banner Sheet when using Vacuum Feed LCIT	

5162	[App. Switch Method]				
	This program specifies the switch that selects an application program.				
5-162-001	-	*CTL	[0: Soft Key Set / 1: Hard Key Set]		

5167	[Fax Printing Mode at Optional Counter Off]				
	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.				
5-167-001	1 Fax Printing Mode at *CTL [0 or 1 / 0 / - /step]				
	Optional Counter Off		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.				
5-169-001	CE Login	CE Login *CTL [0 or 1 / <b>0</b> / 1/step]			
			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)", machine automatically jams a sheet of paper.				
5-186-001	- *EN [0 or 1 / 0 / 1/step]				
	*EN [0 or 1 / <b>0</b> / 1/step]  G 0: Disable				
			1: Enable		

5188	[Copy NvVersion]			
	Displays the version number of the NVRAM on the controller board.			
5-188-001	-	*CTL	-	

5191	[Mode Set]		
5-191-001	Power Str Set	*CTL	[0 or 1 / <b>0</b> / 1/step]

5193	[External Controller Info. Settings]				
	Specifies the model of the external controller connected to the main unit.				
5-193-001	-	*CTL	[0 to 10 / 0 / 1/step]		
			0: External Controller is not installed		
			1: EFI		
			2: Ratio		
			3: Egret		
			4: GJ		
			5:Creo		
			6: QX-100		
			7: Kurofune		
			8 to 10: Reserved		

5195	[Limitless SW] 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.			
5-195-001	-	*CTL [0 or 1 / <b>0</b> / 1/step]		
			0: Productivity Precede	
			1: Use paper up	

5199	[Paper Exit After Staple End]				
	Not used				
5-199-001	Staple	*CTL	[0 to 2 / <b>0</b> / 1/step]		
5-199-002	Saddle	*CTL	[0 to 2 / <b>0</b> / 1/step]		
5-199-003	Stapless	*CTL	[0 to 2 / <b>0</b> / 1/step]		

5302	[Set Time]		
5-302-002	Time Difference	*CTL	[-1440 to 1440 / <b>540</b> / 1 /step]

5305	[Auto Off Set]		
5-305-101	Auto Off Limit Set	*CTL	[ 0 to 1 / <b>1</b> / 1 /step]

5307	[Daylight Saving Time]		
5-307-001	Setting	*CTL	[ 0 to 1 / <b>0</b> / 1 /step]
5-307-003	Rule Set(Start)	*CTL	[ 0 to 0xfffffff / 0 / 1 /step]
5-307-004	Rule Set(End)	*CTL	[ 0 to 0xfffffff / 0 / 1 /step]

5401	[Access Control]		
5-401-103	Default Document ACL	*CTL	[0 to 3 / <b>0</b> / 1 /step]
5-401-104	Authentication Time	*CTL	[0 to 255 / 0 / 1 sec/step]  Specifies the timeout of the authentication.
5-401-162	Extend Certification Detail	*CTL	[0 to Oxff / 0 / 1 /step]  Selects the log out type for the extend authentication device.  Bit 0: Log-out without an IC card  0: Not allowed (default) / 1: Allowed  Bit1: Log out with IC card  0: Not allowed (default) / 1: Allowed  Bit2: Return from energy save mode with IC card  0: Not allowed (default) / 1: Allowed  Bit3, Bit4: Password manual entry  00: Mode 0 (default) / 01: Mode 1 / 10: Mode 2 / 11: Mode 3  Bit5: PIN entry with alphanumeric character  0: Not allowed (default) / 1: Allowed  Bit6: Restrict card scanning  0: Not allowed (default) / 1: Allowed  Bit7: Panel lock when log out failed  0: Not allowed (default) / 1: Allowed
5-401-163	Extend Install Stats	*CTL	[0 to 255 / 0 / 1 sec/step]  Displays the result of the extended authentication device.  0 to 99: Succeed (halfway)  100 to 199: Succeed  200 to 209: Failure  210 to 255: Not used

5-401-200	SDK1 UniqueID	*CTL	[O to OxFFFFFFF / O / 1 /step] "SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
5-401-201	SDK1 Certification Method	*CTL	[O to OxFF / O / 1 /step] "SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
5-401-210	SDK2 UniqueID	*CTL	[O to OxFFFFFFFF / O / 1 /step] "SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
5-401-211	SDK2 Certification Method	*CTL	[0 to 0xFF / 0 / 1 /step]  "SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
5-401-220	SDK3 UniqueID	*CTL	[O to OxFFFFFFFF / O / 1 /step] "SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
5-401-221	SDK3 Certification Method	*CTL	[0 to 0xFF / 0 / 1 /step] "SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
5-401-230	SDK Certification Device	*CTL	[0 to 0xff / <b>0</b> / 1 /step]

5-401-240	Detail Option	*CTL	[0 to 0xff / <b>0</b> / 1 /step]
			BitO: Logout confirm option
			0: OFF, 1: ON
			Bit1, Bit2: Auto-logout timer (retry timer)
			00: 60sec, 01: 10sec, 10: 20sec, 11: 30sec,
			Bit3: Personal authority / Group authority and operation
			0: OFF, 1: ON
			Bit4: Skip password entry
			0: OFF, 1: ON
			Bit5: Set the display of the remaining Frequence
			0: OFF, 1: ON,
			Bitó, Bit7: Set the display time

5402	[Access Control]
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1 : Remote Type Bit 1 : Using user code setup
ice
5

SDKJ19 Limit Setting	*CTL	
SDKJ20 Limit Setting	*CTL	
SDKJ21 Limit Setting	*CTL	
SDKJ22 Limit Setting	*CTL	
SDKJ23 Limit Setting	*CTL	
SDKJ24 Limit Setting	*CTL	
SDKJ25 Limit Setting	*CTL	
SDKJ26 Limit Setting	*CTL	
SDKJ27 Limit Setting	*CTL	
SDKJ28 Limit Setting	*CTL	
SDKJ29 Limit Setting	*CTL	
SDKJ30 Limit Setting	*CTL	
SDKJ1 ProductID	*CTL	[0 to 0xffffffff / 0 / 1 /step]
SDKJ2 ProductID	*CTL	[0 to 0xffffffff / <b>0</b> / 1 /step]
SDKJ3 ProductID	*CTL	[0 to 0xffffffff / <b>0</b> / 1 /step]
SDKJ4 ProductID	*CTL	[0 to 0xffffffff / 0 / 1 /step]
SDKJ5 ProductID	*CTL	[0 to 0xffffffff / 0 / 1 /step]
SDKJ6 ProductID	*CTL	[0 to 0xffffffff / 0 / 1 /step]
SDKJ7 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
SDKJ8 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
SDKJ9 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
SDKJ10 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
SDKJ11 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
SDKJ12 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
SDKJ13 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
SDKJ14 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
	SDKJ20 Limit Setting SDKJ21 Limit Setting SDKJ22 Limit Setting SDKJ23 Limit Setting SDKJ24 Limit Setting SDKJ25 Limit Setting SDKJ25 Limit Setting SDKJ26 Limit Setting SDKJ27 Limit Setting SDKJ27 Limit Setting SDKJ28 Limit Setting SDKJ29 Limit Setting SDKJ29 Limit Setting SDKJ30 Limit Setting SDKJ3 ProductID SDKJ3 ProductID SDKJ4 ProductID SDKJ6 ProductID SDKJ6 ProductID SDKJ7 ProductID SDKJ7 ProductID SDKJ7 ProductID SDKJ8 ProductID SDKJ9 ProductID SDKJ9 ProductID SDKJ10 ProductID SDKJ11 ProductID SDKJ11 ProductID SDKJ12 ProductID	SDKJ20 Limit Setting *CTL  SDKJ21 Limit Setting *CTL  SDKJ22 Limit Setting *CTL  SDKJ23 Limit Setting *CTL  SDKJ24 Limit Setting *CTL  SDKJ25 Limit Setting *CTL  SDKJ26 Limit Setting *CTL  SDKJ27 Limit Setting *CTL  SDKJ27 Limit Setting *CTL  SDKJ29 Limit Setting *CTL  SDKJ29 Limit Setting *CTL  SDKJ30 Limit Setting *CTL  SDKJ3 ProductID *CTL  SDKJ3 ProductID *CTL  SDKJ4 ProductID *CTL  SDKJ5 ProductID *CTL  SDKJ6 ProductID *CTL  SDKJ7 ProductID *CTL  SDKJ7 ProductID *CTL  SDKJ7 ProductID *CTL  SDKJ7 ProductID *CTL  SDKJ7 ProductID *CTL  SDKJ9 ProductID *CTL  SDKJ10 ProductID *CTL  SDKJ10 ProductID *CTL  SDKJ11 ProductID *CTL  SDKJ11 ProductID *CTL  SDKJ11 ProductID *CTL  SDKJ11 ProductID *CTL  SDKJ11 ProductID *CTL  SDKJ11 ProductID *CTL

5-402-155	SDKJ15 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-156	SDKJ16 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-157	SDKJ17 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-158	SDKJ18 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-159	SDKJ19 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-160	SDKJ20 ProductID	*CTL	[O to Oxfffffff / O / 1 /step]
5-402-161	SDKJ21 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-162	SDKJ22 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-163	SDKJ23 ProductID	*CTL	[O to Oxfffffff / O / 1 /step]
5-402-164	SDKJ24 ProductID	*CTL	[O to Oxfffffff / O / 1 /step]
5-402-165	SDKJ25 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-166	SDKJ26 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-167	SDKJ27 ProductID	*CTL	[O to Oxfffffff / O / 1 /step]
5-402-168	SDKJ28 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-169	SDKJ29 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]
5-402-170	SDKJ30 ProductID	*CTL	[0 to 0xfffffff / 0 / 1 /step]

5404	[User Code Count Clear] DFU		
	Clears all counters for users.		
5-404-001	User Code Count Clear	*CTL	Clears all counters for users.
5-404-101	User Code Count Clear Permit Setting	*CTL	[0 or 1 / <b>0</b> / 1 /step]

5411	[LDAP-Certification]		
5-411-004	Simplified Authentication	*CTL	Determines whether easy LDAP certification is done.  [0 or 1 / 1 / -/step] 1: On, 0: Off

5-411-005	Password Null Not Permit	*CTL	This SP is referenced only when SP5411-4 is set to "1" (On).
			[0 or 1 / <b>1</b> / -/step]
			0: Password NULL not permitted.
			1: Password NULL permitted.
5-411-006	Detail Option	*CTL	[0 to 0xFF / <b>0x1F</b> / 1/step]
			Determines whether LDAP option (anonymous certification) is turned on or off.
			BitO
			0: OFF, 1: ON

5412	[Krb-Certification]		
5-412-100	Encrypt Mode	*CTL	[0 to 0xFF / <b>0x1F</b> / 1/step]
			0x01:AES256-CTS-HMAC-SHA1-96
			0x02:AES128-CTS-HMAC-SHA1-96
			0x04:DES3-CBC-SHA1
			0x08:RC4-HMAC
			0x10:DES-CBC-MD5
			OxFF(Ox1F):ALL
			Executes kerberos certification according to certified encryption strength.

5413	[Lockout Setting]		
5-413-001	Lockout On/Off	*CTL	Switches on/off the lock on the local address book account.  [0 or 1 / 0 / 1/step]  0: Off, 1: On
5-413-002	Lockout Threshold	*CTL	Sets a limit on the frequency of lockouts for account lockouts.  [1 to 10 / 5 / 1/step]

5-413-003	Cancelation 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 or 1 / 0 / 1/step]  0: Off (no wait time, lockout not cancelled)  1: On (system waits, cancels lockout if correct user ID and password are entered.
5-413-004	Cancelation 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./step]

5414	[Access Mitigation]		
5-414-001	Mitigation On/Off	*CTL	Switches on/off masking of continuously used IDs and passwords that are identical.  [0 or 1 / 0 / 1/step]  0: Off, 1: On
5-414-002	Mitigation Time	*CTL	Sets the length of time for excluding continuous access for identical user IDs and passwords.  [0 to 60 / 15 / 1 min./step]

5415	[Password Attack]		
5-415-001	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/step]
5-415-002	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./step]

5416	[Access Information]
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5-416-0	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/step]
5-416-0	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 password/step]
5-416-0	Monitor Interval	*CTL	Sets the processing time interval for referencing user ID and password information.  [1 to 10 / 3 / 1 sec./step]

5417	[Access Attack]		
5-417-001	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/step]
5-417-002	Attack Detect Time	*CTL	Sets the length of time for monitoring the frequency of access to MFP features.  [10 to 30 / 10 / 1 sec./step]
5-417-003	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./step]
5-417-004	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/step]

5420	[User Authentication]			
	These settings should be c	ould be done with the System Administrator.		
	These functions are enabled.	enabled on	ly after the user access feature has been	
5-420-001	Сору	*CTL	Determines whether certification is required before a user can use the copy applications.	
			[0 or 1 / <b>0</b> / 1 / step]	
			0: On, 1: Off	
5-420-002	Color Security Setting	*CTL	[0 to 255 / <b>0</b> / 1 / step]	
	Enables or disables the co	olor copy li	mitation for each copy mode when the user	
O: Enable (default), 1: Disable BitO: B/W mode				
	Bit2: Two colors mode			
	Bit3: Full color mode			
	Bit4: Automatic color mod	le		
	Bit5 to 7: Reserved			
5-420-011	DocumentServer	*CTL	Determines whether certification is required before a user can use the document server.  [0 or 1/0/1/step]0: On , 1: Off	
5-420-021	Fax	*CTL	Determines whether certification is required before a user can use the fax application.  [0 or 1/0/1/step]0: On , 1: Off	
5-420-031	Scanner	*CTL	Determines whether certification is required before a user can use the scan applications.  [0 or 1/0/1/step]0: On , 1: Off	
5-420-041	Printer	*CTL	Determines whether certification is required before a user can use the printer applications.  [0 or 1/0/1/step]0: On , 1: Off	

5-420-051	SDK1	*CTL	[0 or 1 / 0 / 1/step] 0: ON. 1: OFF
5-420-061	SDK2	*CTL	Determines whether certification is required before a user can use the SDK application.
5-420-071	SDK3	*CTL	boloro a osor cam oso mo obre appineamon.
5-420-081	Browser	*CTL	[0 or 1 / 0 / 1/step]

5430	[Auth Dialog Message Change]		
5-430-001	Message Change On/Off	*CTL	[0 or 1/0/1/step] 0: Function OFF 1: Function ON
5-430-002	Message Text Download	CTL	[-/ - /-/step] [Execute]
5-430-003	Message Text ID	CTL	[-/ <b>-</b> /-/step]

5431	[External Auth User Preset	]	
5-431-010	Tag	*CTL	[0 or 1/1/1/step]
5-431-011	Entry	*CTL	[0 or 1/1/1/step]
5-431-012	Group	*CTL	[0 or 1/1/1/step]
5-431-020	Mail	*CTL	[0 or 1/1/1/step]
5-431-030	Fax	*CTL	[0 or 1/1/1/step]
5-431-031	FaxSub	*CTL	[0 or 1/1/1/step]
5-431-032	Folder	*CTL	[0 or 1/1/1/step]
5-431-033	ProtectCode	*CTL	[0 or 1/1/1/step]
5-431-034	SmtpAuth	*CTL	[0 or 1/1/1/step]
5-431-035	LdapAuth	*CTL	[0 or 1/1/1/step]
5-431-036	Smb Ftp Fldr Auth	*CTL	[0 or 1/1/1/step]
5-431-037	AcntAcl	*CTL	[0 or 1/1/1/step]

5-431-038	DocumentAcl	*CTL	[0 or 1/1/1/step]
5-431-040	CertCrypt	*CTL	[0 or 1/0/1/step]
5-431-050	UserLimitCount	*CTL	[0 or 1/1/1/step]

5481	[Authentication Error Code]				
	These SP codes determine how the authentication failures are displayed.				
5-481-001	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/step]  0: Off, 1: On		
5-481-002	Panel Disp	*CTL	Determines whether an error code appears on the operation panel after a user authentication failure occurs.  [0 or 1/1/1/step] 1: On, 0: Off		

5490	[MF KeyCard (Japan only)]			
5-490-001	Job Permit Setting	*CTL	Sets up operation of the machine with a keycard.	
			[0 to 1 / <b>0</b> / 1/step]	
			0: Disabled. Cancels operation without a user code.	
			1: Enabled. Allows operation without a user code.	
5-490-002	Count Mode Setting	*CTL	[0 to 1 / <b>0</b> / 1/step]	

5491	[Optional Counter]		
5-491-001	Detail Option	*CTL	[0 or 1 / 00000000 / 1/step]
			0: Forced Job Canceling ON
			1: Forced Job Canceling OFF

5501	[PM Alarm]	*CTL	
5-501-001	PM Alarm Level	[0 to 9999 / <b>0</b> / 1 /step]	
		0: Alarm off	
		1 to 9999: Alarm goes off when <b>Value (1 to 9999) x</b> 1000 > <b>PM counter</b>	
5-501-002	Original Count Alarm	[0 or 1 / <b>0</b> / 1 /step]	
		0: No alarm sounds	
		1: Alarm sounds after the number of originals passing through the ARDF > 10,000	

5504	[Jam Alarm]			
	Sets the alarm to sound for the specified jam level (document misfeeds are not included).			
5-504-001	Level Setting	*CTL	[0 to 3 / <b>3</b> / 1 /step]	
			0: Zero (Off)	
			1: Low (2.5K jams)	
			2: Medium (3K jams)	
			3: High (6K jams)	
5-504-002	Threshold	*CTL	[1 to 99 / <b>10</b> / 1 /step]	

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".				
5-505-001	Level Setting	*CTL	[0 to 255 / <b>10</b> / 1 /step]		
5-505-002	Threshold	*CTL	[1 to 99 / <b>5</b> / 1 /step]		

5507	[Supply/CC Alarm]
	Enables or disables the notifying a supply call via the @Remote.

5-507-001	Paper Supply Alarm	*CTL	[0 or 1 / <b>0</b> / 1 /step] 0: OFF 1: ON
5-507-003	Toner Supply Alarm	*CTL	[0 or 1 / 1 / 1 /step]
			0: OFF
			1: ON
5-507-080	Toner Call Timing	*CTL	[0 or 1 / <b>0</b> / 1 /step]
			0: At replacement
			1: AtLessThanThresh
5-507-081	Toner Call Threshold	*CTL	[10 to 90 / <b>10</b> / 10% /step]
			This program enables only if SP5-507-080 is "1"
5-507-128	Interval: Others	*CTL	[250 to 10000 / 1000 / 1 /step]
5-507-133	Interval: A4	*CTL	Sets report level of paper supply administration call.
5-507-134	Interval: A5	*CTL	
5-507-142	Interval: B5	*CTL	
5-507-164	Interval: LG	*CTL	
5-507-166	Interval: LT	*CTL	
5-507-172	Interval: HLT	*CTL	

5508	[CC Call]	*CTL	
5-508-001	Jam Remains		[0 or 1 / 1 / 1/step] 0: Disable, 1: Enable
	Enables/disables initiating	a call for a	n unattended paper jam.
5-508-002	Continuous Jams		[0 or 1 / 1 / 1/step] 0: Disable, 1: Enable
	Enables/disables initiating a call for consecutive paper jams.		onsecutive paper jams.

5-508-003	Continuous Door Open	[0 or 1 / 1 / 1/step] 0: Disable, 1: Enable
	Enables/disables initiating a call when	n the front door remains open.
5-508-011	Jam Detection: Time Length	[3 to 30 / <b>10</b> / 1/step]
	Sets the time a jam must remain before setting is enabled only when SP5508-	e it becomes an "unattended paper jam". This 004 is set to "1".
5-508-012	Jam Detection: Continuous Count	[2 to 10 / 5 / 1 /step]
	Sets the number of consecutive paper enabled only when SP5508-004 is se	jams required to initiate a call. This setting is et to "1".
5-508-013	Door Open: Time Length	[3 to 30 / <b>10</b> / 1 /step]
	Sets the length of time the door remain This setting is enabled only when SP5-	s open before the machine initiates a call.

5515	[SC/Alarm Setting]	*CTL	-
	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.		
5-515-001	SC Call		[0 or 1 / 1 / - /step]
5-515-002	Service Parts Near End Cal	I	0: Off
5-515-003	Service Parts End Call		1: On
5-515-004	User Call		
5-515-006	Communication Test Call		[0 or 1 / 1 / - /step]
5-515-007	Machine Information Notic	е	0: Off
5-515-008	Alarm Notice		1: On
5-515-009	Non Genuin Tonner Alarm		
5-515-010	Supply Automatic Ordering	ı Call	
5-515-011	Supply Manegement Repo	rt Call	
5-515-012	Jam/Door Open Call		

5-515-050	Timeout:Manual Call	[1 to 255 / <b>5</b> / 1 min /step]
5-515-051	Timeout:Other Call	[1 to 255 / <b>10</b> / 1 min /step]

5517	[Get Machine Information]		
5-517-031	Get SMC Info: Retry Interval	*ENG	[0 to 255 / <b>10</b> / 1 min /step]

5610	[Base Gamma Ctrl Pt:Execute]			
5-610-004	Get Factory Default	ENG	[0 or 1 / <b>0</b> / 1 /step]	
	Recalls the factory settings.			
5-610-005	Set Factory Default ENG [0 or 1 / 0 / 1 /step]			
	Overwrites the current valu	es onto the	factory settings.	
5-610-006	Restore Orginal Value ENG [0 or 1 / 0 / 1 /step]			
	Recalls the previous settings.			

5611	[Toner Color in 2C]		
5-611-001	B-C	*ENG	[0 to 128 / <b>100</b> / 1 /step]
			128: Darkest density
	Adjusts the Cyan correction	n value of th	ne blue signal in two-color mode.
5-611-002	B-M	*ENG	[0 to 128 / <b>100</b> / 1 /step]
			128: Darkest density
	Adjusts the Magenta correc	ction value	of the blue signal in two-color mode.
5-611-003	G-C	*ENG	[0 to 128 / <b>100</b> / 1 /step]
			128: Darkest density
	Adjusts the Cyan correction value of the blue signal in two-color mode.		
5-611-004	G-Y	*ENG	[0 to 128 / <b>100</b> / 1 /step]
			128: Darkest density
	Adjusts the Yellow correction	on value of	the blue signal in two-color mode.

5-611-005	R-M	*ENG	[0 to 128 / <b>100</b> / 1 /step]
			128: Darkest density
	Adjusts the Magenta correc	ction value	of the blue signal in two-color mode.
5-611-006	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]		
5-618-001	-	*CTL	[0 or 1 / 1 / 1 /step]
			0: ACS, Colour, Black & White, Two Colour, Single colour
			1: ACD, Full Colour, Black & White
	Selects the color selection display on the LCD.		

5728	[Network Setting]		
	Sets port numbers for trans	ferring to th	e Android operation panel
5-728-001	NAT Machine Port1	*CTL	[1 to 65535 / <b>49101</b> / 1/step]
5-728-002	NAT UI Port1	*CTL	[1 to 65535 / <b>55101</b> / 1/step]
5-728-003	NAT Machine Port2	*CTL	[1 to 65535 / <b>49102</b> / 1/step]
5-728-004	NAT UI Port2	*CTL	[1 to 65535 / <b>55102</b> / 1/step]
5-728-005	NAT Machine Port3	*CTL	[1 to 65535 / <b>49103</b> / 1/step]
5-728-006	NAT UI Port3	*CTL	[1 to 65535 / <b>55103</b> / 1/step]
5-728-007	NAT Machine Port4	*CTL	[1 to 65535 / <b>49104</b> / 1/step]
5-728-008	NAT UI Port4	*CTL	[1 to 65535 / <b>55104</b> / 1/step]
5-728-009	NAT Machine Port5	*CTL	[1 to 65535 / <b>49105</b> / 1/step]
5-728-010	NAT UI Port5	*CTL	[1 to 65535 / <b>55105</b> / 1/step]
5-728-011	NAT Machine Port6	*CTL	[1 to 65535 / <b>49106</b> / 1/step]
5-728-012	NAT UI Portó	*CTL	[1 to 65535 / <b>55106</b> / 1/step]

5-728-013	NAT Machine Port7	*CTL	[1 to 65535 / <b>49107</b> / 1/step]
5-728-014	NAT UI Port7	*CTL	[1 to 65535 / <b>55107</b> / 1/step]
5-728-015	NAT Machine Port8	*CTL	[1 to 65535 / <b>49108</b> / 1/step]
5-728-016	NAT UI Port8	*CTL	[1 to 65535 / <b>55108</b> / 1/step]
5-728-017	NAT Machine Port9	*CTL	[1 to 65535 / <b>49109</b> / 1/step]
5-728-018	NAT UI Port9	*CTL	[1 to 65535 / <b>55109</b> / 1/step]
5-728-019	NAT Machine Port10	*CTL	[1 to 65535 / <b>49110</b> / 1/step]
5-728-020	NAT UI Port10	*CTL	[1 to 65535 / <b>55110</b> / 1/step]

5730	[Extended Function Setting]		
	Changes the Mk1 Counter to the combine counter from the paper type counter.		
5-730-001	JavaTM Platform setting	*CTL	[0 or 1 / <b>1</b> / 1/step]
			0: Disable 1: Enable
5-730-010	Expiration Prior Alarm Set	*CTL	[0 to 999 / <b>20</b> / 1 days /step]

<i>57</i> 31	[Counter Effect]		
	Changes the Mk1 Counter	to the coml	oine counter from the paper type counter.
5-731-001	Change Mk1 Cnt(Paper->Combine)	*CTL	[0 or 1 / <b>0</b> / 1/step] 0: Disable 1: Enable

5734	[PDF Setting]		
5-734-001	PDF/A Fixed	*CTL	[0 or 1 / <b>0</b> / 1/step]

5741	[Node Authentication Timuout]		
	Specifies the timeout time for node authentication.		
5-741-001	-	*CTL	[1 to 255 / <b>60</b> / 1 sec /step]

5745	[Deemed Power Consumption]

5-745-211	Controller Standby	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-212	STR	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-213	Main Power Off	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-214	Scanning and Printing	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-215	Printing	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-216	Scanning	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-217	Engine Standby	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-218	Low Power Consumptiom	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-219	Silent condition	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]
5-745-220	Heater Off	*CTL	[ 0 to 9999 / <b>0</b> / 1 /step]

5747	[Browser Setting]		
5-747-201	JPEG Quality	*CTL	[0 to 100 / 100 / 1%/step]
5-747-202	Number of Common Bookmark	*CTL	[0 to 100 / 0 / 1/step]
5-747-203	Extended Memory Limit	*CTL	[0 or 1 / 0 / 1/step] 0: Use extended memory 1: Not use extended memory
5-747-204	Vertical Scroll Display Setting	*CTL	[0 or 1 / 0 / 1/step] 0: Fixed 1: Not fixed
5-747-205	Browser2	CTL	[0 to 255 / 0 / 1/step]
5-747-206	Browser3	CTL	[0 to 255 / 0 / 1/step]
5-747-207	Browser4	CTL	[0 to 255 / 0 / 1/step]
5-747-208	Browser5	CTL	[0 to 255 / 0 / 1/step]
5-747-209	Browser6	CTL	[0 to 255 / 0 / 1/step]

5-747-	-210	Browser7	CTL	[0 to 255 / 0 / 1/step]
5-747-	-211	Browser8	CTL	[0 to 255 / 0 / 1/step]
5-747-	-212	Browser9	CTL	[0 to 255 / 0 / 1/step]
5-747-	-213	Browser10	CTL	[0 to 255 / 0 / 1/step]

5748	[OpePanel Setting]		
5-748-101	Op Type Action Setting	CTL	[ 0 to 255 /0- / 1 /step]
5-748-201	Cheetah Panel Connect Setting	CTL	[0 to 1 / <b>0</b> / 1/step]

5749	[Import/Export]		
5-749-001	Export	CTL	Exports the preference information. [EXECUTE]
5-749-101	Import	CTL	Imports the preference information. [EXECUTE]

<i>575</i> 1	[Key Event Encryption Setting]		
5-751-001	Password	*CTL	[0 to 255 / <b>0</b> / 1/step]

5752	[Copy:WebAPI Setting]  Sets the copy Flair API function.  Cycling the power off/is required when the setting is changed.		
5-752-001	Copy:FlairAPI Setting	*CTL	[0 to 255 / <b>0</b> / 1/step]
			Refer to the bit SW below.

### Bit SW for SP5-752

Bit	ltem	0	1	Description	Initial value
0	Flair API Server Boot	No	Yes	Specifies whether to start the HTTP server for Flair API. "O" disables all the Flair API functions (Remote UI).	0
1	Access Permission	Enabl ed	Disab led	Setting this value to "0" permits only internal access in the machine (MFP browser).  Setting this value to "1" permits to access from external devices such as PC, Remote UI, IT-BOX.	0
2	Select IPv6/IPv4	IPv6	IPv4	Setting this value to "0" permits only accessing with IPv6.  Setting this value to "1" permits accessing with IPv4 or IPv6.	0
3	Remote UI	Not use	Use	Sets whether to use the Remote UI.	0
4	Reserved	-	-	N/A	N/A
5	Reserved	-	-	N/A	N/A
6	Reserved	-	-	N/A	N/A
7	Reserved	-	-	N/A	N/A

5753	[SyncLimitCount]		
5-753-001	SyncLimitCountSetting	CTL	[0 to 1 / 0 / 1/step]
5-753-002	SyncLimitCountSettingSrv DownCase	CTL	[0 to 1 / <b>0</b> / 1/step]
5-753-011	SyncEcoCountSetting	CTL	[0 to 1 / <b>0</b> / 1/step]

5755	[Display Setting]	
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#### RTB 67 Not used

5-755-001	Disp Administrator Password Change Scrn	CTL	[- / <b>-</b> / -/step]
5-755-002	Hide Administrator Password Change Scrn	CTL	[- / <b>-</b> / -/step]

5758	[RemoteUl Setting]		
5-758-001	Authentication	* CTL	[0 to 1 / 0 / 1/step]

5759	[Machine Limit Count]		
	-		
5-759-001	Machine Limit Count Setting	* CTL	[0 or 1 / <b>0</b> / 1/step]
5-759-061	Full Color Limit Count	*CTL	[0 to 99999999 <b>/ 0</b> / 1 / step]
5-759-062	Mono Color Limit Count	*CTL	[0 to 99999999 / <b>0</b> / 1/step]

5761	[SmartOperationPanel Setting]		
5-761-001	Restore the default Home screen	*CTL	[- / <b>-</b> / -/step]

5795	[SRM Debug SW]		
5-795-001	001:1	*CTL	[0 to 255 / <b>0</b> / 1/step]

## **U** 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]		
5-801-001	All Clear	CTL	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.

5-801-002	Engine	ENG	Clears the engine settings.
5-801-003	scs	CTL	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.
5-801-004	IMH Memory Clr	CTL	-
5-801-005	Mcs	CTL	Initializes the Mcs settings.
5-801-006	Copier Application	CTL	Initializes all copier application settings.
5-801-007	Fax Application	CTL	
5-801-008	Printer Application	CTL	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
5-801-009	Scanner Application	CTL	Initializes the scanner defaults for the scanner and all the scanner SP modes.
5-801-010	Web Service	CTL	Deletes the network file application management files and thumbnails, and initializes the job login ID.
5-801-011	NCS	CTL	All setting of Network Setup (User Menu) (NCS: Network Control Service)
5-801-012	R-FAX	CTL	
5-801-014	Clear DCS Setting	CTL	Initializes the DCS (Delivery Control Service) settings.
5-801-015	Clear UCS Setting	CTL	

5-801-016	MIRS Setting	CTL	Initializes the MIRS (Machine Information Report Service) settings.
5-801-017	CCS	CTL	Initializes the CCS (Certification and Charge-control Service) settings.
5-801-018	SRM Memory Clr	CTL	Initializes the SRM (System Resource Manager) settings.
5-801-019	LCS	CTL	Initializes the LCS settings.
5-801-020	Web Uapli	CTL	Initializes the web user application settings.
5-801-021	ECS	CTL	Initializes the data in SP5740-001 through -053, and SP5741-001.
5-801-023	AICS	CTL	Initializes the data in SP5740-001 through -053, and SP5741-001.
5-801-025	websys	CTL	Initializes the websys data
5-801-026	PLN	CTL	-
5-801-027	SAS	CTL	-
5-801-028	Rest WebService	CTL	-

5803	[INPUT Check]	See page 426.
5804	[OUTPUT Check]	

5807	[Area Selection]
	Sets the machine destination.

5-807-001	_	*FNG	[0 to 7 / <b>2</b> / 1 /step]
0 007 001			[0 to 7/2/1/step]
			1: Japan
			2: NA
			3: EU
			4: Taiwan
			5: Asia
			6: China
			7: Korea
			* The default value depends on the original machine destination.

5810	[Fusing SC Reset]			
	Resets a type A service call condition.			
	Note			
	Turn the main switch off and on after resetting the SC code.			
5-807-001	Fusing SC Reset	CTL	[0 to 1 / <b>0</b> / 1/step]	
5-807-002	Hard High Temp.Detection	CTL		

5811	[MachineSerial]		
5-811-002	Display	*CTL	Displays the machine serial number.
			[0 to 255 / <b>0</b> / 1/step]

5812	[Service Tel. No. Setting]	*CTL	
5-812-001	Service		
	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).		

5-812-002	Facsimile	
	Sets the fax 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).	
5-812-003	3 Supply	
	Use this to input the telephone number of your supplier for consumables. Enter the number and press #.	
5-812-004	Operation	
	Use this to input the telephone number of your sales agency. Enter the number and press #.	

5816	[Remote Service]	*CTL	
5-816-001	I/F Setting		
	Selects the remote service setting.		
	[0 to 2 / <b>2</b> / 1/step]		
	O: Remote service off		
	1: CSS remote service on		
	2: NRS remote service on		
5-816-002	CE Call		
	Performs the CE Call at the start or end of the service.		
	[0 or 1 / <b>0</b> / 1/step]		
	0: Start of the service		
	1: End of the service		
	<b>↓</b> Note		
	This SP is activated only when SP 5816-001 is set to "2".		
5-816-003	Function Flag		
	Enables or disables the remote service function.		
	[0 to 1 / <b>0</b> / 1/step]		
	0: Disabled, 1: Enabled		

5-816-007	SSL Disable		
	Controls if RCG (Remote Communication Gate) confirmation is done by SSL during		
	RCG send for the @Remote over a network interface.		
	[0 or 1 / 0 / 1/step]		
	0: Yes (SSL used)		
	1: No (SSL not used)		
5-816-008	RCG Connect Timeout		
	Sets the length of time (seconds) for the time-out when the RCG (Remote Communication Gate) connects during a call via the @Remote network.  [1 to 90 / 30 / 1 sec/step]		
5-816-009	RCG Write Timeout		
	Sets the length of time (seconds) for the time-out when sent data is written to the RCG during a call over the @Remote network.		
	[0 to 100 / <b>60</b> / 1 sec/step]		
5-816-010	RCG Read Timeout		
	Sets the length of time (seconds) for the timeout when sent data is written from the RCG during a call over the @Remote network.		
	[0 to 100 / <b>60</b> / 1 sec /step]		
5-816-011	Port 80 Enable		
	Controls if permission is given to get access to the SOAP method over Port 80 on the @Remote network.		
	[0 or 1 / <b>0</b> / 1 /step]		
	0: No. Access denied		
	1: Yes. Access granted.		
5-816-013	RFU Timing		
	Selects the timing for the remote firmware updating.		
	[0 or 1 / 1 / 1 /step]		
	0: Any status of a target machine		
	1: Sleep or panel off mode only		

5-816-014	RCG Error Cause
	[0 to 2 / <b>0</b> / 1 /step]
5-816-021	RCG-C Registed DFU(SSP)
	[0 or 1 / <b>0</b> / 1 /step]
5-816-023	Connect Type (N/M) DFU(SSP)
	[0 or 2 / <b>0</b> / 1 /step]
5-816-028	Send Timeout
	[0 to 100 / <b>30</b> / 1 sec/step]
5-816-029	Receive Timeout
	[0 to 100 / <b>30</b> / 1 sec/step]
5-816-030	Retry Interval
	[0 to 0xffff / 3 / 1 sec/step]
5-816-031	Retry Count
	[0 to 255 / <b>3</b> / 1 /step]
5-816-032	Connect Send Delay
	[0 to 255 / <b>5</b> / 1 sec/step]
5-816-033	Max Multipart
	[0 to 255 / <b>10</b> / 1 /step]
5-816-034	Firm DL Interval
	[0 to 0xffff / 3 / 1 sec/step]
5-816-035	Firm DL Retry Count
	[0 to 255 / <b>3</b> / 1 /step]
5-816-061	Cert Expire Timing DFU(SSP)
	Proximity of the expiration of the certification.  [0 to 0xfffffff / 0 / 1 /step]

# 5-816-062 | Use Proxy DFU(SSP) This SP setting determines if the proxy server is used when the machine communicates with the service center. [0 or 1 / 0 / 1 /step] 0: Not use 1: Use 5-816-063 Proxy Host This SP sets the address of the proxy server used for communication between the RCG device and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up the embedded RCG-N. **U** Note • The address display is limited to 127 characters. Characters beyond the 127 character are ignored. • This address is customer information and is not printed in the SMC report. 5-816-064 Proxy Port Number This SP sets the port number of the proxy server used for communication between the embedded RCG-N and the gateway. This setting is necessary to set up the embedded RC Gate-N. [0 to 0xffff / 0 / 1 / step]**Note** • This port number is customer information and is not printed in the SMC report. 5-816-065 Proxy User Name This SP sets the HTTP proxy certification user name. **U** 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.

3

5816	[Remote Service]	*CTL

5-816-067	CERT: U	Jp State DFU(SSP)
	Displays the status of the certification update.	
	[0 to 2	[0 to 255 / <b>0</b> / 1 /step]
	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.

5816	[Remot	e Service]	*CTL
5-816-068	CERT: E	Error DFU(SSP)	
	certifico		at describes the reason for the request for update of the
	0	Normal. There is n	o request for certification update in progress.
	1	Request for certific expired.	ation update in progress. The current certification has
	2	An SSL error notifiexpired.	cation has been issued. Issued after the certification has
	3	Notification of shif certification.	t from a common authentication to an individual
	4	Notification of a c	ommon certification without ID2.
	5	Notification that no	o certification was issued.
	6	Notification that G	W URL does not exist.

5816	[Remote Service]	*CTL	
5-816-069	CERT:Up ID DFU(SSP)		
	The ID of the request for ce	rtification.	
5-816-083	Firm Up Status DFU(SSP)		
Displays the status of the firmware update		mware update	
	[0 or 1/ <b>0</b> /1/step]		
5-816-085 Firm Up User Check DFU(SSP)		SSP)	
	[0 or 1 / <b>0</b> / 1 /step]		
5-816-086	Firmware Size DFU(SSP)		
	[0 to 0xfffffff / 0 / 1 /step	p]	
5-816-087	CERT:Macro Ver. DFU(SSP)		
	Displays the macro version	of the @Remote certification.	

5-816-088	CERT:PAC Ver. DFU(SSP)
	Displays the PAC version of the @Remote certification.
5-816-089	CERT:ID2Code DFU(SSP)
	Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_).  Asteriskes (* * * *) indicate that no @Remote certification exists.
5-816-090	CERT:Subject DFU(SSP)
	Displays the common name of the @Remote certification subject. CN = the following 17 bytes. Spaces are displayed as underscores (_). Asterisks (* * * *) indicate that no DESS exists.
5-816-091	CERT:Serial No. DFU(SSP)
	Displays serial number for the NRS certification. Asterisks (****) indicate that no DESS exists.
5-816-092	CERT:Issuer DFU(SSP)
	Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asteriskes (* * * *) indicate that no DESS exists.
5-816-093	CERT:Valid Start DFU(SSP)
	Displays the start time of the period for which the current @Remote certification is enabled.
5-816-094	CERT:Valid End DFU(SSP)
	Displays the end time of the period for which the current @Remote certification is enabled.
5-816-102	CERT:Encrypt Level
	Displays cryptic strength of the NRS certification.  1: 512 bit  2: 2048 bit

5-816-103	Client Communication Method
	[0 to 3 / <b>0</b> / 1 /step]
	Saves the communication type that the machine succeeded in @Remote client
	communication
	0: Not communicated (initial setting)
	1: IPv4
	2: IPv6
	3: Hostname
5-816-104	Client Communication Limit
	[1 to 7 / <b>7</b> / 1 /step]
5-816-115	Network Information Waiting timer
	[5 to 255 / <b>5</b> / 1 sec /step]
	Saves the time until the latest network information is determined.
	If SCS does not notify a boot of the network or IPv6 address event, NRS determines the network information and notifies the setting change(s) to intermediary device(s).
5-816-150	Selection Country
	[0 to 10 / <b>0</b> / 1 /step]
	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
	1: NA
	3: EU
	0: Other

#### 5-816-151

#### Line Type Automatic Judgement

#### 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.

### 5-816-152 | Line Type Judgement Result

Displays a number to show the result of the execution of SP5816 151. Here is a list of what the numbers mean.

[0 to 255 / 0 / 0 /step]

- 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.

## 5-816-153 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 to 2 / 0 / 1 /step] O: Tone Dialing Phone 1: Pulse Dialing Phone Inside Japan "2" may also be displayed: O: Tone Dialing Phone 1: Pulse Dialing Phone 10PPS 2: Pulse Dialing Phone 20PPS 5-816-154 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). 5-816-156 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 (").

5-816-157	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
	<ul> <li>Spaces and # allowed but the entire entry must be enclosed by double quotation marks (").</li> </ul>
5-816-161	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)
5-816-162	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.
5-816-163	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

5-816-164	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 or 1 / <b>0</b> / 1 /step]
	0: Sharing Fax
	1: No Sharing Fax
	Note
	<ul> <li>If this setting is changed, the copier must be cycled off and on.</li> </ul>
	<ul> <li>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.</li> </ul>
5-816-165	-
	[0 to 10/1/1/step]
	Specifies the ringing count for RCG-M to call when the value of SP5816-164 is "1". Cycling the main power off/on is required if the value of this SP is changed.
5-816-173	Modem Serial No.
	This SP displays the serial number registered for the RCG-M.
5-816-174	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.
5-816-187	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 1/0/1/step]
	0: Disable, 1: Enable
5-816-190	3G DongleID
	[-/ <b>-</b> / - /step]

5-816-200	Manual Polling
	Executes the manual polling.
5-816-201	Regist Status DFU(SSP)
	Displays a number that indicates the status of the @Remote service device.
	[0 to 255/0/1/step]
	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.
5-816-202	Letter Number DFU(SSP)
	Allows entry of the number of the request needed for the RCG-N device.
5-816-203	Confirm Execute
	Executes the inquiry request to the @Remote GW URL.
	[0 or 1/0/1/step]

5-816-204	Confirm Result DFU(SSP)		
	[0 to 255 / <b>0</b> / 1 /step]		
	Displays a number that indicates the result of the inquiry executed with SP5816 203.		
	0: Succeeded		
	3: Communication error (proxy enabled)		
	4: Communication error (proxy disabled)		
	5: Proxy error (authentication error)		
	6: Communication error		
	8: Other error		
	9: Request number confirmation executing		
	11: Already registered		
	12: Parameter error		
	20: Dial-up authentication error		
	21: Answer tone detection error		
	22: Carrier detection error		
	23: Invalid setting value (modem)		
	24: Low power supply current		
	25: unplugged modem		
	26: Busy line		
5-816-205	Confirm Place DFU(SSP)		
	[0 or 1/0/1/step]		
5-816-206	Register Execute		
	Executes "Embedded RCG Registration".		
	[0 or 1/0/1/step]		

## 5-816-207 Register Result DFU(SSP) Displays a number that indicates the registration result. [0 to 255/0/1/step] 0: Succeeded 2: Already registered 3: Communication error (proxy enabled) 4: Communication error (proxy disabled) 5: Proxy error (Authentication error) 8: Other error 9: Request number confirmation executing 11: Already registered 12: Parameter error 20: Dial-up authentication error 21: Answer tone detection error 22: Carrier detection error 23: Invalid setting value (modem) 24: Low power supply current 25: unplugged modem

5816	[Remote Service]	*CTL	
5-816-208	Error Code DFU(SSP)		
	Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.  [-2147483647 to 2147483647 / 0 / - /step]		
	Cause	Code	Meaning
	Illegal Modem	-11001	Chat parameter error
	Parameter	-11002	Chat execution error
		-11003	Unexpected error

26: Busy line

5816	[Remote Service]	*CTL	
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5-816-208	Error Code			
	Cause	Code	Meaning	
	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.	
		-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.	
		-12006	A confirmation request was made after the confirmation had been already completed.	
		-12007	The request number used at registration was different from the one used at confirmation.	
		-12008	Update certification failed because mainframe was in use.	
		-12009	D2 mismatch between an individual certification and NVRAM.	
		-12010	Certification area is not initialized.	

816 [Remote Servic	*CTL	
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5-816-208	Error Code		
	Cause	Code	Meaning
	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
5-816-209	Instl Clear	Releases the r	nachine from its embedded RCG setup. 1 /step]
5-816-240	CommErrorTime DFU(SSP)	[O to Oxfffffff/	/ 0 / 1 /step]
5-816-241	CommErrorCode 1 DFU(SSP)	[O to Oxfffffff/	/ 0x00000000 / 1 /step]
5-816-242	CommErrorCode 2 DFU(SSP)	[O to Oxfffffff/	/ 0x00000000 / 1 /step]
5-816-243	CommErrorCode 3 DFU(SSP)	[O to Oxfffffff/	/ <b>0x00000000</b> / 1 /step]
5-816-244	CommErrorState 1 DFU(SSP)	[O to Oxffff/ C	<b>0x0000</b> / 1 /step]

5-816-245	CommErrorState 2 DFU(SSP)	[0 to 0xffff/ <b>0x0000</b> / 1 /step]
5-816-246	CommErrorState 3 DFU(SSP)	[0 to 0xffff/ <b>0x0000</b> / 1 /step]
5-816-247	SSL Error Count DFU(SSP)	[0 to 255/ <b>0</b> / 1 /step]
5-816-248	Other Err Count DFU(SSP)	[0 to 255/ <b>0</b> / 1 /step]
5-816-250	CommLog Print	Prints the communication log.  [0 to 255/0/1/step]

5821	[Remote Service RCG Setting]		
5-821-002	RCG IPv4 Address	*CTL	[0 to Oxffffffff / 0 / 1 / step]  Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.
5-821-003	RCG Port	*CTL	[0 to 65535/ <b>443</b> / 1 /step]
5-821-004	RCG IPv4 URL Path	*CTL	[- / <b>-</b> / - /step]
5-821-005	RCG IPv6 Address	*CTL	[- / <b>-</b> / - /step]
5-821-006	RCG IPv6 URL Path	*CTL	[- / <b>-</b> / - /step]
5-821-007	RCG Host Name	*CTL	[- / <b>-</b> / - /step]
5-821-008	RCG Host URL Path	*CTL	[- / <b>-</b> / - /step]

5824	[NV-RAM Data Upload]		
5-824-001	NV-RAM Data Upload	CTL	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card.  [EXECUTE]

5825	[NV-RAM Data Download]
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5-825-001	NV-RAM Data Download	CTL	Downloads the UP and SP mode data from an SD card to the NVRAM.
			[EXECUTE]

5828	[Network Setting]	*CTL
5-828-065	Job Spooling	
	Enables/disables Job Spoo	ling.
	[0 or 1 / <b>0</b> / 1/step]	
	0: Disabled, 1: Enabled	
5-828-066	Job Spooling Clear: Start Ti	me
	Treatment of the job when a	ı spooled job exists at power on.
	[0 or 1 / <b>1</b> / 1/step]	
	0: ON (Data is cleared), 1:	OFF (Automatically printed)
5-828-069	Job Spooling (Protocol)	
	Validates or invalidates the	job spooling function for each protocol.
	[0x00 to 0xff / <b>0x7f</b> / -/st	ep]
	0: Validates, 1: Invalidates	
	bit0: LPR, bit1: FTP	
	bit2: IPP, bit3: SMB	
	bit4: BMLinkS, bit5: DIPRIN	Т
	bit6: sftp, bit7: (Reserved)	

5-828-087	Protocol usage
	Used or not used the network.
	[0x00000000 to 0xffffffff / 0x00000000 / 1/step]
	0: Off (Not used the network with the protocol.)
	1: On (Used the network with the protocol once or more.)
	bit0: IPsec, bit1: IPv6, bit2: IEEE 802. 1X, bit3:Wireless LAN,
	bit4: Security mode level setting, bit5:Appletalk, bit6: DHCP,
	bit7: DHCPv6, bit8: telnet, bit9: SSL, bit10: HTTPS,
	bit11: BMLinkS printing, bit12: diprint printing, bit13: LPR printing,
	bit 14: ftp printing, bit 15: rsh printing, bit 16: SMB printing,
	bit17: WSD-Printer, bit18: WSD-Scanner, bit19: Scan to SMB,
	bit20: Scan to NCP, bit21: Reserve, bit22: Bluetooth,
	bit23: IEEE 1284, bit24: USB printing, bit25: Dynamic DNS,
	bit26: Netware printing, bit27: LLTD, bit28: IPP printing,
	bit29: IPP printing (SSL), bit30: ssh, bit31: sftp
5-828-090	TELNET (0: OFF 1: ON)
	Enables or disables the Telnet protocol.
	[0 or 1 / 1 / 1 /step]
	0: Disable, 1: Enable
5-828-091	Web (0: OFF 1: ON)
	Enables or disables the Web operation.
	[0 or 1 / 1 / 1 /step]
	0: Disable, 1: Enable
5-828-145	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.

5-828-147	SettingActive IPv6 Stateless Address 1	These SPs are the IPv6 status addresses (1 to 5) referenced on the Ethernet or wireless	
5-828-149	SettingActive IPv6 Stateless Address	LAN (802.11b) in the format:  "Status Address" + "Prefix Length"	
5-828-151	Active IPv6 Stateless Address 3	The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.	
5-828-153	Active IPv6 Stateless Address 4		
5-828-155	Active IPv6 Stateless Address 5		
5-828-156	IPv6 Manual Address		
	This SP is the IPv6 manually set addres (802.11b) in the format: "Manual Set Address" + "Prefix Length	ss referenced on the Ethernet or wireless LAN	
		28 bits configured in 8 blocks of 16 bits each.	
5-828-158	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.		
5-828-219	IPsec Aggressive Mode Setting		
	[0 or 1 / <b>0</b> / 1 /step]		
5-828-236	Web Item visible		
	Displays or does not display the Web	system items.	
	[0x0000 to 0xffff / <b>0xffff</b> / 1 /step] (	D: Not displayed, 1:Displayed	
	bit0: Net RICOH		
	bit1: Consumable Supplier bit2-15: Reserved (all)		
5-828-237			
	Displays or does not display the link to the web system.	o Net RICOH on the top page and link page of	
	[0 or 1 / <b>1</b> / 1]		
	0: Not display, 1:Display		

5-828-238	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 or 1 / 1 / 1]		
	0: Not display, 1:Display		
5-828-239	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.		
5-828-240	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.		
5-828-241	Web Link1 visible		
	Displays or does not display the link to URL1 on the top page of the web system.		
	[0 or 1 / 1 / 1]		
	0: Not display, 1:Display		
5-828-242	Web Link2 Name		
	Same as "-239"		
	[-/-/-]		
5-828-243	Web Link2 URL		
	Same as "-240"		
	[-/-/-]		
5-828-244	Web Link2 visible		
	Same as "-241"		
	[0 or 1 / 1 / 1/step]		

5832	[HDD Formatting]	*CTL	
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HDD Formatting (ALL)
HDD Formatting (IMH)
HDD Formatting (Thumbnail/OCR)
HDD Formatting (Job Log)
HDD Formatting (Printer Fonts)
HDD Formatting (User Info)
Mail RX Data
Mail TX Data
HDD Formatting (Data for a Design)
HDD Formatting (Log)
HDD Formatting (Ridoc I/F)
HDD Formatting (Thumbnail)

Initializes the hard disk. Use this SP mode only if there is a hard disk error.

5835	[File Transfer]		
5-835-034	List/File Select: Scanner	*CTL	[ 0 to 1 / <b>0</b> / 1 /step]

5836	[Capture Settings]	*CTL
5-836-001	Capture Function (0:Off 1:On)	[0 or 1 / 0 / 1 /step]
		0: Disable, 1: Enable
	With this function disabled, the settings initialized, displayed, or selected.	s related to the capture feature cannot be
5-836-011	Capture Setting: Copy	[0 or 1 / <b>0</b> / 1 /step]
5-836-012	Capture Setting: Doc. Svr.	[0 or 1 / <b>0</b> / 1 /step]
5-836-013	Capture Setting: Fax RX Printer	[0 or 1 / <b>0</b> / 1 /step]
5-836-014	Capture Setting: Fax TX	[0 or 1 / <b>0</b> / 1 /step]
5-836-015	Capture Setting: Printer	[0 or 1 / <b>0</b> / 1 /step]
5-836-016	Capture Setting: Scanner	[0 or 1 / <b>0</b> / 1 /step]

5-836-017	Capture Setting: SDK	[0 or 1 / <b>0</b> / 1 /step]
5-836-071	Reduction for Copy Color	[0 to 3 / <b>2</b> / 1 /step]
		0: 1to-1, 1: 1/2, <b>2: 1/3</b> , 3: 1/4
5-836-072	Reduction for Copy B&W Text	[0 to 6 / <b>0</b> / 1 /step]
		<b>0:</b> 1to-1, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
5-836-073	Reduction for Copy B&W Other	[0 to 6 / <b>0</b> / 1 /step]
		<b>0:</b> 1to-1, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
5-836-074	Reduction for Printer Color	[0 to 3 / <b>2</b> / 1 /step]
		0: 1to-1, 1: 1/2, <b>2: 1/3</b> , 3: 1/4
5-836-075	Reduction for Printer B&W	[0 to 6 / <b>0</b> / 1 /step]
		<b>0:</b> 1to-1, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
5-836-077	Reduction for Printer Color 1200dpi	[1 to 5 / <b>4</b> / 1 /step]
		1: 1/2, 3: 1/4, <b>4: 1/6</b> , 5: 1/8 (2: skipped), 6: 2/3
5-836-078	Reduction for Printer B&W 1200dpi	[0 or 5 / <b>0</b> / 1 /step]
		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	
		rult format for stored documents sent to the
	document management server via the	
5.004.001	Enabled only when optional MLB (Me	
5-836-081	Format for Copy Color	[- / - / 1 /step] <b>0: JFIF/JPEG</b> , 1: TIFF/MMR,
		2: TIFF/MH, 3: TIFF/MR
		• Note
		This SP is not used in this model.
5-836-082	Format for Copy B&W Text	[0 to 3 / 1 / 1 /step]
	,,	O: JFIF/JPEG, 1: TIFF/MMR,
		2: TIFF/MH, 3: TIFF/MR
	!	!

5-836-083	Format Copy B&W Other	[0 to 3 / 1 / 1 /step]	
		O: JFIF/JPEG, 1: TIFF/MMR,	
		2: TIFF/MH, 3: TIFF/MR	
5-836-084	Format for Printer Color	[-/ <b>-</b> /1/step]	
		O: JFIF/JPEG, 1: TIFF/MMR,	
		2: TIFF/MH, 3: TIFF/MR	
		●Note	
		This SP is not used in this model.	
5-836-085	Format for Printer B&W	[0 to 3 / 1 / 1 /step]	
		O: JFIF/JPEG, 1: TIFF/MMR,	
		2: TIFF/MH, 3: TIFF/MR	
5-836-091	Default for JPEG	[5 to 95 / <b>50</b> / 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 (Me	edia Link Board) is installed.	
5-836-101	Primary srv IP address	[0 to 0xfffffff / 0x00 / 1 /step]	
		Sets the IP address for the primary capture server. This is basically adjusted by the remote system.	
5-836-102	Primary srv scheme	This is basically adjusted by the remote system.	
5-836-103	Primary srv port number	[1 to 65535 / <b>80</b> / 1 /step]	
		This is basically adjusted by the remote system.	
5-836-104	Primary srv URL path	This is basically adjusted by the remote system.	
5-836-111	Secondary srv IP address	Sets the IP address for the secondary capture server. This is basically adjusted by the remote system.	
5-836-112	Secondary srv scheme	This is basically adjusted by the remote system.	

5-836-113	Secondary srv port number	[1 to 65535 / <b>80</b> / 1 /step] This is basically adjusted by the remote system.
5-836-114	Secondary srv URL path	This is basically adjusted by the remote system.
5-836-120	Default Reso Rate Switch	[0 or 1 / 0 / 1 /step] This is basically adjusted by the remote system.
5-836-121	Reso: Copy(Color)	[0 to 255 / <b>2</b> / 1/step]
	Selects the resolution for color copy m system.  0: 600dpi/ 1: 300dpi/ 2: 150dpi/ 3	ode. This is basically adjusted by the remote
5-836-122	Reso: Copy(Mono)	[0 to 255 / <b>3</b> / 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	
5-836-123	Reso: Print(Color)	[0 to 255 / <b>2</b> / 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	
5-836-124	Reso: Print(Mono)	[0 to 255 / <b>3</b> / 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	
5-836-125	Reso: Fax(Color)	[0 to 255 / <b>4</b> / 1/step]
5-836-126	Reso: Fax(Mono)	[0 to 255 / <b>3</b> / 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	

	I .		
5-836-127	Reso: Scanner(Color)	[0 to 255 / <b>4</b> / 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:		
5-836-128	Reso: Scanner(Mono)	[0 to 255 / <b>3</b> / 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		
5-836-129	Reso: SDK(Color)	[0 to 255 / <b>4</b> / 1/step]	
5-836-130	Reso: SDK(Mono)	[0 to 255 / <b>3</b> / 1/step]	
5-836-141	All Addr Info Switch	[0 or 1 / 1 / 1/step]	
5-836-142	Stand-by Doc Max Number	[10 to 10000 / <b>2000</b> / 1/step]	
5-836-143	ClearLightPDF Switch	[0 or 1 / <b>0</b> / 1/step]	

5840	[IEEE 802.11]			
5-840-006	Channel Max	*CTL	[1 to 14 / <b>14</b> / 1 /step]	
			Europe/Asia: 1 to 13	
	NA/ Asia: 1 to 11			
	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. DFU  • Note  • Do not change the setting.			

5-840-007	Channel Min	*CTL	[1 to 14 / 1 / 1 / step]  Europe: 1 to 13  NA/ Asia: 1 to 11
	LAN. The number of channe	els availab num end of ber of char	available for data transmission via the wireless le varies according to location. The default the range for each area. Adjust the lower 4
5-840-011	WEP key Select	*CTL	Selects the WEP key.  [0x00 to 0x11 / 0x00 / 1 /step]  00: Key #1  01: Key #2 (Reserved)  10: Key #3 (Reserved)  11: Key #4 (Reserved)
5-840-045	WPA Debug Lvl	*CTL	Selects the debug level for WPA authentication application.  [1 to 3 / 3 / 1/step] 1: Info, 2: warning, 3: error]  This SP is displayed only when the IEEE802.11 card is installed.
5-840-046	11w	*CTL	[0 to 2 / 0 / 1/step]
5-840-047	PSK Set Type	*CTL	[0 to 1 / <b>0</b> / 1/step]

5841	[Supply Name Setting]		
5-841-001	Toner Name Setting:Black	*CTL	Specifies supply names. These appear on the
5-841-002	Toner Name Setting:Cyan	*CTL	screen when the user presses the Inquiry button in the user tools screen.
5-841-003	Toner Name Setting:Yellow	*CTL	
5-841-004	Toner Name Setting:Magenta	*CTL	

5842	[GWWS Analysis]		
5-842-001	Setting 1	*CTL	[0x00 to 0xFF / <b>0</b> / 1/step]
5-842-002	Setting 2	*CTL	[0x00 to 0xFF / <b>0</b> / 1/step]

5844	[USB]		
5-844-001	Transfer Rate	*CTL	[1 to 4 / 4 / 1 /step] 0001: Full speed 0004: Auto Change
5-844-002	Vendor ID	*CTL	[0x0000 to 0xffff / <b>0x05ca</b> / 1 /step] Displays the vendor ID. DFU
5-844-003	Product ID	*CTL	[0x0000 to 0xffff / 0x0403 / 1 /step] Displays the product ID. DFU
5-844-004	Device Release Number	*CTL	[0 to 9999 / 100 / 1 /step] Displays the development release version number. DFU
5-844-005	Fixed USB Port	*CTL	[0 to 2 / <b>0</b> / 1 /step]
5-844-006	PnP Model Name	*CTL	[-/-/-/step]
5-844-007	PnP Serial Number	*CTL	[- / <b>-</b> / - /step]
5-844-008	Mac Supply Level	*CTL	[0 or 1 / 1 / 1 /step]
5-844-100	Notify Unsupport	*CTL	[0 or 1 / 1 / 1 /step]

5845	[Delivery Server Setting]	*CTL
	Provides items for delivery server setting	gs.
5-845-001	FTP Port No.	[1 to 65535 / <b>3670</b> / 1 /step]
	Sets the FTP port number used when in	nage files to the Scan Router Server.
5-845-002	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.	

5-845-006	Delivery Error Display Time	[0 to 999 / <b>300</b> / 1 s	ec /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.		
5-845-008	IP Address (Secondary) Range:000.000.000 to 255.255.255		000 to
	Specifies the IP address assigned to the secondary delivery server of Scan Rouaddress without reference to the DNS	uter. This SP allows only	
5-845-009	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		the I/O device.
5-845-010	Delivery Svr. Capability	[0 to 255 / <b>0</b> / 1 /ste	ep]
	Bit7 = 1 Comment information exits		Changes the
	Bit6 = 1 Direct specification of mail ad	ldress possible	capability of the registered that the
	Bit5 = 1 Mail RX confirmation setting p	oossible	I/O device registered.
	Bit4 = 1 Address book automatic upda	ate function exists	. Togistorou.
	Bit3 = 1 Fax RX delivery function exists	3	
	Bit2 = 1 Sender password function exi	r password function exists	
	Bit1 = 1 Function to link MK-1 user and Sender exists		
	BitO = 1 Sender specification required to "O")	(if set to 1, Bit6 is set	

5-845-011	Delivery Svr Capability (Ext)	[0 to 255 / <b>0</b> / 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		
5-845-013	Server Scheme (Primary) DFU		
	This is used for the scan router prograr	n.	
5-845-014	Server Port Number (Primary) DFU	[1 to 65535 / <b>80</b> / 1 /step]	
	This is used for the scan router program	n.	
5-845-015	Server URL Path (Primary) DFU		
	This is used for the scan router prograr	n.	
5-845-016	Server Scheme (Secondary) DFU		
	This is used for the scan router prograr	n.	
5-845-017	Server Port Number (Secondary) DFU	[1 to 65535 / <b>80</b> / 1 /step]	
	This is used for the scan router program	n.	
5-845-018	Server URL Path (Secondary) DFU		
	This is used for the scan router program.		
5-845-022	Rapid Sending Control		
	Enables or disables the prevention function for the continuous data sending error.  [0 to 1 / 1 / 1/step]  0: Disable, 1: Enable		

5846	[UCS Setting]		
5-846-001	Machine ID (for Delivery Server)	*CTL	[- / - / -/step] Displays the ID used for directory name of the delivery server.

5-846-002	Machine ID Clear (for Delivery Server)	*CTL	[- / - / -/step] Clears the ID used for directory name of the delivery server.
5-846-003	Maximum Entries	*CTL	[2000 to 20000 / 2000 / 1/step] Sets the maximum account entries that UCS manages.
5-846-006	Delivery Server Retry Timer	*CTL	[0 to 255 / 0 / 1/step]  Sets the retrying interval when the delivery server failed to obtain the address book in the delivery server.  Setting to "0" disables retrying.
5-846-007	Delivery Server Retry Times	*CTL	[0 to 255 / 0 / 1/step] Sets the retry times when the delivery server failed to obtain the address book in the delivery server. Setting to "0" disables retrying.
5-846-008	Delivery Server Maximum Entries	*CTL	[2000 to 20000 / 2000 / 1/step] Sets the maximum user entries that UCS manages.
5-846-010	LDAP Search Timeout	*CTL	[1 to 255 / 60 / 1/step] Sets the length of the timeout for the search of the LDAP server.
5-846-020	WSD Maximum Entries	*CTL	[50 to 250 / <b>250</b> / 1/step] Sets the maximum entries of the WSD address book that UCS manages.
5-846-021	Folder Auth Change	*CTL	[0 or 1 / 0 / 1 /step]  Sets whether to use the log-in user or destination, if the folder authentication uses "specify the log-in auth info".
5-846-040	Addr Book Migration(USB->HDD)	*CTL	[- / - / -/step]  Moves the address book data in the SD card or USB Flash ROM to the HDD.

5-846-041	Fill Addr Acl Info	*CTL	[- / - / -/step]
	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 the new HDD.		
	3.Turn the machine on.		
			are created on the HDD automatically.
	<ul><li>5. However, at this point the address book can be accessed by only the system administrator or key operator.</li><li>6. Enter the SP mode and do SP5-846-041. After this SP executes successfully, any user can access the address book.</li></ul>		
5-846-043	Addr Book Media	*ENG	[0 to 30 / <b>0</b> / 1 /step]
			0: Unconfirmed
			1: SD Slot 1
			2: SD Slot 2
			4: USB Flash ROM
			10: SD Slot 10
			20: HDD
			30: Nothing
5-846-047	Initialize Local Addr Book	*ENG	[- / <b>-</b> / -/step]
			Clears the local address book information, including the user code.
5-846-048	Initialize Delivery Addr Book	*ENG	[- / - / -/step] Initialize the delivery address book.
			·
5-846-049	Initialize LDAP Addr Book	*ENG	[- / - / -/step]
			Clears the LDAP address book information, except the user code.

5-846-050	Initialize All Addr Book	*ENG	[- / - / -/step]  Clears all directory information managed by  UCS, including all user codes.
5-846-051	Backup All Addr Book	ENG	[- / - / -/step] Uploads all directory information to the SD card.
5-846-052	Restore All Addr Book	ENG	[-/-/-/step]  Downloads all directory information from the SD card.
5-846-053	Clear Backup Info	ENG	[- / - / -/step]  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.
5-846-060	Search option	*ENG	[0x00 to 0xff / 0x0f / 1 /step] This SP uses bit switches to set up the fuzzy search options for the UCS local address book. Bit: Meaning bit0: Checks both upper/lower case characters bit1: Japan Only bit2: Japan Only bit3: Japan Only bit4 to 7: Not Used
5-846-062	Complexity option 1	*ENG	[0 to 32 / 0 / 1 /step] 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.

	· · · · · · · · · · · · · · · · · · ·		
5-846-063	Complexity option 2	*ENG	[0 to 32 / 0 / 1 /step]  Use this SP to set the conditions for password entry to access the local address book.  Specifically, this SP limits the password entry to lower case and defines the length of the password.
5-846-064	Complexity option 3	*ENG	[0 to 32 / 0 / 1 /step]  Use this SP to set the conditions for password entry to access the local address book.  Specifically, this SP limits the password entry to numbers and defines the length of the password.
5-846-065	Complexity option 4	*ENG	[0 to 32 / 0 / 1 /step]  Use this SP to set the conditions for password entry to access the local address book.  Specifically, this SP limits the password entry to symbols and defines the length of the password.
5-846-091	FTP Auth Port Setting	*ENG	[0 to 65535 / <b>3671</b> / 1 /step] Specifies the FTP port for obtaining the address book of delivery server.
5-846-094	Encryption Stat	*ENG	[0 to 255 / <b>0</b> / 1/step] 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.		

5-847-001	Rate for Copy Color [0 to 5 / <b>2</b> / 1 /step]	0: 1x 1: 1/2x
5-847-002	Rate for Copy B&W Text [0 to 6 / 0 / 1 /step]	2: 1/3x 3: 1/4x
5-847-003	Rate for Copy B&W Other [0 to 6 / 0 / 1 /step]	4: 1/6x 5: 1/8x 6: 2/3x
5-847-004	Rate for Printer Color [0 to 5 / 2 / 1 /step]	
5-847-005	Rate for Printer B&W [0 to 6 / 0 / 1 /step]	
5-847-006	Rate for Printer Color 1200dpi	[0 to 5 / <b>4</b> / 1/step]
5-847-007	Rate for Printer B&W 1200dpi	[0 to 6 / <b>1</b> / 1/step]
5-847-021	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. A 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.	
5-847-002	Access Ctrl: Repository (onl 4 bits)	y Lower [0x00 to 0xFF / 0x02 / 1/step] 0000: No access control 0001: Denies access to DeskTop Binder. 0010: No writing control

5-847-003	Access Control: Doc. Svr. Print (Lower 4 bits)	[0x00 to 0xFF / 0x00 / 1/step] Switches access control on and off.
5-847-004	Access Control: udirectory (Lower 4 bits)	0000: No access control 0001: Denies access to DeskTop Binder.
5-847-007	Access Ctrl: Comm. Log Fax (Lower 4 bits)	
5-847-009	Access Ctrl: Job Ctrl (Lower 4 bits)	
5-847-011	Access Ctrl: Devicemanagement (Lower 4bits)	
5-847-021	Access Ctrl: Delivery (Lower 4 bits)	
5-847-022	Access Ctrl: administration (Lower 4bits)	
5-847-099	Repository: Download Image Setting	DFU
5-847-100	Repository: Download Image Max. Size	Specifies the max size of the image data that the machine can download.  [1 to 2048 / 2048 / 1 / step]
5-847-217	Setting: Timing	N/A

5849	[Installation Date]	*CTL
5-849-001	Display	The "Counter Clear Day" has been changed to "Installation Date" or "Inst. Date".
5-849-002	Switch to Print	Determines whether the installation date is printed on the printout for the total counter.  [0 or 1 / 1 / 1/step]  0: OFF (No Print)  1: ON (Print)

5-849-003	Displays the total counter at set the setting day (SP5849-001).
	[0 to 99999999 / <b>0</b> / 1/step]

5851	[Bluetooth]	*CTL
5-851-001	Mode	
	Sets the operation mode for the Bluetooth Unit. Press either key.	
	[0x00 to 0x01 / <b>0x00</b> / 1/step]	
	[O:Public][1:Private]	

5856	[Remote ROM Update]		
	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.		
5-856-002	Local Port *CTL [0 or 1 / <b>0</b> / 1/step]		[0 or 1 / <b>0</b> / 1/step]
			0: Disable
			1: Enable

5858	[Save Machine Info] *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.	
5-858-001	0:OFF 1:ON	Turns on/off the debug save for SC codes generated by printer engine errors.  [0 or 1 / 0 / 1 / step]
5-858-002	Target(0:HDD 1:SD)	Turns on/off the debug save for SC codes generated by GW controller errors.  [0 or 1 / 0 / 1 / step]
5-858-003	Make LogTrace Dir	[0 or 1 / <b>0</b> / -/ step]
5-858-101	Start Date	[0 to 20371212 / <b>0</b> / 1 /step]
5-858-102	Days of Tracing	[0 to 180 / <b>0</b> / 1 day/step]

5-858-103	Acquire Fax Address(0:OFF 1:ON)	[0 or 1 / <b>0</b> / 1 / step]
5-858-111	Acquire All Info & Logs	[0 or 1 / 0 / -/ step]
5-858-121	Acquire Configuration Page	[0 or 1 / 0 / -/ step]
5-858-122	Acquire Font Page	[0 or 1 / <b>0</b> / -/ step]
5-858-123	Acquire Print Setting List	[0 or 1 / <b>0</b> / -/ step]
5-858-124	Acquire Error Log	[0 or 1 / <b>0</b> / -/ step]
5-858-131	Acquire Fax Info	[0 or 1 / <b>0</b> / -/ step]
5-858-141	Acquire All Debug Logs	[0 or 1 / <b>0</b> / -/ step]
5-858-142	Acquire Only Controller Debug Logs	[0 or 1 / 0 / -/ step]
5-858-143	Acquire Only Engine Debug Logs	[0 or 1 / 0 / -/ step]
5-858-144	Acquire Only Opepanel Debug Logs	[0 or 1 / 0 / -/ step]
5-858-145	Acquire Only FCU Debug Logs	[0 or 1 / <b>0</b> / -/ step]

5860	[SMTP/POP3/IMAP4]	*CTL
5-860-020	Partial Mail Receive Timeout	[1 to 168 / <b>72</b> / 1hour/step]
	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.	
5-860-021	MDN Response RFC2298 Compliance	[0 or 1 / 1 / 1 /step]
	Determines whether RFC2298 compliance is switched on for MDN reply mail.  0: No  1: Yes	

F044	[F AA et December 1	*CTI
5-860-028	S/MIME: Authentication Check	[0 to 1 / <b>0</b> / 1/step] 0: Check 1: No check
5-860-026	S/MIME: MIME Header Setting	Selects the MIME header type of an E-mail sent by S/MIME.  [0 to 2 / 0 / 1/step]  0: Microsoft Outlook Express standard  1: Internet Draft standard  2: RFC standard
	Selects the authentication method for S  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 SA	ATP authorization is enabled by UP mode.
5-860-025	Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated.  O: No. "From" item not switched.  1: Yes. "From" item switched.  SMTP Auth. Direct Setting  [0 to 0xff / 0x0 / 1 / step]	
5-860-022	SMTP Auth. From Field Replacement	[0 or 1 / <b>0</b> / 1 /step]

5866	[E-Mail Report]	*CTL
5-866-001	Report Validity	[0 or 1 / <b>0</b> / 1/step]
5-866-005	Add Date Field	[0 or 1 / <b>0</b> / 1/step]

5869	[RAM Disk Setting]	*CTL
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5-869-001	Mail Function	Set whether the RAM disk is used or not used when using the mail functions.
		[0 or 1 / <b>0</b> / 1 / step]
		0:OFF, 1:ON

5870	[Common KeyInfo Writing]		
5-870-001	Writing	*CTL	[0 or 1 / 0 / 1/step] Writes to flash ROM the common proof for validating the device for @Remote specifications.
5-870-003	Initialize	*CTL	[0 or 1 / 0 / 1/step] Initializes the data area of the common proof for validating.
5-870-004	Writing: 2048bit	*CTL	[0 or 1 / <b>0</b> / 1/step]

5873	[SDCardAppliMove]		
5-873-001	MoveExec	*CTL	[O or 1 / 0 / 1/step]  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.
5-873-002	UndoExec	*CTL	[O or 1 / 0 / 1/step] 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]
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5-875-001	Reboot Setting	*CTL	Enables or disables the automatic reboot function when an SC error occurs.
			[0 or 1/ <b>0</b> /1/step]
			O: 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.
5-875-002	Reboot Type	*CTL	Selects the reboot method for SC.  [0 or 1 / 0 / 1/step]
			0: Manual reboot, 1: Automatic reboot

5878	[Option Setup]		
5-878-001	Data Overwrite Security	*CTL	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.
5-878-002	HDD Encryption	*CTL	Installs the HDD Encryption unit.
5-878-004	OCR Dictionary	*CTL	

5881	[Fixed Phrase Block Erasing]		
5-881-001	-	*CTL	Deletes the fixed phrase.

5885	[Set WIM Function] Web Image Monitor Settings	
3663	Close or disclose the functions of web image monitor.	

5-885-020	DocSvr Acc Ctrl	*CTL	[0x00 or 0xFF / 0x00 / -/step] 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
5-885-050	DocSvr Format	*CTL	[0 to 2 / <b>0</b> / 1/step]
5-885-051	DocSvr Trans	*CTL	[5 to 120 / <b>10</b> /tep]
5-885-100	Set Signature	*CTL	[0 to 2/0/1/step]
5-885-101	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/step]  0: Not encrypted, 1:Encryption
5-885-200	Detect Mem Leak	*CTL	[0x00 or 0xFF / 0x00 / -/step]
5-885-202	-	*CTL	[3 to 60 / 30 / 1/step] Sets the auto log-out time for Web Image Monitor.
5-885-203	-	*CTL	[0 or 1 / 0 / 1/step] Setting this SP to "1" disables printing through Web Image Monitor.

5886	[Farm Update Setting]		
5-886-100	Skip Version Check	*CTL	[0 to 1/0/1/step]
5-886-101	Skip LR Check	*CTL	[0 to 1/0/1/step]
5-886-150	Cheetah Firm Exclusion	*CTL	[0 to 1/0/1/step]

5887	[SD GetCounter]		
	Output the counter list in the machine into the SD card in the service slot.		
	Two files are generated as follows:		
	"(machine serial).txt" contains the Nth time for getting the counter list.		
	"(machine serial)_(Nth time).txt" contains the counter list.		
	Note that the "SD_COUNTER" folder is required in the root directory in the SD card before doing this SP.		
5-887-001	-	*ENG	[/ -step]

5888	[Personal Information Protect]		
5-888-001	-	*CTL	Selects the protection level for logs.
			[0 to 1 / <b>0</b> / 1/step]
			0: No authentication, No protection for logs
			1: No authentication, Protected logs (only an administrator can see the logs)

5893	[SDK Application Counter]	*ENG
	Displays the counter name of each SDK application.	
5-893-001	SDK-1	
5-893-002	SDK-2	
5-893-003	SDK-3	
5-893-004	SDK-4	
5-893-005	SDK-5	
5-893-006	SDK-6	
5-893-007	SDK-7	
5-893-008	SDK-8	
5-893-009	SDK-9	
5-893-010	SDK-10	
5-893-011	SDK-11	

5-893-012	SDK-12	

5894	[Engine Log Upload]		
5-894-001	Mech Counter Switch Setting	*ENG	[0 to 2 / 0 / 1/step] Sets switching charge mode of external charging device setting.

5900	[Engine Log Upload]		
5-900-001	Pattern	*ENG	[0 to 4 / 0 / 1/step]
			Specifies target module group for engine log upload.
5-900-002	Trigger	*ENG	[0 to 3 / 0 / 1/step] Specifies target trigger group for engine log upload.

5907	[Plug & Play Maker/Model Name]	*ENG
5-907-001	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.  [0 to 255 / 0 / 1 / step]	

5913	[Switchover Permission Time]			
5-913-002	Print Application Timer *CTL [0 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	*CTL	[0 or 1 / 0 / – /step]
	Function]		0: Enable, 1: Disable

5-967-001	(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.

5985	[Device Setting]		
5-985-001	On Board NIC	*CTL	[0 to 2 / <b>0</b> / 1 /step]
5-985-002	On Board USB	*CTL	[0 or 1 / <b>0</b> / 1 /step]

5987	[Mech. Counter Protection]		
5-987-001	0: OFF / 1: ON	*ENG	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.		
5-990-001	All(Data List)	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-002	SP(Mode Data List)	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-003	User Program	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-004	Logging Data	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-005	Diagnostic Report	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-006	Non-Default	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-007	NIB Summary	*CTL	[- / <b>-</b> / -/step]
5-990-008	Capture Log	*CTL	[0 to 255 / <b>0</b> / 1/step]
5990	[SMC Print]		
5-990-021	Copier User Program	*CTL	[- / <b>-</b> / -/step]
5990	[SP Print Mode]		
5-990-022	Scanner SP	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-023	Scanner User Program	*CTL	[0 to 255 / <b>0</b> / -/step]

5-990-024	SDK/J Summary	*CTL	[- / <b>-</b> / -/step]
5-990-025	SDK/J Application Info	*CTL	[- / <b>-</b> / -/step]
5-990-026	Printer SP	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-027	SmartOperationPanel SP	*CTL	[0 to 255 / <b>0</b> / -/step]
5-990-028	SmartOperationPanel UP	*CTL	[0 to 255 / <b>0</b> / -/step]

5992	[SP Text Mode]				
	Exports the SMC sheet data to the SD Card.				
	Press "Execute" key to start e	e SMC data in the SP mode display.			
5-992-001	All(Data List)	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-002	SP(Mode Data List)	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-003	User Program	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-004	Logging Data	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-005	Diagnostic Report	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-006	Non-Default	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-007	NIB Summary	*CTL	[- / <b>-</b> / -/step]		
5-992-008	Capture Log	*CTL	[0 to 255 / <b>0</b> / 1/step]		
5-992-021	Copier User Program	*CTL	[- / <b>-</b> / -/step]		
5-992-022	Scanner SP	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-023	Scanner User Program	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-024	SDK/J Summary	*CTL	[- / <b>-</b> / -/step]		
5-992-025	SDK/J Application Info	*CTL	[- / <b>-</b> / -/step]		
5-992-026	Printer SP	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-027	SmartOperationPanel SP	*CTL	[0 to 255 / <b>0</b> / -/step]		
5-992-028	SmartOperationPanel UP	*CTL	[0 to 255 / <b>0</b> / -/step]		

5998	[Fusing Precedence Warm Up]		
	Turns the silent fusing warm-up mode on or off.		
5-998-001	On/Off	*ENG	[0 to 1 / 1 / - /step]
			0: OFF
			1: ON

Q

## Main SP Tables-6

## SP6-XXX (Peripherals)

6006	[ADF Adj. Side-to-Side Regist]		
	Adjusts the side-to-side and leading registration of originals with the ARDF.		
6-006-001	)1 Face *ENG [-2.0 to		[-2.0 to 2.0 / <b>0.0</b> / 0.1 mm/step]
6-006-002	Back	*ENG	[-2.0 to 2.0 / <b>0.0</b> / 0.1 mm/step]

6006	[ADF Adj. Leading Edge]		
	Adjusts the side-to-side and leading registration of originals with the ARDF.		
6-006-003	Face	*ENG	[-5.0 to 5.0 / <b>0.0</b> / 0.1 mm/step ]
6-006-004	Back	*ENG	[-5.0 to 5.0 / <b>0.0</b> / 0.1 mm/step ]

6006	[ADF Adj. Erase Margin]		
	Adjusts the erase margin at the original trailing edge.		
6-006-007	Trailing Edge	ailing Edge *ENG [-5.0 to 5.0 / <b>-1.6</b> / 0.1 mm/step]	

6007	[ADF INPUT Check]	
	See page 426	

6008	[ADF OUTPUT Check]	
	See page 426	

6009	[ADF Free Run]		
	Performs a DF free run in simplex, duplex mode or stamp mode.		
6-009-001	Simplex Mode	ENG	[0 or 1 / <b>0</b> / 1/step]
6-009-002	Duplex Mode	ENG	[0 or 1 / <b>0</b> / 1/step]

6017	[ADF Adjustment Magnification]			
	Adjusts the magnification in the sub-scan direction for the ARDF.			
6-017-001	-	*ENG	[-5.0 to 5.0 / <b>0</b> / 0.1 %/step]	

6021	[ARDF Motor]		
6-021-001	Gain selection	*ENG	[0 to 2 / <b>0</b> / 1/step ]
			0: Common
			1: Only for GX060050
			2: Only for GX060040

6910	[ADF Adjustment Shading Time]		
6-010-001	-	*ENG	[0 to 90 / <b>60</b> / 1 sec/step]

6800	[Sheet Conversion (Thick Paper)]					
	Not used					
6-800-001	1 to 3 (Initial: 3 Sheets)	CTL	[1 to 3 / <b>3</b> / 1/step]			

6810	[Ring Bind Sheet Conversion (Thick Paper)]				
	Not used				
6-810-001	-	CTL	[1 to 3 / <b>3</b> / 1/step]		

6830	[Extra]			
	Not used			
6-830-001	Staples 0 to 50 (Initial: 0)	*CTL	[0 to 50 / <b>0</b> / 1/step]	
6-830-002	Saddles 0 to 50 (Initial: 0)	*CTL	[0 to 50 / <b>0</b> / 1/step]	
6-830-003	Half-Fold 0 to 50 (Initial: 0)	*CTL	[0 to 50 / <b>0</b> / 1/step]	
6-830-004	Ring Binding 0 to 50 (Initial: 0)	*CTL	[0 to 50 / <b>0</b> / 1/step]	

6890	[Function Enabled]		
	Not used		
6-890-001	Z-Fold  0: No Punch 1: Punching  OK	*CTL	[0 or 1 / <b>1</b> / 1/step]
6-890-002	Staple 0: No Shift 1: Shift OK	*CTL	[0 or 1 / <b>0</b> / 1/step]

## Main SP Tables-7

## SP7-XXX (Data Log)

7401	[Total SC]		
	Displays the	Displays the number of SC codes detected.	
	*CTL	[00000 to 65535 / <b>0</b> / -/step]	
7-401-001	SC Counter		
7-401-002	Total SC Co	unter	

7403	[SC History]	[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.		
	*CTL	[-]	
7-403-001	Latest		
7-403-002	Latest 1		
7-403-003	Latest 2		
7-403-004	Latest 3		
7-403-005	Latest 4		
7-403-006	Latest 5		
7-403-007	Latest 6		
7-403-008	Latest 7		
7-403-009	Latest 8		
7-403-010	Latest 9		

3

7404	[Software	Error History]		
	Logs the S	Logs the SC Code 991 detected.		
		ost recently detected SC Code 991s are not displayed on the screen, but en on the SMC (logging) outputs.		
	*CTL	[-]		
7-404-001	Latest			
7-404-002	Latest 1			
7-404-003	Latest 2			
7-404-004	Latest 3			
7-404-005	Latest 4			
7-404-006	Latest 5			
7-404-007	Latest 6			
7-404-008	Latest 7			
7-404-009	Latest 8			
7-404-010	Latest 9			

75	502	[Total Paper Jam]		
		Displays th	Displays the total number of jams detected.	
		*CTL	[00000 to 65535 / - / - /step]	
	7-502-001	Jam Count	er	
	7-502-002	Total Jam Counter		

7503	[Total Original Jam Counter]		
	Displays th	Displays the total number of original jams detected.	
	*CTL	[00000 to 65535 / - / 1 sheet/step]	
7-503-001	-		
7503	[Total Original Jam]		

7-503-002	Total Original Counter	
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7504	[Paper Jam Location] ON: On check, OFF: Off check	
		e number of jams according to the location where jams were detected. see "Jam Detection".
	*CTL	[0000 to 9999 / - / -/step]
7-504-001	At Power O	'n
7-504-003	Tray 1: On	
7-504-004	Tray 2: On	
7-504-005	Tray 3: On	
7-504-008	Registration	Sn: On (Bypath)
7-504-009	Registration	Sn: On (Duplex)
7-504-012	Bank: Transport Sn 1: On	
7-504-017	Registration Sn: On (Tray)	
7-504-018	Fusing Entrance: On	
7-504-019	Fusing Exit: On	
7-504-020	Paper Exit: On	
7-504-021	1 bin: Exit Sensor: On	
7-504-025	Duplex Exit: On	
7-504-026	Duplex Entrance: On	
7-504-052	Bank: Trans	port 1: Off
7-504-053	Bank: Transport 2: Off	
7-504-057	Registration Sensor: Off	
7-504-060	Paper Exit: (	Off
7-504-061	1 bin: Exit Sensor: Off	
7-504-065	Duplex Exit	Off

7-504-066 Duplex Entrance: Off	
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7505	-	[Original Jam Detection0] ON: On check, OFF: Off Check		
		Displays the number of jams according to the location where jams were detected.  For details, see "Jam Detection".		
	*CTL	[0000 to 9999 / - / 1/step]		
7-505-001	At Power (	At Power On		
7-505-004	Registratio	Registration Sensor: On		
7-505-054	Registratio	n Sensor: Off		
7-505-100	Motor Erro	Motor Error		

7506	[Jam Count by Paper Size]	
	Displays th	e number of jams according to the paper size.
	*CTL	[0000 to 65535 / - / 1 sheet /step]
7-506-006	A5 LEF	
7-506-044	HLT LEF	
7-506-133	A4 SEF	
7-506-134	A5 SEF	
7-506-142	B5 SEF	
7-506-164	LG SEF	
7-506-166	LT SEF	
7-506-172	HLT SEF	
7-506-255	Others	

7507	[Plotter Jam History]		
Displays the 10 most recently detect		the 10 most recently detected paper jams.	
	*CTL	[-]	

7-507-001	Latest
7-507-002	Latest 1
7-507-003	Latest 2
7-507-004	Latest 3
7-507-005	Latest 4
7-507-006	Latest 5
7-507-007	Latest 6
7-507-008	Latest 7
7-507-009	Latest 8
7-507-010	Latest 9

7508	[Original Jam History]		
	Displays the 10 most recently detected original paper jams.		
	*CTL [-]		
7-508-001	Latest		
7-508-002	Latest 1		
7-508-003	Latest 2		
7-508-004	Latest 3		
7-508-005	Latest 4		
7-508-006	Latest 5		
7-508-007	Latest 6		
7-508-008	Latest 7		
7-508-009	Latest 8		
7-508-010	Latest 9		

7514	[Paper Jam Count by Location]		
	the total count of SP7504-001 through -066.		
	*CTL	[0 to 65535 / - / - /step]	
7-514-001	At Power On		
7-514-003	Tray 1: On		
7-514-004	Tray 2: C	On .	
7-514-005	Tray 3: C	On .	
7-514-008	Registrati	on Sn: On (Bypath)	
7-514-009	Registrati	on Sn: On (Duplex)	
7-514-012	Bank: Tro	ansport Sn 1: On	
7-514-017	Registration Sn: On (Tray)		
7-514-018	Fusing Entrance: On		
7-514-019	Fusing Exit: On		
7-514-020	Paper Exit: On		
7-514-021	1 bin: Exit Sensor: On		
7-514-025	Duplex E	xit: On	
7-514-026	Duplex E	ntrance: On	
7-514-052	Bank: Tro	ansport 1: Off	
7-514-053	Bank: Tro	ansport 2: Off	
7-514-057	Registration Sensor: Off		
7-514-060	Paper Exit: Off		
7-514-061	1 bin: Exit Sensor: Off		
7-514-065	Duplex Exit: Off		
7-514-066	Duplex E	Duplex Entrance: Off	

7515	[Original Jam Count by Detection]				
	Displays the total count of SP7505-001 through -100.				
	*CTL	*CTL [0 to 65535 / - / - /step]			
7-515-001	At Power On				
7-515-004	Registration Sensor: On				
7-515-054	Registration Sensor: Off				
7-515-100	Motor Error				

7516	[Paper Size Jam Count]	
	*CTL	[0 to 65535 / - / - /step]
7-516-006	A5 LEF	
7-516-044	HLT LEF	
7-516-133	A4 SEF	
7-516-134	A5 SEF	
7-516-142	B5 SEF	
7-516-164	LG SEF	
7-516-166	LT SEF	
7-516-172	HLT SEF	
7-516-255	Others	

7520	[Update Log]		
7-520-001	ErrorRecord 1	*CTL	[0 to 255 / 0 / 1 /step]
7-520-002	ErrorRecord2	*CTL	[0 to 255 / 0 / 1 /step]
7-520-003	ErrorRecord3	*CTL	[0 to 255 / 0 / 1 /step]
7-520-004	ErrorRecord4	*CTL	[0 to 255 / 0 / 1 /step]
7-520-005	ErrorRecord5	*CTL	[0 to 255 / 0 / 1 /step]

7-520-006	ErrorRecord6	*CTL	[0 to 255 / 0 / 1 /step]
7-520-007	ErrorRecord7	*CTL	[0 to 255 / 0 / 1 /step]
7-520-008	ErrorRecord8	*CTL	[0 to 255 / 0 / 1 /step]
7-520-009	ErrorRecord9	*CTL	[0 to 255 / 0 / 1 /step]
7-520-010	ErrorRecord 10	*CTL	[0 to 255 / 0 / 1 /step]

7540	MultiLinkPanel Apli Counter		
7-540-001	Apli No,001	*CTL	[-/-/-/step]
7-540-002	Apli No,002	*CTL	[-/-/-/step]
7-540-003	Apli No,003	*CTL	[-/-/-/step]
7-540-004	Apli No,004	*CTL	[-/-/-/step]
7-540-005	Apli No,005	*CTL	[-/-/-/step]
7-540-006	Apli No,006	*CTL	[-/-/-/step]
7-540-007	Apli No,007	*CTL	[-/-/-/step]
7-540-008	Apli No,008	*CTL	[-/-/-/step]
7-540-009	Apli No,009	*CTL	[-/-/-/step]
7-540-010	Apli No,010	*CTL	[-/-/-/step]
7-540-011	Apli No,011	*CTL	[-/-/-/step]
7-540-012	Apli No,012	*CTL	[-/-/-/step]
7-540-013	Apli No,013	*CTL	[-/-/-/step]
7-540-014	Apli No,014	*CTL	[-/-/-/step]
7-540-015	Apli No,015	*CTL	[-/-/-/step]
7-540-016	Apli No,016	*CTL	[-/-/-/step]
7-540-017	Apli No,017	*CTL	[-/-/-/step]
7-540-018	Apli No,018	*CTL	[-/-/-/step]
7-540-019	Apli No,019	*CTL	[-/-/-/step]

7-540-020	Apli No,020	*CTL	[ - / - / - /step]
7-540-021	Apli No,021	*CTL	[-/-/-/step]
7-540-022	Apli No,022	*CTL	[-/-/-/step]
7-540-023	Apli No,023	*CTL	[-/-/-/step]
7-540-024	Apli No,024	*CTL	[-/-/-/step]
7-540-025	Apli No,025	*CTL	[-/-/-/step]
7-540-026	Apli No,026	*CTL	[-/-/-/step]
7-540-027	Apli No,027	*CTL	[-/-/-/step]
7-540-028	Apli No,028	*CTL	[-/-/-/step]
7-540-029	Apli No,029	*CTL	[-/-/-/step]
7-540-030	Apli No,030	*CTL	[ - / - / - /step]
7-540-031	Apli No,031	*CTL	[-/-/-/step]
7-540-032	Apli No,032	*CTL	[-/-/-/step]
7-540-033	Apli No,033	*CTL	[-/-/-/step]
7-540-034	Apli No,034	*CTL	[-/-/-/step]
7-540-035	Apli No,035	*CTL	[-/-/-/step]

7621	[PM Counter Display: Pages]	

		1	
7-621-002	# PCU:Bk	ENG	[0000 to 99999999 / <b>0</b> / 1 page /
7-621-003	# Dev Unit:Bk	*ENG	step]
7-621-025	# PCU:C	ENG	
7-621-026	# Dev Unit:C	*ENG	
7-621-048	# PCU:M	ENG	
7-621-049	# Dev Unit:M	*ENG	
7-621-071	# PCU:Y	ENG	
7-621-072	# Dev Unit:Y	*ENG	
7-621-093	# ITB Unit	ENG	
7-621-102	# ITB Cleaning Unit	ENG	
7-621-109	# PTR Unit	ENG	
7-621-115	# Fusing Unit	ENG	
7-621-116	Fusing Belt	ENG	
7-621-118	Pressure Roller	ENG	
7-621-142	Toner Collection Bottle	ENG	[0000 to 999999999 / <b>0</b> / 1 mg / step]
7-621-206	DF Friction Pad	ENG	[0000 to 99999999 / <b>0</b> / 1 page /
7-621-207	DF Pickup Roller	ENG	step]
7-621-208	DF Feed Roller	ENG	

7622	[PM Counter Clear]		
	ENG	ENG [0 or 1 / <b>0</b> / 1 /step]	
7-622-002	# PCU:Bk		
7-622-003	# Dev Unit:Bk		
7-622-025	# PCU:C		
7-622-026	# Dev Unit:C		

7-622-048	# PCU:M
7-622-049	# Dev Unit:M
7-622-071	# PCU:Y
7-622-072	# Dev Unit:Y
7-622-093	# ITB Unit
7-622-102	# ITB Cleaning Unit
7-622-109	# PTR Unit
7-622-115	# Fusing Unit
7-622-116	Fusing Belt
7-622-118	Pressure Roller
7-622-206	DF Friction Pad
7-622-207	DF Pickup Roller
7-622-208	DF Feed Roller
7-622-220	Toner Sub Hopper:Bk
7-622-221	Toner Sub Hopper:C
7-622-222	Toner Sub Hopper:M
7-622-223	Toner Sub Hopper:Y
7-622-245	PCU:All Colors
7-622-246	Development Unit:All Colors
7-622-249	Toner Sub Hopper:All Colors
7-622-250	All Clear

7623	[PM Value Setting: Life Pages]		
	ENG	[0 to 99999999 / <b>0</b> / 1 page /step]	
7-623-002	# PCU:Bk		
7-623-003	# Dev Unit:Bk		

7-623-025	# PCU:C			
7-623-026	# Dev Unit:0	# Dev Unit:C		
7-623-048	# PCU:M			
7-623-049	# Dev Unit:	М		
7-623-071	# PCU:Y			
7-623-072	# Dev Unit:\	# Dev Unit:Y		
7623	[PM Value Setting: Life Pages]			
	ENG	[0 to 99999999 / <b>120000</b> / 1 page /step]		
7-623-093	# ITB Unit			
7-623-102	# ITB Cleaning Unit			
7-623-109	# PTR Unit			
7-623-115	# Fusing Unit			
7-623-116	Fusing Belt			
7-623-118	Pressure Roller			
7623	[PM Value Setting: Life Pages]			
	ENG	[0 to 9999999 / <b>800000</b> / 1 mg /step]		
7-623-142	Toner Collection Bottle			
	·			

7625	[Previous Unit Counter: Pages]		
	ENG	[0 to 99999999 / <b>0</b> / 1 page/step]	
7-625-002	# PCU:Bk		
7-625-003	# Dev Unit:Bk		
7-625-025	# PCU:C		
7-625-026	# Dev Unit:C		
7-625-048	# PCU:M		
7-625-049	# Dev Unit:M		

# PCU:Y		
# Dev Unit:Y		
# ITB Unit		
# ITB Cleani	ing Unit	
# PTR Unit		
# Fusing Unit		
Fusing Belt		
Pressure Roller		
[Previous Unit Counter: Pages]		
ENG	[0 to 99999999 / <b>0</b> / 1 mg/step]	
Toner Collection Bottle		
[Previous Unit Counter: Pages]		
ENG	[0 to 99999999 / <b>0</b> / 1 page/step]	
DF Friction Pad		
DF Pickup Roller		
DF Feed Roller		
	# Dev Unit:\ # ITB Unit # ITB Clean # PTR Unit # Fusing Un Fusing Belt Pressure Rol [Previous Ur ENG Toner Collect [Previous Ur ENG DF Friction F	

7626	[Previous Unit Counter2: Pages]		
	ENG	[0 to 9999999 / <b>0</b> / 1 page /step]	
7-626-002	# PCU:Bk		
7-626-003	# Dev Unit:Bk		
7-626-025	# PCU:C		
7-626-026	# Dev Unit:C		
7-626-048	# PCU:M		
7-626-049	# Dev Unit:M		
7-626-071	# PCU:Y		

7-626-072	# Dev Unit:Y			
7-626-093	# ITB Unit	# ITB Unit		
7-626-102	# ITB Cleani	ng Unit		
7-626-109	# PTR Unit			
7-626-115	# Fusing Unit			
7-626-116	Fusing Belt			
7-626-118	Pressure Roller			
7626	[Previous Unit Counter2: Pages]			
	ENG	[0 to 99999999 / <b>0</b> / 1 mg /step]		
7-626-142	Toner Collection Bottle			

7628	[PM Counter Clear]	
	ENG	[0 or 1 / <b>0</b> / 1 /step]
7-628-002	All Clear	

7700	[Accum Cvrg 1 img Process.:Disp]		
	*ENG	[0 to 400000000.0 / <b>0</b> / 0.1% /step]	
7-700-001	Bk		
7-700-002	С		
7-700-003	М		
7-700-004	Υ		

7701	[Accum Cvrg 2 img Process.:Disp]		
	*ENG	[0 to 400000000.0 / <b>0</b> / 0.1% /step]	
7-701-001	Bk		
7-701-002	С		

7-701-003	М
7-701-004	Υ

7710	[Print Pages: Display]		
	*ENG	[0 to 99999999 / <b>0</b> / 1 page /step]	
7-710-001	Bk		
7-710-002	С		
7-710-003	М		
7-710-004	Υ		

7720	[Avg. Cvrg for img.: Display]	
	*ENG	[0 to 100.00 / <b>0</b> / 0.01% /step]
7-720-001	Bk	
7-720-002	С	
7-720-003		
7-720-004		

7801	[ROM No.]		
	ENG	[-]	
7-801-002	Engine		
7-801-009	PFU		
7-801-019	PFU2	PFU2	
7801	[Firmware Version]		
	ENG	[-]	
7-801-102	Engine		
7-801-109	PFU		

7-801-119	PFU2	PFU2		
7801	[ROM No/ Firmware Version]			
	Displays all versions and ROM numbers in the machine.			
	CTL [-]			
7-801-255	-			

7803	[PM Counter Display] (Page, Unit, [Color])			
	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 10) and is reset to "0".			
	The total number of sheets printed with the last unit replaced can be checked with SP7-906-1 to 10.			
	●Note	<b>♦</b> Note		
	The LCT is counted as the 3rd feed station.			
	*CTL [0 to 9999999 / - / - page/step]			
7-803-001	Paper			

7804	[PM Counter Reset] PM Counter Clear (Unit, [Color])		
	Clears the PM counter.  Press the Enter key after the machine asks "Execute?", which will store the PM countervalue in SP7-906 (PM Counter - Previous) and reset the value of the curren PM counter (SP7-803) to "0".  *CTL -  PM Counter Reset		
7-804-001			

	7807	[SC/Jam Counter Reset]		
	Clears the counters related to SC codes and paper jams.			
CTL [-/-/		CTL	[- / - / -]	
	7-807-001	-		

7826	[MF Error Counter]		
	Displays the number of count that can not be required the counting to MF device.		
*CTL [00		[0000000 to 9999999 / <b>-</b> / -/step]	
7-826-001	Error Total		
7-826-002	Error Staple		

7827	[MF Error Couter Clear]		
Resets the MF count		device error counter.	
	*CTL	[-/-/-]	
7-827-001	-		

7832	[Self-Diagnose Result Display]		
	Displays the result of th	ne diagnostics.	
	CTL	[-/-/-]	
7-832-001	-		

7835	[ACC Counter]		
	Displays the number of times of ACC counter.		
	*CTL [0 to 9999999 / - / -/step]		
7-835-001	Copy ACC		
7-835-002	Printer ACC		

7836	[Total Memory Size]		
	apacity of the controller system.		
	CTL	[O to Oxfffffff / - /- MB /step]	
7-836-001			

7840	[ServiceSP Entry Code Chg Hist]		
7-840-001	Change Time :Latest	*CTL	[-/-/-/step]
7-840-002	Change Time :Last 1	*CTL	[-/-/-/step]
7-840-101	Initialize Time :Latest	*CTL	[-/-/-/step]
7-840-102	Initialize Time :Last1	*CTL	[-/-/-/step]

7851	[-]	
	This SP is referenced by SP8-951-007.	
	CTL	[0 to 255 / <b>0</b> / 1 /step]
7-851-001		

7852	[DF Glass Dust Check]			
Counts the number of occurrences (0 to 65,535) when dust was detected a scanning glass of the ARDF or resets the dust detection counter. Counting is only if SP4-020-1 (ARDF Scan Glass Dust Check) is switched on.  *FNG				
7-852-001	Dust Detection Counter [0 to 65535 / 0 / 1 /step]			
7-852-002	Dust Detection Clear Counter [0 to 65535 / 0 / 1 /step]			

7853	[Replace Counter]		
	Displays the PM parts replacement number.		
	ENG	[0 to 255 / <b>0</b> / 1 /step]	
7-853-002	# PCU:Bk		

7-853-003	# Dev Unit:Bk
7-853-025	# PCU:C
7-853-026	# Dev Unit:C
7-853-048	# PCU:M
7-853-049	# Dev Unit:M
7-853-071	# PCU:Y
7-853-072	# Dev Unit:Y
7-853-093	# ITB Unit
7-853-102	# ITB Cleaning Unit
7-853-109	# PTR Unit
7-853-115	# Fusing Unit
7-853-116	Fusing Belt
7-853-118	Pressure Roller
7-853-142	Toner Collection Bottle

7855	[Coverage Range]			
	The value of	The value of SP7-855-001 cannot be bigger than SP7-855-002.		
	This SP does not be cleared, set the initial value when replacing the NVRAM. If this initial value is not set, the value is set to "0" and coverage counter (SP8-601-xxx) does not work properly.			
	*Coverage:	*Coverage: amount of toner used per A4 sheet (1% increments)		
*CTL [-]		[-]		
7-855-001	Coverage Range 1			
7-855-002	Coverage Range 2			

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. <b>DFU</b>		
	*CTL	[-]	
7-901-001	File Name		
7-901-002	Number of Lin	es	
7-901-003	Location		

7903	Shipment :Fee Collection Cou	nter Set	
7-903-001		*CTL	[-]

7906	[Previous Unit Counter:Distance]		
	ENG	[0 to 4294967295 / <b>0</b> / 1 mm/step]	
7-906-002	# PCU:Bk		
7-906-003	# Dev Unit:Bk		
7-906-025	# PCU:C		
7-906-026	# Dev Unit:C		
7-906-048	# PCU:M	# PCU:M	
7-906-049	# Dev Unit:M	# Dev Unit:M	
7-906-071	# PCU:Y		
7-906-072	# Dev Unit:Y		
7-906-093	# ITB Unit		
7-906-102	# ITB Cleaning	# ITB Cleaning Unit	
7-906-109	# PTR Unit		
7-906-115	# Fusing Unit		
7-906-116	Fusing Belt		
7-906-118	Pressure Roller		

7906	[Previous Unit Counter:Distance]		
	ENG	[0 to 99999999 / <b>0</b> / 1 /step]	
7-906-220	Toner Sub Ho	pper:Bk	
7-906-221	Toner Sub Ho	pper:C	
7-906-222	Toner Sub Ho	pper:M	
7-906-223	Toner Sub Ho	pper:Y	
7906	[Previous Unit	[Previous Unit Counter:Distance]	
	ENG	[0 to 4294967295 / <b>0</b> / 1 mm/step]	
7-906-230	Low Speed: # PCU:Bk		
7-906-231	Low Speed: # PCU:C		
7-906-232	Low Speed: #	Low Speed: # PCU:M	
7-906-233	Low Speed: #	Low Speed: # PCU:Y	
7-906-234	Middle Speed	Middle Speed: # PCU:Bk	
7-906-235	Middle Speed: # PCU:C		
7-906-236	Middle Speed: # PCU:M		
7-906-237	Middle Speed: # PCU:Y		
7-906-238	Standard Speed2: # PCU:Bk		

7907	[Previous Unit Cntr:Distance(%)]	
	ENG	[0 to 255 / <b>0</b> / 1% /step]
7-907-002	# PCU:Bk	
7-907-003	# Dev Unit:Bk	
7-907-025	# PCU:C	
7-907-026	# Dev Unit:C	
7-907-048	# PCU:M	
7-907-049	# Dev Unit:M	

7-907-071	# PCU:Y
7-907-072	# Dev Unit:Y
7-907-093	# ITB Unit
7-907-102	# ITB Cleaning Unit
7-907-109	# PTR Unit
7-907-115	# Fusing Unit
7-907-116	Fusing Belt
7-907-118	Pressure Roller

7908	[Previous Unit Counter:Pages(%)]		
	ENG	[0 to 255 / <b>0</b> / 1% /step]	
7-908-002	# PCU:Bk		
7-908-003	# Dev Unit:Bk		
7-908-025	# PCU:C		
7-908-026	# Dev Unit:C		
7-908-048	# PCU:M		
7-908-049	# Dev Unit:M		
7-908-071	# PCU:Y		
7-908-072	# Dev Unit:Y		
7-908-093	# ITB Unit		
7-908-102	# ITB Cleaning Unit		
7-908-109	# PTR Unit	# PTR Unit	
7-908-115	# Fusing Unit	# Fusing Unit	
7-908-116	Fusing Belt		
7-908-118	Pressure Roller		
7-908-142	Toner Collection Bottle		

7910	[ROM No]		
	CTL [- / - / - /step]		
7-910-001	System/Copy		
7-910-002	Engine		
7-910-003	Lcdc		
7-910-009	Bank		
7-910-012	FCU		
7-910-018	NetworkSupport		
7-910-019	Bank2		
7-910-023	HDD Format Option		
7-910-132	NetWare		
7-910-150	RPCS		
7-910-151	PS		
7-910-152	RPDL		
7-910-153	R98		
7-910-154	R16		
7-910-156	R55		
7-910-157	RTIFF		
7-910-158	PCL		
7-910-159	PCLXL		
7-910-160	MSIS		
7-910-162	PDF		
7-910-164	PictBridge		
7-910-165	PJL		
7-910-167	MediaPrint:JPEG		

7-910-168	MediaPrint:TIFF
7-910-169	XPS
7-910-180	FONT
7-910-181	FONT1
7-910-182	FONT2
7-910-183	FONT3
7-910-184	FONT4
7-910-185	FONT5
7-910-200	Factory
7-910-201	Сору
7-910-202	NetworkDocBox
7-910-203	Fax
7-910-204	Printer
7-910-205	Scanner
7-910-206	RFax
7-910-210	MIB
7-910-211	Websupport
7-910-212	WebUapl
7-910-213	SDK1
7-910-214	SDK2
7-910-215	SDK3
7-910-250	Package

7911	[Firmware Version]		
	CTL	[- / <b>-</b> / - /step]	
7-911-001	System/Co	ору	

7-911-002	Engine
7-911-003	Lcdc
7-911-009	Bank
7-911-012	FCU
7-911-018	NetworkSupport
7-911-019	Bank2
7-911-023	HDD Format Option
7-911-132	NetWare
7-911-150	RPCS
7-911-151	PS
7-911-152	RPDL
7-911-153	R98
7-911-154	R16
7-911-156	R55
7-911-157	RTIFF
<i>7</i> -911-158	PCL
7-911-159	PCLXL
7-911-160	MSIS
7-911-162	PDF
7-911-164	PictBridge
7-911-165	PJL
7-911-167	MediaPrint:JPEG
7-911-168	MediaPrint:TIFF
7-911-169	XPS
7-911-180	FONT
<i>7</i> -911-181	FONT1

7-911-182	FONT2
7-911-183	FONT3
7-911-184	FONT4
7-911-185	FONT5
7-911-200	Factory
7-911-201	Сору
7-911-202	NetworkDocBox
7-911-203	Fax
7-911-204	Printer
7-911-205	Scanner
7-911-206	RFax
7-911-210	MIB
7-911-211	Websupport
7-911-212	WebUapl
7-911-213	SDK1
7-911-214	SDK2
7-911-215	SDK3
7-911-250	Package

<i>7</i> 931	[Toner Bottle Bk]	
	Displays the toner bottle information for Bk.	
	*ENG	
7932	[Toner Bottle M]	
	Displays the toner bottle information for Ma.	
	*ENG	

7933	[Toner Bottle C]
	Displays the toner bottle information for Cy.
	*ENG
7934 [Toner Bottle Y]	
	Displays the toner bottle information for Ye.
	*ENG

## Last three digits for 7931 to 7934

Machine Serial ID	7-93x-012	Toner Remaining [0 to 100 / 100 / 1% /step]
Cartridge Ver	7-93x-013	EDP Code [0 to 1 / <b>0</b> / 1 / step]
Brand ID	7-93x-014	End History [0 to 1 / <b>0</b> / 1 / step]
Area ID [0 to 255 / <b>0</b> / 1 /step]	7-93x-015	Refill Information [0 to 1 / 0 / 1 / step]
Product ID [0 to 255 / <b>0</b> / 1 /step]	7-93x-016	Attachment: Total Counter [0 to 99999999 / 0 / 1 /step]
Color ID [0 to 255 / 0 / 1 /step]	7-93x-017	Attachment: Color Counter [0 to 99999999 / <b>0</b> / 1 /step]
Maintenance ID [0 to 255 / <b>0</b> / 1 /step]	7-93x-018	End: Total Counter [0 to 99999999 / <b>0</b> / 1 /step]
New Product Information [0 to 255 / 0 / 1 /step]	7-93x-019	End: Color Counter [0 to 99999999 / <b>0</b> / 1 /step]
Recycle Counter [0 to 255 / 0 / 1 /step]	7-93x-020	Attachment Date [0 to 1 / 0 / 1 /step]
Date [0 to 1 / <b>0</b> / 1 /step]	7-93x-021	End Date [0 to 1 / <b>0</b> / 1 /step]
	[0 to 255 / 0 / 1 /step]  Cartridge Ver [0 to 255 / 0 / 1 /step]  Brand ID [0 to 255 / 0 / 1 /step]  Area ID [0 to 255 / 0 / 1 /step]  Product ID [0 to 255 / 0 / 1 /step]  Color ID [0 to 255 / 0 / 1 /step]  Maintenance ID [0 to 255 / 0 / 1 /step]  New Product Information [0 to 255 / 0 / 1 /step]  Recycle Counter [0 to 255 / 0 / 1 /step]  Date	[0 to 255 / 0 / 1 / step]  Cartridge Ver [0 to 255 / 0 / 1 / step]  Brand ID [0 to 255 / 0 / 1 / step]  Area ID [0 to 255 / 0 / 1 / step]  Product ID [0 to 255 / 0 / 1 / step]  Color ID [0 to 255 / 0 / 1 / step]  Maintenance ID [0 to 255 / 0 / 1 / step]  New Product Information [0 to 255 / 0 / 1 / step]  Recycle Counter [0 to 255 / 0 / 1 / step]  Recycle Counter [0 to 255 / 0 / 1 / step]  Date  7-93x-021

7-93x-011	SerialNo.	-	-
	[0 to 1 / <b>0</b> / 1 /step]		

7935	[Toner Bottle Log 1: Bk]
	Displays the toner bottle information log for Bk.
7936	[Toner Bottle Log 1: M]
	Displays the toner bottle information log for Ma.
7937	[Toner Bottle Log 1: C]
	Displays the toner bottle information log for Cy.
7938	[Toner Bottle Log 1: Y]
	Displays the toner bottle information log for Ye.

## Last three digits for 7935 to 7938

7-93x-001	Serial No. [0 to 1 / <b>0</b> / 1 /step]	ENG	Displays the toner bottle information log 1 for Bk, Ma, Cy, or Ye.
7-93x-002	Attachment Date [0 to 1 / 0 / 1 /step]		Cy, or re.
7-93x-003	Attachment: Total Counter [0 to 99999999 / 0 / 1 /step]		
7-93x-004	Refill Information [O to 1 / 0 / 1 /step]	*ENG	
7-93x-011	Serial No. [0 to 1 / <b>0</b> / 1 /step]	ENG	Displays the toner bottle information log 2 for Bk, Ma, Cy, or Ye.
7-93x-012	Attachment Date [0 to 1 / 0 / 1 /step]		Cy, or re.
7-93x-013	Attachment: Total Counter [0 to 99999999 / 0 / 1 /step]		
7-93x-014	Refill Information [O to 1 / <b>O</b> / 1 /step]	*ENG	

7-93x-021 7-93x-022 7-93x-023	Serial No.  [0 to 1 / 0 / 1 /step]  Attachment Date  [0 to 99999999 / 0 / 1 /step]  Attachment: Total Counter  [0 to 1 / 0 / 1 /step]	ENG	Displays the toner bottle information log 3 for Bk, Ma, Cy, or Ye.
7-93x-024	Refill Information [0 to 1 / 0 / 1 /step]	*ENG	
7-93x-031	Serial No. [0 to 1 / 0 / 1 /step]	ENG	Displays the toner bottle information log 4 for Bk, Ma, Cy, or Ye.
7-93x-032	Attachment Date [0 to 99999999 / 0 / 1 /step]		Cy, or re.
7-93x-033	Attachment: Total Counter [0 to 1 / 0 / 1 /step]		
7-93x-034	Refill Information [0 to 1 / 0 / 1 /step]	*ENG	
7-93x-041	Serial No. [0 to 1 / 0 / 1 /step]	ENG	Displays the toner bottle information log 5 for Bk, Ma, Cy, or Ye.
7-93x-042	Attachment Date [0 to 99999999 / - / 1 /step]		<i>Gy, or re.</i>
7-93x-043	Attachment: Total Counter [0 to 1 / 0 / 1 /step]		
7-93x-044	Refill Information [0 to 1 / 0 / 1 /step]	*ENG	

7940	[PM Value Setting:Life Distance]	
	ENG	[0 to 99999999 / <b>0</b> / 1 mm/step]
7-940-002	# PCU:Bk	

7-940-003	# Dev Unit:Bk		
7-940-025	# PCU:C		
7-940-026	# Dev Unit:C		
7-940-048	# PCU:M		
7-940-049	# Dev Unit:N	Λ	
7-940-071	# PCU:Y		
7-940-072	# Dev Unit:Y	,	
7940	[PM Value Setting:Life Distance]		
	ENG	[0 to 99999999 / <b>95873985</b> / 1 mm/step]	
7-940-093	# ITB Unit		
7-940-102	# ITB Cleaning Unit		
7-940-109	# PTR Unit		
7940	[PM Value Setting:Life Distance]		
	ENG	[0 to 99999999 / <b>168978600</b> / 1 mm/step]	
7-940-115	# Fusing Unit		
7-940-116	Fusing Belt		
7-940-118	Pressure Roller		

7942	[PM Counter Display:Distance(%)]	
	ENG	[0 to 255 / <b>0</b> / 1% /step]
7-942-002	# PCU:Bk	
7-942-003	# Dev Unit:Bk	
7-942-025	# PCU:C	
7-942-026	# Dev Unit:C	
7-942-048	# PCU:M	
7-942-049	# Dev Unit:M	

7-942-071	# PCU:Y	
7-942-072	# Dev Unit:Y	
7-942-093	# ITB Unit	
7-942-102	# ITB Cleaning Unit	
7-942-109	# PTR Unit	
7-942-115	# Fusing Unit	
7-942-116	Fusing Belt	
7-942-118	Pressure Roller	

7944	[PM Counter Display: Distance]		
	002 to 072: *ENG 093 to 118: ENG	[0 to 4294967295 / <b>0</b> / 1 mm/step]	
7-944-002	# PCU:Bk		
7-944-003	# Dev Unit:Bk		
7-944-025	# PCU:C		
7-944-026	# Dev Unit:C		
7-944-048	# PCU:M		
7-944-049	# Dev Unit:M		
7-944-071	# PCU:Y		
7-944-072	# Dev Unit:Y		
7-944-093	# ITB Unit		
7-944-102	# ITB Cleaning Unit		
7-944-109	# PTR Unit		
7-944-115	# Fusing Unit		
7-944-116	Fusing Belt		
7-944-118	Pressure Roller		

7944	[PM Counter Display: Distance]				
	ENG [0 to 999999999 / <b>0</b> / 1 /step]				
7-944-220	Toner Sub Hopper:Bk				
7-944-221	Toner Sub Hopper:C				
7-944-222	Toner Sub Hopper:M				
7-944-223	Toner Sub Hopper:Y				
7944	[PM Counter Display: I	Distance]			
	ENG	[0 to 4294967295 / <b>0</b> / 1 /step]			
7-944-230	Low Speed: # PCU:Bk				
7-944-231	Low Speed: # PCU:C				
7-944-232	Low Speed: # PCU:M				
7-944-233	Low Speed: # PCU:Y				
7-944-234	Middle Speed: # PCU:Bk				
7-944-235	Middle Speed: # PCU:C				
7-944-236	Middle Speed: # PCU:M				
7-944-237	Middle Speed: # PCU:Y				
7-944-238	Standard Speed2: # PCU:Bk				
7-944-240	ITB Unit:FC				

7950	[Unit Replacement Date]		
	Displays the replacement date of each PM unit.		
	*ENG	*ENG [0 to 1 / 0 / 1 /step]	
7-950-002	# PCU:Bk		
7-950-003	# Dev Unit:Bk		
7-950-025	# PCU:C		
7-950-026	# Dev Unit:C		

7-950-048	# PCU:M
7-950-049	# Dev Unit:M
7-950-071	# PCU:Y
7-950-072	# Dev Unit:Y
7-950-093	# ITB Unit
7-950-102	# ITB Cleaning Unit
7-950-109	# PTR Unit
7-950-115	# Fusing Unit
7-950-116	Fusing Belt
7-950-118	Pressure Roller
7-950-142	Toner Collection Bottle

<i>7</i> 951	[Remain Day Counter: Pages]	
7-951-001 to	Displays the remaining unit life of each PM unit.	
026	ENG	[0 to 255 / <b>0</b> / 1 days/step]
7-951-002	# PCU:Bk	
7-951-003	# Dev Unit:B	k
7-951-025	# PCU:C	
7-951-026	# Dev Unit:C	
7-951-048	# PCU:M	
7-951-049	# Dev Unit:M	
7-951-071	# PCU:Y	
7-951-072	# Dev Unit:Y	
7-951-093	# ITB Unit	
7-951-102	# ITB Cleaning Unit	
7-951-109	# PTR Unit	

7-951-115	# Fusing Unit	
7-951-116	Fusing Belt	
7-951-118	Pressure Roller	
7-951-142	Toner Collection Bottle	

7952	[Remain Day Counter: Distance]		
	Displays th	Displays the remaining unit life of each PM unit.	
	ENG	[0 to 255 / <b>0</b> / 1 days/step]	
7-952-002	# PCU:Bk		
7-952-003	# Dev Unit	:Bk	
7-952-025	# PCU:C		
7-952-026	# Dev Unit	r:C	
7-952-048	# PCU:M		
7-952-049	# Dev Unit:M		
7-952-071	# PCU:Y		
7-952-072	# Dev Unit:Y		
7-952-093	# ITB Unit		
7-952-102	# ITB Cleaning Unit		
7-952-109	# PTR Unit		
7-952-115	# Fusing Unit		
7-952-116	Fusing Belt		
7-952-118	Pressure Roller		

7953	[Operation Env. Log: PCU: Bk]		
		Displays the PCU rotation distance in each specified operation environment.	
021	T: Tempero	T: Temperature (°C), H: Relative Humidity (%)	
	ENG	[0 to 99999999 / <b>0</b> / 1 mm/step]	

7-953-001	T<=0
7-953-002	0 <t<=5:0<=h<30< td=""></t<=5:0<=h<30<>
7-953-003	0 <t<=5:30<=h<70< td=""></t<=5:30<=h<70<>
7-953-004	0 <t<=5:70<=h<=100< td=""></t<=5:70<=h<=100<>
7-953-005	5 <t<15:0<=h<30< td=""></t<15:0<=h<30<>
7-953-006	5 <t<15:30<=h<55< td=""></t<15:30<=h<55<>
7-953-007	5 <t<15:55<=h<80< td=""></t<15:55<=h<80<>
7-953-008	5 <t<15:80<=h<=100< td=""></t<15:80<=h<=100<>
7-953-009	15<=T<25:0<=H<30
7-953-010	15<=T<25:30<=H<55
7-953-011	15<=T<25:55<=H<80
7-953-012	15<=T<25:80<=H<=100
7-953-013	25<=T<30:0<=H<30
7-953-014	25<=T<30:30<=H<55
7-953-015	25<=T<30:55<=H<80
7-953-016	25<=T<30:80<=H<=100
7-953-017	30<=T<35:0<=H<30
7-953-018	30<=T<35:30<=H<55
7-953-019	30<=T<35:55<=H<80
7-953-020	30<=T<35:80<=H<=100
7-953-021	35<=T
7953	[Operation Env. Log Clear]
7-953-100	-
	ENG [0 to 1 / 0 / 1/step]

7954	[PM Counter Display: Pages (%)]		
	ENG	[0 to 255 / <b>0</b> / 1%/step]	
7-954-002	# PCU:Bk		
7-954-003	# Dev Uni	t:Bk	
7-954-025	# PCU:C		
7-954-026	# Dev Uni	t:C	
7-954-048	# PCU:M		
7-954-049	# Dev Unit:M		
7-954-071	# PCU:Y		
7-954-072	# Dev Unit:Y		
7-954-093	# ITB Unit		
7-954-102	# ITB Cleaning Unit		
7-954-109	# PTR Unit		
7-954-115	# Fusing Unit		
7-954-116	Fusing Belt		
7-954-118	Pressure Roller		
7-954-142	Toner Collection Bottle		

7958	[PM Value Setting:DaysThreshold]			
	ENG	[1 to 30 / <b>15</b> / 1 days/step]		
7-958-002	# PCU:Bk			
7-958-003	# Dev Unit:Bk			
7-958-025	# PCU:C			
7-958-026	# Dev Unit:C			
7-958-048	# PCU:M			

7-958-049	# Dev Unit:M
7-958-071	# PCU:Y
7-958-072	# Dev Unit:Y
7-958-093	# ITB Unit
7-958-102	# ITB Cleaning Unit
7-958-109	# PTR Unit
7-958-115	# Fusing Unit
7-958-116	Fusing Belt
7-958-118	Pressure Roller
7-958-142	Toner Collection Bottle

# Main SP Tables-8

#### 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		
F:	Fax application.	when the job was not stored on the document server.		
P:	Print application.			
S:	Scan application.			

Prefixes	What it means		
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/ApI" = Total Jobs "by" Application		
>	More (2> "2 or more", 4> "4 or more"		
AddBook	Address Book		
Apl	Application		
B/W	Black & White		
Bk	Black		
С	Cyan		
ColCr	Color Create		
ColMode	Color Mode		
Comb	Combine		
Comp	Compression		
Deliv	Delivery		

Abbreviation	What it means	
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	
МС	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	
OrgJam	Original Jam	

Abbreviation	What it means		
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		
YMC	Yellow, Magenta, Cyan		
YMCK	Yellow, Magenta, Cyan, Black		



• All of the Group 8 SPs are reset with SP5 801 1 Memory All Clear.

8001	T:Total Jobs	*CTL	These SPs count the number of times each application is used to do a job.
8002	C:Total Jobs	*CTL	[0 to 9999999/ - / 1]
8003	F:Total Jobs	*CTL	Note: The L: counter is the total number of times the other applications are used to send a job to the
8004	P:Total Jobs	*CTL	document server, plus the number of times a file already on the document server is used.
8005	S:Total Jobs	*CTL	
8006	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.

8011	T:Jobs/LS	*CTL	These SPs count the number of jobs stored to the
8012	C:Jobs/LS	*CTL	document server by each application, to reveal how local storage is being used for input.
8013	F:Jobs/LS	*CTL	[0 to 9999999/-/1]
8014	P:Jobs/LS	*CTL	The L: counter counts the number of jobs stored from within the document server mode screen at the
8015	S:Jobs/LS	*CTL	operation panel.
8016	L:Jobs/LS	*CTL	
801 <i>7</i>	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.

8021	T:Pjob/LS	*CTL	These SPs reveal how files printed from the
8022	C:Pjob/LS	*CTL	document server were stored on the document server originally.
8023	F:Pjob/LS	*CTL	[0 to 9999999/-/1]
8024	P:Pjob/LS	*CTL	The L: counter counts the number of jobs stored from within the document server mode screen at the
8025	S:Pjob/LS	*CTL	operation panel.
8026	L:Pjob/LS	*CTL	
8027	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.

8031	T:Pjob/DesApl	*CTL	These SPs reveal what applications were used to
8032	C:Pjob/DesApl	*CTL	output documents from the document server.  [0 to 9999999/ - / 1]
8033	F:Pjob/DesApl	*CTL	The L: counter counts the number of jobs printed
8034	P:Pjob/DesApl	*CTL	from within the document server mode screen at the operation panel.
8035	S:Pjob/DesApl	*CTL	
8036	L:Pjob/DesApl	*CTL	
8037	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.

8041	T:TX Jobs/LS	*CTL	These SPs count the applications that stored files on
8042	C:TX Jobs/LS	*CTL	the document server that were later accessed for transmission over the telephone line or over a
8043	F:TX Jobs/LS	*CTL	network (attached to an e-mail, or as a fax image by I-Fax).
8044	P:TX Jobs/LS	*CTL	[0 to 9999999/-/1]
8045	S:TX Jobs/LS	*CTL	Note: Jobs merged for sending are counted
8046	L:TX Jobs/LS	*CTL	separately.  The L: counter counts the number of jobs scanned
8047	O:TX Jobs/LS	*CTL	from within the document server mode screen at the operation panel.

- 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 email, the O: counter increments.

8051	T:TX Jobs/DesApl	*CTL	These SPs count the applications used to send files
8052	C:TX Jobs/DesApl	*CTL	from the document server over the telephone line or over a network (attached to an e-mail, or as a fax
8053	F:TX Jobs/DesApl	*CTL	image by I-Fax). Jobs merged for sending are counted separately.
8054	P:TX Jobs/DesApl	*CTL	[0 to 9999999/-/1]
8055	S:TX Jobs/DesApl	*CTL	The L: counter counts the number of jobs sent from within the document server mode screen at the
8056	L:TX Jobs/DesApl	*CTL	operation panel.
8057	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.

8061	T:FIN Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs total the finishing metho	ds. The finish	ing method is specified by the application.
8062	C:FIN Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs total finishing methods for copy jobs only. The finishing method is specified by the application.		

8063	F:FIN Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs total finishing methods for fax jobs only. The finishing method is specified by application.			
	Note: Finishing features for fax jobs are not available at this time.			
8064	P:FIN Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs total finishing methods fapplication.	or print jobs	only. The finishing method is specified by the	
8065	S:FIN Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs total finishing methods for scan jobs only. The finishing method is speapplication.			
	Note: Finishing features for scan j	ote: Finishing features for scan jobs are not available at this time.		
8066	L:FIN Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
			ut from within the document server mode thod is specified from the print window	
8067	O:FIN Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs total finishing methods f	•	uted by an external application, over the ne application.	

#### Last three digits for SP8 061 to 067

Lusi iiii oo algii.	asi fili de diglis for di d'oct fo do?			
806x-001	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)		
806x-002	Stack	Number of jobs started out of Sort mode.		
806x-003	Staple	Number of jobs started in Staple mode.		
806x-004	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.		
806x-005	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).		
806x-006	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8 064 6.)		

806x-007	Other	Reserved. Not used.
806x-008	Inside-Fold	Not used
806x-009	Three-IN-Fold	Not used
806x-010	Three-OUT-Fold	Not used
806x-011	Four-Fold	Not used
806x-012	KANNON-Fold	Not used
806x-013	Perfect-Bind	Not used
806x-014	Ring-Bind	Not used
806x-015	3rd Vendor	

8071	T:Jobs/PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.			
8072	C:Jobs/PGS *CTL [0 to 9999999/ <b>0</b> / 1/step]			
	These SPs count and calculate the pages in the job.	number of c	opy jobs by size based on the number of	
8073	F:Jobs/PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count and calculate the pages in the job.	ese SPs count and calculate the number of fax jobs by size based on the number of ages in the job.		
8074	74 P:Jobs/PGS *CTL [0 to 9999999/ 0 / 1/step]			
	These SPs count and calculate the pages in the job.	te the number of print jobs by size based on the number of		
8075	S:Jobs/PGS *CTL [0 to 9999999/ <b>0</b> / 1/step]			
	These SPs count and calculate the pages in the job.	number of so	can jobs by size based on the number of	
8076	L:Jobs/PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count and calculate the mode window at the operation po	•	obs printed from within the document server umber of pages in the job.	

8077	O:Jobs/PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count and calculate the Monitor, Palm 2, etc.) by size bas		Other" application jobs (Web Image mber of pages in the job.

Last three digits for SP8 071 to 077

807x-001	1 Page	8 07x 8	21 to 50 Pages
807x-002	2 Pages	8 07x 9	51 to 100 Pages
807x-003	3 Pages	8 07x 10	101 to 300 Pages
807x-004	4 Pages	8 07x 11	301 to 500 Pages
807x-005	5 Pages	8 07x 12	501 to 700 Pages
807x-006	6 to 10 Pages	8 07x 13	701 to 1000 Pages
807x-007	11 to 20 Pages	8 07x 14	More than 1001 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.

8111	T:FAX TX Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]		
	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 avo	ailable at this	time.		

8113	F: FA	X TX Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]		
	a tele	ese SPs count the total number of jobs (color or black-and-white) sent by fax directly on elephone line.				
	Note	Note: Color fax sending is not available at this time.				
811x-001 B/W						
811x-002		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.

8121	T:IFAX TX Jobs		*CTL [0 to 9999999/ <b>0</b> / 1/step]				
		se SPs count the total number of jobs (color or black-and-white) sent, either directly or g a file stored on the document server, as fax images using I-Fax.					
	Note	lote: Color fax sending is not available at this time.					
8123	F: IFA	*CTL [0 to 9999999/ <b>0</b> / 1/step]					
	docu	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.					
812>	812x-001 B/W						
812x-002 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.

8131	T:S-to-Email Jobs	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count the total number to an e-mail, regardless of whether		or black-and-white) scanned and attached ent server was used or not.

8135	S: S-to-Email Jobs		*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	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.				
813x-001 B/W					
813x-002 Color		Color			
813x-003 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).

8141	T:Del	iv Jobs/Svr	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
		nese SPs count the total number of jobs (color or black-and-white) scanned and sent to a can Router server.					
8145	S: De	eliv Jobs/Svr	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
		ese SPs count the number of jobs (color or black-and-white) scanned in scanner mode d sent to a Scan Router server.					
814x	14x-001 B/W						
814x-002 Color							
814x-003 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.

8151	T:Deli	iv Jobs/PC	[0 to 9999999/ <b>0</b> / 1/step]					
		e SPs count the total number of jobs (color or black-and-white) scanned and sent to a er on a PC (Scan-to-PC).						
	Note	ote: At the present time, 8 151 and 8 155 perform identical counts.						
8155	S:Del	*CTL [0 to 9999999 / 0 / 1 / step]						
		e SPs count the total number of jobs (color or black-and-white) scanned and sent with -to-PC.						
815x-001 B/W								
815x-002		Color						
815x-003 ACS		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.

8161	T:PCFAX TX Jobs	*CTL	These SPs count the number of PC Fax transmission
8163	F:PCFAX TX Jobs	*CTL	jobs. A job is counted from when it is registered for sending, not when it is sent.
			[0 to 9999999/ <b>0</b> / 1/step]
			<b>Note:</b> At the present time, these counters perform identical counts.

• 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.

8171	T:Deliv Jobs/WSD	*CTL	These SPs count the pages scanned by WS.			
8175	S:Deliv Jobs/WSD	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
001	B/W					
002	Color					
003	ACS					

8181	T:Scan to Media Jobs	*CTL	These SPs count the scanned pages in a
8185	S:Scan to Media Jobs	*CTL	media by the scanner application. [0 to 9999999/ 0 / 1/step]
001	B/W		
002	Color		
003	ACS		

8191	T:Total Scan PGS	*CTL	These SPs count the pages scanned by
8192	C:Total Scan PGS	*CTL	each application that uses the scanner to scan images.
8193	F:Total Scan PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8195	S:Total Scan PGS	*CTL	
8196	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.

8201	T:LSize Scan PGS A3/DLT, Larger	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
	These SPs count the total number of large pages input with the scanner for scan and copiobs. Large size paper scanned for fax transmission is not counted.  Note: These counters are displayed in the SMC Report, and in the User Tools display.					
8203	F: LSize Scan PGS A3/DLT, Larger	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
	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.					
8205	S:LSize Scan PGS A3/DLT, Larger	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
	These SPs count the total number of large pages input with the scanner for scan jobs only.  Large size paper scanned for fax transmission is not counted.					
	Note: These counters are display	Note: These counters are displayed in the SMC Report, and in the User Tools display.				

8211	T:Scan PGS/LS	*CTL	These SPs count the number of pages scanned into
8212	C:Scan PGS/LS	*CTL	the document server [0 to 9999999/ - / 1/step]
8213	F:Scan PGS/LS	*CTL	The L: counter counts the number of pages stored
8215	S:Scan PGS/LS	*CTL	from within the document server mode screen at the operation panel, and with the Store File button from
8216	L:Scan PGS/LS	*CTL	within the Copy mode screen.

- 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.

8221	ADF Org Feeds	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
	These SPs count the number of poscanning.	ages fed thro	ough the ADF for front and back side			
001	Front					
	Number of front sides fed for sco	nning:				
	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.)					
002	Back					
	Number of rear sides fed for sca	nning:				
	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 be number of pages fed for duplex		Ultaneously, the Back count is the same as the inning.			

- 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.

8231	Scan PGS/Mode	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
	These SPs count the number of policy load on the ADF.	ages scanned by each ADF mode to determine the work				
001	Large Volume	Selectable. Large copy jobs that cannot be loaded in the ADF at one time.				
002	SADF	Selectable. Feeding pages one by one through the ADF.				
003	Mixed Size	Selectable. Select "Mixed Sizes" on the operation panel.				
004	Custom Size	Selectable. Originals of non-standard size.				
005	Platen	Book mode. Raising the ADF and placing the original directly on the platen.				
006	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.

8241	T:Scan PGS/Org	*CTL	[0 to 9999999/ <b>0</b> / 1/step]				
	These SPs count the total number of scanned pages by original type for all jobs, regardless of which application was used.						
8242	C:Scan PGS/Org	*CTL	[0 to 9999999/ <b>0</b> / 1/step]				
	These SPs count the number of p	ages scanned	d by original type for Copy jobs.				
8243	F:Scan PGS/Org	*CTL	[0 to 9999999/ <b>0</b> / 1/step]				
	These SPs count the number of pages scanned by original type for Fax jobs.						
8245	S:Scan PGS/Org	*CTL	[0 to 9999999/ <b>0</b> / 1/step]				
	These SPs count the number of pages scanned by original type for Scan jobs.						
8246	L:Scan PGS/Org	*CTL	[0 to 9999999/ <b>0</b> / 1/step]				
	These SPs count the number of pages scanned and stored from within the docume mode screen at the operation panel, and with the Store File button from within the mode screen						

#### Last three digits for SP8 241 to 246

	8 241	8 242	8 243	8 245	8 246
824x-001: Text	Yes	Yes	Yes	Yes	Yes
824x-002: Text/Photo	Yes	Yes	Yes	Yes	Yes
824x-003: Photo	Yes	Yes	Yes	Yes	Yes
824x-004: GenCopy, Pale	Yes	Yes	No	Yes	Yes
824x-005: Map	Yes	Yes	No	No	Yes
824x-006: Normal/Detail	Yes	No	Yes	No	No
824x-007: Fine/Super Fine	Yes	No	Yes	No	No

824x-008: Binary	Yes	No	No	Yes	No
824x-009: Grayscale	Yes	No	No	Yes	No
824x-010: Color	Yes	No	No	Yes	No
824x-011: 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.

8251	T:Scan PGS/ImgEdt	*CTL	These SPs show how many times Image Edit	
8252	C:Scan PGS/ImgEdt	*CTL	features have been selected at the operation panel for each application. Some examples of these	
8255	S : Scan PGS/ImgEdr	*CTL	editing features are:	
8256	L:Scan PGS/ImgEdt	*CTL	Erase → Border     Erase → Center	
8257	O:Scan PGS/ImgEdt	*CTL	Image Repeat	
			Centering	
			Positive/Negative	
			[0 to 9999999/ - / 1/step]	
			Note: The count totals the number of times the edi features have been used. A detailed breakdown a exactly which features have been used is not give	

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.

8261	T:Scn PGS/ColCr	*CTL	-
8262	C:Scn PGS/ ColCr	*CTL	-
8265	S:Scn PGS/Color	*CTL	-
8266	L:Scn PGS/ColCr	*CTL	-

## Last three digits for SP8 261, 262, 265 and 266

826x-001	Color Conversion	These SPs show how many times color creation
826x-002	Color Erase	features have been selected at the operation panel.
826x-003	Background	
826x-004	Other	

8281	T:Scan PGS/TWAIN	*CTL	These SPs count the number of pages scanned using
8285	S:Scan PGS/TWAIN	*CTL	a TWAIN driver. These counters reveal how the TWAIN driver is used for delivery functions.  [0 to 9999999 / 0 / 1 / step]  Note: At the present time, these counters perform identical counts.

8291	T:Scan PGS/Stamp	*CTL	These SPs count the number of pages stamped with
8293	F:Scan PGS/Stamp	*CTL	the stamp in the ADF unit. [0 to 9999999/ <b>0</b> / 1/step]
8295	S:Scan PGS/Stamp	*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

8301	T:Scan PGS/Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]				
	-	ise SPs count by size the total number of pages scanned by all applications. Use the als to compare original page size (scanning) and output (printing) page size [SP 141].					
8302	*CTL [0 to 9999999/ 0 / 1/ste						
	These SPs count by size the total number of pages scanned by the Copy application. Us these totals to compare original page size (scanning) and output (printing) page size [S 8-442].						
8303	[0 to 9999999/ <b>0</b> / 1/step]						
	•		ages scanned by the Fax application. Use anning) and output page size [SP 8-443].				

8305	S:Scan PGS/Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
	,		ages scanned by the Scan application. Use anning) and output page size [SP 8-445].			
8306	806 L:Scan PGS/Size *CTL [0 to 9999999/ 0 / 1/step]					
	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 frow within the Copy mode screen. Use these totals to compare original page size (scanning and output page size [SP 8-446].					

Last three digits for SP8 301 to 306

		_	
830x-001	A3	830x-007	LG
830x-002	A4	830x-008	LT
830x-003	A5	830x-009	HLT
830x-004	B4	830x-010	Full Bleed
830x-005	B5	830x-254	Other (Standard)
830x-006	DLT	830x-255	Other (Custom)

8311	T:Scan PGS/Rez	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by resolution set that can specify resolution setting	· ·	number of pages scanned by applications
8315	S: Scan PGS/Rez	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by resolution setting the total number of pages scanned by appearing that can specify resolution settings.		
	Note: At the present time, SP8-3	11 and SP8-	315 perform identical counts.

## Last three digits for SP8 311 and 315

831x-001	1200 dpi
831x-002	600 dpi to 1199 dpi
831x-003	400 dpi to 599 dpi
831x-004	200 dpi to 399 dpi

831x-005
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- 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.

8321	T:Sacn Poster	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8322	C:Sacn Poster	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8326	L:Sacn Poster	*CTL	[0 to 9999999/ <b>0</b> / 1/step]

832x-00	01 23	Sheet
832x-00	)2 4	Sheet
832x-00	03 9	Sheet

8381	T:Total PrtPGS Field Number	*CTL	These SPs count the number of pages printed by the customer. The counter for the application used for storing the pages
8382	C:Total PrtPGS Field Number	*CTL	increments. [0 to 9999999/ - / 1/step]
8383	F:Total PrtPGS Field Number	*CTL	The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages
8384	P:Total PrtPGS Field Number	*CTL	stored with the Store File button from within the Copy mode screen go to the C: counter.
8385	S:Total PrtPGS Field Number	*CTL	
8386	L:Total PrtPGS Field Number	*CTL	
8387	O:Total PrtPGS Field Number	*CTL	

• When several documents are merged for a print job, the number of pages stored is 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.

I Size PrtPGS

- Error notification reports.

8301

- Partially printed pages as the result of a copier jam.

8391		LSIZE PRIPGS			
		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.			
	001	A3/DLT, Larger	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	003	BannaerPaper	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
8401		T:PrtPGS/LS	*CTL	These SPs count the number of pages	
8402		C:PrtPGS/LS	*CTL	printed from the document server. The counter for the application used to print the	
8403		F:PrtPGS/LS	*CTL	pages is incremented.	
8404		P:PrtPGS/LS	*CTL	The L: counter counts the number of jobs stored from within the document server	
8405		S:PrtPGS/LS	*CTL	mode screen at the operation panel.	
8406		L:PrtPGS/LS	*CTL	[0 to 9999999/ <b>-</b> / 1/step]	

- 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.

8411	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/ - / 1/step]

8421	T:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	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.			
8422	C:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by binding and processed for printing by the co		d n-Up settings the number of pages on.	
8423	F:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by binding and processed for printing by the fax		d n-Up settings the number of pages	
8424	P:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.			
8425	S:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the scanner application.			
8426	L:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	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.			
8427	O:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
These SPs count by binding and combine, and n-processed for printing by Other applications			d n-Up settings the number of pages	

## Last three digits for SP8 421 to 427

842x-001	Simplex> Duplex	-
842x-002	Duplex> Duplex	-
842x-003	Book> Duplex	-
842x-004	Simplex Combine	-
842x-005	Duplex Combine	-
842x-006	2in 1	2 pages on 1 side (2-Up)

842x-007	4in 1	4 pages on 1 side (4-Up)
842x-008	6in1	6 pages on 1 side (6-Up)
842x-009	8in 1	8 pages on 1 side (8-Up)
842x-010	9in 1	9 pages on 1 side (9-Up)
842x-011	16in1	16 pages on 1 side (16-Up)
842x-012	Booklet	-
842x-013	Magazine	-
842x-014	2in1 + Booklet	-
842x-015	4in1 + Booklet	-
842x-016	6in1 + Booklet	-
842x-017	8in1 + Booklet	-
842x-018	9in1 + Booklet	-
842x-019	2in1 + Magazine	-
842x-020	4in1 + Magazine	-
842x-021	6in1 + Magazine	-
842x-022	8in1 + Magazine	-
842x-023	9in1 + Magazine	-
842x-024	16in1 + 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		Magaz	zine
Original Pages	Count	Original Pages	Count
1	1	1	1
2	2	2	2

Booklet		Magaz	zine
Original Pages	Count	Original Pages	Count
3	2	3	2
4	2	4	2
5	3	5	4
6	4	6	4
7	4	7	4
8	4	8	4

8431	T:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the total number of pages output with the three features below, regardless of which application was used.			
8432	C:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the total number of pages output with the three features below with the copy application.			
8434	P:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the total number of pages output with the three features below with the print application.			
8436	L:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	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.			
8437	O:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the total number of pages output with the three features below with Other applications.			

### Last three digits for SP8 431 to 437

843x-001	Cover/Slip Sheet	Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.	
843x-002	Series/Book	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.	

843x-003	User Stamp	The number of pages printed where stamps were applied,
		including page numbering and date stamping.

8441	T:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by print paper s	ize the numb	er of pages printed by all applications.
8442	C:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by print paper s	ize the numb	er of pages printed by the copy application.
<b>8443</b> F	F:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by print paper s	ize the numb	er of pages printed by the fax application.
8444 F	P:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by print paper size the number of pages printed by the printer application.		
8445	S:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by print paper size the number of pages printed by the scanner application.		
8 <b>44</b> 6 l	L:PrtPGS/Ppr Size		
l	These SPs count by print paper size the number of pages printed from within the document server mode window at the operation panel.		
8447	O:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by print paper size the number of pages printed by Other applications.		

## Last three digits for SP8 441 to 447

844x-001	A3
844x-002	A4
844x-003	A5
844x-004	B4
844x-005	B5
844x-006	DLT
844x-007	LG

844x-008	LT
844x-009	НІТ
844x-010	Full Bleed
844x-254	Other (Standard)
844x-255	Other (Custom)

• These counters do not distinguish between LEF and SEF.

8451	PrtPGS/Ppr Tray	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the numbe	ber of sheets fed from each paper feed station.		
001	Bypass Tray	Bypass Tray	,	
002	Tray 1	Machine		
003	Tray 2	Paper Tray	Unit (Option)	
004	Tray 3	Paper Tray	Unit (Option)	
005	Tray 4	Paper Tray	Unit (Option)	
006	Tray 5	Not used		
007	Tray 6	Not used		
008	Tray 7	Not used		
009	Tray 8	Not used		
010	Tray 9	Not used		
011	Tray10	Not used		
012	Tray 1 1	Not used		
013	Tray12	Not used		
014	Tray 13	Not used		
015	Tray 14	Not used		
016	Tray15	Not used		

8461	T:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by paper type the	ne number po	ages printed by all applications.	
	<ul> <li>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.</li> </ul>			
	Blank sheets (covers, chapt	er covers, sli	p sheets) are also counted.	
	<ul> <li>During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1.</li> </ul>			
8462	C:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by paper type the	ne number po	ages printed by the copy application.	
8463	F:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by paper type the number pages printed by the fax application.			
8464	P:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by paper type the number pages printed by the printer application.			
8466	L:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by paper type the number pages printed from within the document server mode window at the operation panel.			

## Last three digits for SP8 461 to 466

846x-001	Normal	
846x-002	Recycled	
846x-003	Special	
846x-004	Thick	
846x-005	Normal (Back)	
846x-006	Thick (Back)	
846x-007	OHP	
846x-008	Other	

8471	PrtPGS/Mag	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by magnifi	cation rate th	ne number of pages printed.
001	49% or less		
002	50% to 99%		
003	100%		
004	101% to 200%		
005	201% or more		

- 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%.

8481	T:PrtPGS/TonSave	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8484	P:PrtPGS/TonSave	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	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.		

8491	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages
8492	C:PrtPGS/Col Mode	*CTL	printed in the Color Mode by each application.
8493	F:PrtPGS/Col Mode	*CTL	
8496	L:PrtPGS/Col Mode	*CTL	
8497	O:PrtPGS/Col Mode	*CTL	

#### 3

#### Last three digits for SP8 491 to 493, 496 and 497

Lasi iiii oo algiis i					
849x-001	B/W				
849x-002	Single Color				
849x-003	Two Color				
849x-004	Full Color				
849x-051	B/W(Banner)				
849x-052	Single Color(Banner)				
849x-053	Two Color(Banner)				
849x-054	Full Color(Banner)				

8501	T:PrtPGS/Col Mode	*CTL
8504	P:PrtPGS/Col Mode	*CTL
8507	O:PrtPGS/Col Mode	*CTL

These SPs count the number of pages printed in the Color Mode by the print application.

### Last three digits for SP8 501, 504 and 507

850x-001	B/W	
850x-002	Mono Color	
850x-003	Full Color	
850x-004	Single Color	
850x-005	x-005 Two Color	
850x-051	B/W(Banner)	
850x-052	Full Color(Banner)	
850x-053 Single Color(Banner)		
850x-054 Two Color(Banner)		

8511	T:PrtPGS/Emul	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by printer emulation mode the total number of pages printed		

8514	P:PrtPGS/Emul	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by printer emulation mode the total number of pages printed.		

## Last three digits for SP8 511 and 514

RPCS	-
RPDL	-
PS3	-
R98	-
R16	-
GL/GL2	-
R55	-
RTIFF	-
PDF	-
PCL5e/5c	-
PCL XL	-
IPDL-C	-
BM-Links	Japan Only
Other	-
IPDS	-
XPS	-
	RPDL PS3 R98 R16 GL/GL2 R55 RTIFF PDF PCL5e/5c PCL XL IPDL-C BM-Links Other IPDS

- $\bullet$  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.

8521	T:PrtPGS/FIN	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
	These SPs count by finishing napplications.	node the to	ital number of pages printed by all

8522	C:PrtPGS/FIN	*CTL	[0 to 9999999 / <b>0</b> / 1 / step]		
	These SPs count by finishing napplication.	These SPs count by finishing mode the total number of pages printed by the Copy application.			
8523	F:PrtPGS/FIN	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	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.				
8524	P:PrtPGS/FIN	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	These SPs count by finishing mode the total number of pages printed by the Print application.				
8525	S:PrtPGS/FIN	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	These SPs count by finishing mode the total number of pages printed by the Scanner application.				
8526	L:PrtPGS/FIN	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	These SPs count by finishing mode the total number of pages printed from within the document server mode window at the operation panel.				

## Last three digits for SP8 521 to 526

852x-001	Sort	852x-009	Three-IN-Fold
852x-002	Stack	852x-010	Three-OUT-Fold
852x-003	Staple	852x-011	Four-Fold
852x-004	Booklet	852x-012	KANNON-Fold
852x-005	Z-Fold	852x-013	Perfect-Bind
852x-006	Punch	852x-014	Ring-Bind
852x-007	Other	852x-015	3rd Vendor
852x-008	Inside-Fold		



• 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.

8531	This SP counts the amount of staples used (-001) or count stapled (-002) by the machine.		
001	Staples	*CTR	[0 to 9999999 / - / 1]
002	Stapleless	*CTR	[0 to 9999999 / - / 1]

8551	T:PrtBooks/FIN	*CTL	-
8552	C:PrtBooks/FIN	*CTL	-
8554	P:PrtBooks/FIN	*CTL	-
8556	L:PrtBooks/FIN	*CTL	-
855x-001	Perfect-Bind	Not used	
855x-002	Ring-Bind	Not used	

8561	T:A Sheet Of Paper	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
8562	C:A Sheet Of Paper	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
8563	F:A Sheet Of Paper	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
8564	P:A Sheet Of Paper	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
8566	L:A Sheet Of Paper	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
8567	O:A Sheet Of Paper	*CTL	[0 to 9999999 / <b>0</b> / 1/step]

## Last three digits for SP8 561 to 567

856x-001	Total: Over A3/DLT
856x-002	Total: Under A3/DLT
856x-003	Duplex: Over A3/DLT
856x-004	Duplex: Under A3/DLT

3

8581	T:Counter *CTL [0 to 9999999 / 0 / 1/step]				
	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.				
001	Total				
002	Total: Full Color				
003	B&W/Single Color				
004	Development: CMY				
005	Development: K				
006	Copy: Color				
007	Copy: B/W				
008	Print: Color				
009	Print: B/W				
010	Total: Color  Total: B/W  Full Color: A3				
011					
012					
013	Full Color: B4 JIS or Smaller				
014	Full Color Print				
015	Mono Color Print				
016	Full Color GPC				
017	Twin Color Mode Print				
018	Full Color Print(Twin)				
019	Mono Color Print(Twin)				
020	Full Color Total(CV)				
021	Mono Color Total(CV)				
022	Full Color Print(CV)				

	028	Development: CMY(A3)				
	029	Development: K(A3)				
	030	Total: Color(A3)				
	031	Total: B/W(A3)				
8582		C:Counter *CTL [0 to 9999999/ <b>0</b> / 1/step]				
0302		C:Counter *CTL [0 to 9999999/ 0 / 1/step]  These SPs count the total output of the copy application broken down by color output.				
	001	B/W				
	002	Single Color				
	003	Two Color				
	004	Full Color				
8583		F:Counter	*CTL	[0 to 9999999/ <b>0</b> / 1/step]		
		These SPs count the total output of the fax application broken down by color output.				
	001	B/W				
	002	Single Color				
8584		P:Counter	*CTL	[0 to 9999999/ <b>0</b> / 1/step]		
0304				·		
			out of the pr	int application broken down by color output.		
	001	B/W				
	002	Mono Color				
	003	Full Color				
	004	Single Color				
	005	Two Color				
8586		L:Counter	*CTL	[0 to 9999999/ <b>0</b> / 1/step]		

These SPs count the total output of the local storage broken down by color output.

001	B/W
002	Single Color
003	Two Color
004	Full Color

8591	O:Counter	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	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.			
001	A3/DLT			
002	Duplex			
005	Banner			

8601	T:Coverage Counter	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the total coverage for each color and the total printout pages for each printing mode.			
001	B/W			
002	Color	Color		
011	B/W Printing Pages			
012	Color Printing Pages			
021	Coverage Counter 1			
022	Coverage Counter 2			
023	Coverage Counter 3			
031	Coverage Counter 1 (YMC)			
032	Coverage Counter 2 (YMC)			
033	Coverage Counter 3 (YMC)			

8602	C:Coverage Counter	*CTL	[0 to 2147483647/ <b>0</b> / 1%/step]	
	ach color and the total printout pages for			
8603	F:Coverage Counter	*CTL	[0 to 2147483647/ <b>0</b> / 1%/step]	
	These SPs count the total coverage for each color and the total printout pages for each printing mode.			
	P:Coverage Counter	*CTL	[0 to 2147483647/ <b>0</b> / 1%/step]	
8604	These SPs count the total coverage for each color and the total printout pages for each printing mode.			
	L:Coverage Counter *CTL [0 to 2147483647/0/1%/step]			
8606	These SPs count the total coverage for each color and the total printout pages for each printing mode.			

#### Last three digits for SP8 602 to 606

	8 602	8 603	8 604	8 606
860x-001: B/W	Yes	Yes	Yes	Yes
860x-002: Single Color	Yes	Yes	Yes	Yes
860x-003: Two Color	Yes	No	Yes	Yes
860x-004: Full Color	Yes	No	Yes	Yes

8617	SDK Apli Counter	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count the total printout pages for each SDK applicaion.		
001	SDK-1		
002	SDK-2		
003	SDK-3		
004	SDK-4		
005	SDK-5		
006	SDK-6		
007	SDK-7		

008	SDK-8
009	SDK-9
010	SDK-10
011	SDK-11
012	SDK-12

8621	Func Use Counter <b>DFU</b>
001 to 064	Function 001 to Function 064

8631	T:FAX TX PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by color mod number.	le the numb	per of pages sent by fax to a telephone	
8633	F:FAX TX PGS *CTL [0 to 9999999/ 0 / 1/step]			
	These SPs count by color mode the number of pages sent by fax to a telephone number.			
863x-001	B/W			
863x-002	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.

8641	T:IFAX TX PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]			
	These SPs count by color modusing I-Fax.	These SPs count by color mode the number of pages sent by fax to as fax images using I-Fax.				

8643	F:IFAX TX PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by color mod I-Fax.	le the numl	per of pages sent by Fax as fax images using
864x-001	B/W		
864x-002	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.

8651	T:S-to-Email PGS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count by color mod both the Scan and document		number of pages attached to an e-mail for lications.
8655	S:S-to-Email PGS *CTL [0 to 9999999/ <b>0</b> / 1/step]		
	These SPs count by color mode the total number of pages attached to an e-mail for the Scan application only.		
865x-001	B/W		
865x-002	Color		



- 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.).

8661	T:Deliv PGS/Svr	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by color mod server by both Scan and LS a		number of pages sent to a Scan Router	
8665	S:Deliv PGS/Svr *CTL [0 to 9999999/ 0 / 1/step]			
	These SPs count by color mode the total number of pages sent to a Scan Router server by the Scan application.			
866x-001	B/W			
866x-002	Color			



- 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.

8671	T:Deliv PGS/PC	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count by color mod (Scan-to-PC) with the Scan ar		number of pages sent to a folder on a PC cations.	
8675	S: Deliv PGS/PC *CTL [0 to 9999999/ 0 / 1/step]			
	These SPs count by color mode the total number of pages sent with Scan-to-PC with the Scan application.			
867x-001	B/W			
867x-002	Color			

8681	T:PCFAX TXPGS	*CTL	These SPs count the number of pages sent by PC Fax.
8683	F:PCFAX TXPGS	*CTL	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/step]

• 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.)

8691	T:TX PGS/LS	*CTL	These SPs count the number of pages sent from the
8692	C:TX PGS/LS	*CTL	document server. The counter for the application that was used to store the pages is incremented.
8693	F:TX PGS/LS	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8694	P:TX PGS/LS	*CTL	The L: counter counts the number of pages stored from within the document server mode screen at the
8695	S:TX PGS/LS	*CTL	operation panel. Pages stored with the Store File
8696	L:TX PGS/LS	*CTL	button from within the Copy mode screen go to the C: counter.



- 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.

8701	TX PGS/Port	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	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.			
001	PSTN-1	PSTN-1		
002	PSTN-2			
003	PSTN-3			
004	ISDN (G3,G4)			
005	Network			

8711	T:Scan PGS/Comp	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8715	S:Scan PGS/Comp	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count the number of pages sent by each compression mode.		

871x-001	JPEG/JPEG2000
07 1X-001	31 20/ 31 202000
871x-002	TIFF(Multi/Single)
871x-003	PDF
871x-004	Other
871x-005	PDF/Comp
871x-006	PDF/A
871x-007	PDF(OCR)
871x-008	PDF/Comp(OCR)
871x-009	PDF/A(OCR)

8721	T: Deliv PGS/WSD	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8725	S: Deliv PGS/WSD	*CTL	
	These SPs count the number of pages scanned by each scanner mode.		
872x-001	B/W		
872x-002	Color		

8731	T:Scan PGS/Media	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
8735	S:Scan PGS/Media	*CTL	
	These SPs count the number of mode.	of pages sc	anned and saved in a meia by each scanner
873x-001	B/W		
873x-002	Color		

8741	RX PGS/Port	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs count the number of them.	of pages re	ceived by the physical port used to receive
001	PSTN-1		
002	PSTN-2		

003	PSTN-3
004	ISDN (G3,G4)
005	Network

8 <i>77</i> 1	Dev Counter	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.			
8 771-001	Total			
8 771-002	K			
8 771-003	Υ			
8 771-004	М			
8 771-005	С			

8 781	Toner_Botol_Inf	fo.	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs display the number of already replaced toner bottles.			replaced toner bottles.	
		y, the data in SP7-833-011 through 014 and the data in through 004 are the same.			
8 781-001	ВК	The number of black-toner bottles			
8 781-002	Υ	The number of yellow-toner bottles			
8 781-003	М	The number of magenta-toner bottles			
8 781-004	С	The number of cyan-toner bottles			

8791	LS Memory Remain	*CTL	[0 to 100 / <b>0</b> / 1/step]
	This SP displays the percent o documents.	f space avo	ailable on the document server for storing

8801	Toner Remain	*CTL	[0 to 100/ <b>0</b> /1/step]		
	These SPs display the percent of toner remaining for each color. This SP allows the user to check the toner supply at any time.				
	<b>Note:</b> 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).				
001	K				
002	Υ				
003	М				
004	С				

8811	Eco Counter				
001	Eco Total	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	Displays the number of pages reduced by using the color, full color, duplex and combine function.				
002	Color	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	Displays the number of pag	es reduced k	by using the color function.		
003	Full Color	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	Displays the number of pag	es reduced k	by using the full color function		
004	Duplex	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	Displays the number of pages reduced by using the duplex function.				
005	Combine	*CTL	[0 to 9999999 / <b>0</b> / 1/step]		
	Displays the number of pag	es reduced k	by using the combine function.		
006	Color(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]		
	Displays the utilization ratio of the color function.				
007	Full Color(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]		
Displays the utilization ratio of the full color function.			olor function.		

			[0 to 100/ <b>0</b> / 1%/step]
D	Displays the utilization ratio of	the duple	x function.
009 C	Combine(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]
D	Displays the utilization ratio of	the combi	ne function.
010 P	aper Cut(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]
D	Displays the paper reduction r	atio.	
051 S	iync Eco Total	*CTL	[0 to 99999999/ <b>0</b> / 1/step]
052 S	Sync Color	*CTL	[0 to 99999999/ <b>0</b> / 1/step]
053 S	iync Full Color	*CTL	[0 to 99999999/ <b>0</b> / 1/step]
054 S	sync Duplex	*CTL	[0 to 99999999/ <b>0</b> / 1/step]
055 S	ync Combine	*CTL	[0 to 99999999/ <b>0</b> / 1/step]
056 S	Sync Color(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]
057 S	ync Full Color(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]
058 S	ync Duplex(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]
059 S	sync Combine(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]
060 S	sync Paper Cut(%)	*CTL	[0 to 100/ <b>0</b> / 1%/step]
101 E	co Totalr:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
-			
102 C	Color:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
-			
103 F	ull Color:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
-			
104 D	Ouplex:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]
-			

105	Combine:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]	
	-			
106	Color(%):Last	*CTL	[0 to 100/ <b>0</b> /1%/step]	
	-			
107	Full Color(%):Last	*CTL	[0 to 100/ <b>0</b> /1%/step]	
	-			
108	Duplex(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	
	-			
109	Combine(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	
	-			
110	Paper Cut(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	
	-			
151	Sync Eco Totalr:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]	
152	Sync Color:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]	
153	Sync Full Color:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]	
	•			
154	Sync Duplex:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]	
155	Sync Combine:Last	*CTL	[0 to 9999999 / <b>0</b> / 1/step]	
156	Sync Color(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	
157	Sync Full Color(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	
158	Sync Duplex(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	
159	Sync Combine(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	
160	Sync Paper Cut(%):Last	*CTL	[0 to 100/ <b>0</b> / 1%/step]	

0051	CVr Cnt: 0-10%	*CTL	[0.4	0000000/0/1/1	
8851	CVr Cnr. 0-10%	CIL [UII		o 999999/ <b>0</b> / 1/step]	
	These SPs display the number color is from 0% to 10%.	er of scanned sheets on which the coverage of each			
011	0 to 2%: BK	(	031	5 to 7%: BK	
012	0 to 2%: Y	032		5 to 7%: Y	
013	0 to 2%: M	033		5 to 7%: M	
014	0 to 2%: C	034		5 to 7%: C	
021	3 to 4%: BK	041		8 to 10%: BK	
022	3 to 4%: Y	042		8 to 10%: Y	
023	3 to 4%: M	(	043	8 to 10%: M	
024	3 to 4%: C	044		8 to 10%: C	
8861	CVr Cnt: 11-20%	*CTL [0 to 9999999/ <b>0</b> / 1/step]			
	These SPs display the number	er of scanned sheets on which the coverage of each			

8861	CVr Cnt: 11-20%	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
These SPs display the number of scanned sheets on which the coverage of each color is from 11% to 20%.			d sheets on which the coverage of each	
001	ВК	3K		
002	Υ			
003	М			
004	С			

8871	CVr Cnt: 21-30%	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
These SPs display the number of scanned sheets on which the coverage of each color is from 21% to 30%.				
001	ВК			
002	Υ			
003	М			
004	С			

8881	CVr Cnt: 31%-	*CTL	[0 to 9999999/ <b>0</b> / 1/step]		
	These SPs display the number color is 31% or higher.	se SPs display the number of scanned sheets on which the coverage of each or is 31% or higher.			
001	ВК				
002	Υ				
003	М				
004	С				

8891	Page/Toner Bottle	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs display the amount	of the rem	aining current toner for each color.
001	ВК		
002	Υ		
003	М		
004	С		

8901	Page/Toner_Prev1	*CTL	[0 to 9999999/ <b>0</b> / 1/step]
	These SPs display the amount	of the rem	aining previous toner for each color.
001	BK		
002	Υ		
003	М		
004	С		

8911	Page/Toner_Prev2 *CTL [0 to 9999999/ 0 / 1/step]		[0 to 9999999/ <b>0</b> / 1/step]	
	These SPs display the amount	y the amount of the remaining 2nd previous toner for each color.		
001	ВК			
002	Υ			
003	М			

004 C

8921	Cvr Cnt/Total	*CTL	[0 to 2147483647/ <b>0</b> / 1/step]	
	Displays the total coverage and total printout number for each color.			
001	Coverage (%) BK	Coverage (%) BK		
002	Coverage (%) Y	Coverage (%) Y		
003	Coverage (%) M	Coverage (%) M		
004	Coverage (%) C			
8921	Cvr Cnt/Total         *CTL         [0 to 99999999 / 0 / 1/step]			
011	Coverage /P: BK			
012	Coverage /P: Y	Coverage /P: Y		
013	Coverage /P: M			
014	Coverage /P: C			

8941	Machine Status	*CTL	[0 to 9999999/ <b>0</b> / 1/step]		
		t of time the machine spends in each operation mode. stomers who need to investigate machine operation for iance with ISO Standards.			
001	Operation Time	Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).			
002	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.			
003	Energy Save Time	Includes time while the machine is performing background printing.			
004	Low Power Time	Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.			

005	Off Mode Time	Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.
006	SC	Total time when SC errors have been staying.
007	PrtJam	Total time when paper jams have been staying during printing.
008	OrgJam	Total time when original jams have been staying during scanning.
009	Supply PM Unit End	Total time when toner end has been staying.

8951	AddBook Register	*CTL	-	
	These SPs count the numbe	r of events when the machine manage		es data registration.
001	User Code /User ID	User code r	egistrations.	[0 to 99999/ <b>0</b> / 1/step]
002	Mail Address	Mail addres	ss registrations.	
003	Fax Destination	Fax destinat	tion registrations.	
004	Group	Group desti	nation registrations.	
005	Transfer Request	Fax relay de	estination registrations	
006	F-Code	F-Code box registrations.		
007	Copy Program	Copy application registrations with the Program (job settings) feature.		[0 to 255 / <b>0</b> / 1/step]
008	Fax Program	Fax application registrations with the Program (job settings) feature.		
009	Printer Program	Printer application registrations with the Program (job settings) feature.		
010	Scanner Program	Scanner application registrations with the Program (job settings) feature.		

8961	Electricity Status	*CTL	[0 to 9999999/ <b>0</b> / 1/step]	
	-			
001	Ctrl Standby Time			
002	STR Time			
003	Main Power Off Time			
004	Reading and Printing Time	Reading and Printing Time		
005	Printing Time	Printing Time		
006	Reading Time			
007	Eng Waiting Time			
008	Low Power State Time			
009	Silent State Time			
010	Heater Off State Time			
011	LCD on Time			
101	Silent Print			

8971	Unit Control	*CTL	[0 to 99999999/ <b>0</b> / 1/step]
	-		
001	Engine Off Recovery Count		
002	Power Off Count		
003	Force Power Off Count		

8999	Admin. Counter List
	Displays the total coverage and total printout number for each color.

001	Total	*CTL	[0 to 9999999/ - / 1]
002	Copy: Full Color	*CTL	
003	Copy: BW	*CTL	
004	Copy: Single Color	*CTL	
005	Copy: Two Color	*CTL	
006	Printer Full Color	*CTL	
007	Printer BW	*CTL	
008	Printer Single Color	*CTL	
009	Printer Two Color	*CTL	
010	Fax Print: BW	*CTL	
011	Fax Print: Single Color	*CTL	
013	Duplex	*CTL	
022	Copy: Full Color(%)	*CTL	[0 to 2147483647/ - / 1]
023	Copy: BW(%)	*CTL	
024	Copy: Single Color(%)	*CTL	
025	Copy: Two Color(%)	*CTL	
026	Printer: Full Color(%)	*CTL	
027	Printer: BW(%)	*CTL	
028	Printer: Single Color(%)	*CTL	
029	Printer: Two Color(%)	*CTL	
030	Fax Print: BW(%)	*CTL	
031	Fax Print: Single Color(%)	*CTL	

101	Transmission Total: Color	*CTL	[0 to 9999999/ - / 1]
102	Transmission Total: BW	*CTL	
102	Transmission Total: BW	*CTL	
103	FAX Transmission	*CTL	
104	Scanner Transmission: Color	*CTL	
105	Scanner Transmission: BW	*CTL	

# **Printer Service Mode**

### Printer Service Mode

1001	Bit Switch			
001	Bit Swit	ch 1	0	1
	bit 0	DFU	-	-
	bit 1	Responding with the hostname as the sysName	Model name (PnP name)	Hostname
	This BitSwitch can change the value of the sysName.  O (default): Model name (PnP name) such as "MP C401SP"  1: Host name			
	bit 2	DFU	-	-
	bit 3	No I/O Timeout	0:Disabled	1:Enabled
		Enables/Disables MFP I/O Timeouts. If enabled, the MFP I/O Timeout setting will have no affect. I/O Timeouts will never occur.		
	bit 4	SD Card Save Mode	0:Disabled	1:Enabled
		If this bit switch is enabled, print jobs will be saved to to paper.	the GW SD slo	t and not output
	bit 5	[PS and PDF] Paper size error margin	±5pt	±10pt
		When a PS job is printed by using a custom paper size, the job might not be printed because of a paper size mismatch caused by a calculation error. By default, the error margin for matching to a paper size is ±5 points. By enabling this BitSwitch, the error margin for matching to a paper size can be extended to ±10 points.		
	bit 6	Color balance switching	0:Disabled	1:Enabled
		This BitSwitch can be used to restore the color balance models. If this BitSwitch is set to "1" (Enabled), the color Fuji-Xerox printers will be used.		'

100	1 Bit Swi	Bit Switch				
	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 Swit	ch 2	0	1
		Color balance switching	Disabled	Enabled
	bit 0	This BitSwitch can be used to restore the color balance to match that of previous models. If this BitSwitch is set to "1" (Enabled), the color balance from 09S and earlier models will be used.		
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	[PCL5e/c.PS]: PDL Auto Switching	0: Enable	1: Disable
		Enables/disable the MFPs ability to change the PDL processor mid-job.  Some host systems submit jobs that contain both PS and PCL5e/c. If Auto PDL switching is disabled, these jobs will not be printed properly.		
	bit 4	Color balance switching	Disabled	Enabled
	This BitSwitch can be used to restore the color balance to match that of previous models. If this BitSwitch is set to "1" (Enabled), the color balance from 09A and Extended 09A models will be used.			
	bit 5	DFU	-	-
	bit 6	Switch dither	0: Use normal dither	1: Use alternative dither
		See RTB#RD014018.		
	bit 7	DFU	-	-

1001	Bit Swit	Bit Switch				
003	Bit Swit	ch 3	0	1		
	bit 0	DFU	-	-		
	bit 1	DFU	-	-		
	bit 2	[PCL5e/c]: Legacy HP compatibility	0:Disabled	1:Enabled		
		Uses the same left margin as older HP models such as In other words, the left margin defined in the job (usua changed to " <esc>*r1A".</esc>	•			
	bit 3 to 7	DFU	-	-		

1001	Bit Swit	Bit Switch				
004	Bit Swit	ch 4	0	1		
	bit 0 to 7	DFU	-	-		

1001	Bit Swit	Bit Switch				
005	Bit Swit	rch 5	0	1		
	bit 0	DFU	-	-		
	bit 1	Multiple copies if a paper size or type mismatch occurs	0:Disabled (Single copy)	1:Enabled (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 bit switch, 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:Disabled	1:Enabled		
	Enable: 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 bit switch is for troubleshooting tapplications on data.			eshooting the ef	fects of SDK		

1001	Bit Switch				
	bit 3	[PS] PS Criteria	0: Pattern3	1: Pattern 1	
		Change the number of PS criterion used by the PS interpereter to determine whether a job is PS data or not.			
		Pattern3: (2 to 4): The larger the pattern number, the used. Pattern 4 includes most PS commands.	greater the nu	mber of criterion	
		Pattern 1: A small number of PS tags and headers			
	bit 4	Increase max. number of stored jobs.	0:Disabled (100)	1:Enabled (750)	
		Changes the maximum number of jobs that can be stored on the HDD. The default (disabled) is 100. If this is enabled, the max. will be raised to 750 or 1000 depending on the model.			
	bit 5	DFU	-	-	
	bit 6	Method for determining the image rotation for the edge to bind on.	0:Disabled	1:Enabled	
		Enable: The image rotation will be performed as they older models for the binding of pages of mixed orient		ecifications of	
		The old models are below:			
		- PCL: Pre-04A models			
		- PS/PDF/RPCS: Pre-05S models			
	bit 7	Letterhead mode printing	0:Disabled	1:Enabled (Duplex)	
		Routes all pages through the duplex unit.			
	If this is disabled, simplex pages or the last page of an odd-paged duplex job not routed through the duplex unit. This could result in problems with letterhead/printed pages.				
		Only affects pages specified as Letterhead paper.			

1001	Bit Swit	Bit Switch				
006	Bit Swit	ch 6	0	1		
	bit 0	Include bypass in auto tray select	0:Disabled	1:Enabled		
	If enabled, the Bypass tray tray will be included in auto tray select		to tray selection	1.		
	bit 1 to 7	DFU	-	-		

1001	Bit Swit	ch		
007	Bit Swit	ch 7	0	1
	bit 0 to 7	DFU	-	-

1001	Bit Swit	Bit Switch			
008	Bit Swit	ch 8	0	1	
	bit 0 to 2	DFU	-	-	
	bit 3	[PCL.PS]: Allow BW jobs to print without requiring User Code	0:Disabled	1:Enabled (allow BW jobs to print without a user code)	
		BW jobs submitted without a user code will be printed authentication is enabled.  Note: Color jobs will not be printed without a valid us		de	
	bit 4 to 5	DFU	-	-	
	bit 6	PCL, RPCS, PS: Forced BW print	0:Disabled	1:Enabled	
	O TIC	Switches whether to ignore PDL color command.			
	bit 7	DFU	-	-	

1001	Bit Switch				
009	Bit Swit	ch 9	0	1	
	bit 0	PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).	0:Disabled (Immediatel y)	1:Enabled (10 seconds)	
		To be used if PDL auto-detection fails. A failure of PDI necessarily mean that the job can not be printed. This whether to time-out immediately (default) upon failure	bit switch tells t	he device	
	bit 1	DFU	-	-	
	bit 2	Job Cancel	0:Disabled (Not cancelld)	1:Enabled (Cancelled)	
		Enable: All jobs will be cancelled after a jam occurs.			
		<b>Note:</b> If this bit switch is enabled, printing under the fo	ollowing conditi	ons might result	
		- Job submission via USB or parallel port			
		- Spool printing (WIM > Configuration > Device Setti	ngs > System)		
	bit 3	DFU	-	-	
	bit 4	Timing of the PJL Status ReadBack (JOB END) when printing multiple collated copies.	0:Disabled	1:Enabled	
		This bit switch determines the timing of the PJL USTATU multiple collated copies are being printed.	JS JOB END se	nt when	
		Disable (=0 (default)):			
		JOB END is sent by the device to the client after the fi printing. This causes the page counter to be incremen again at the end of the job.			
		Enable (=1):			
		JOB END is sent by the device to the client after the lo This causes the page counter to be incremented at the			

1001	Bit Switch		
009	Bit Switch 9	0	1

1001	Bit Swit	Bit Switch				
	bit 5	Display UTF-8 text in the operation panel	0:Enabled	1:Disabled		
		Enable (=0):				
		Text composed of UTF-8 characters can be displayed	d in the operation	on panel.		
		Disable (=1):				
		UTF-8 characters cannot be displayed in the operation	on panel.			
		For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this bit switch is enabled (=0).				
	bit 6	Disable super option	0:Enabled	1:Disabled		
		Switches super option disable on / off. It this is On, multiple jobs are grouped at LPR port. PJL settings are enabled even jobs that are specified queue names are sent.				
	bit 7	Enable/Disable Print from USB/SD's Preview function	0:Enabled	1:Disabled		
Determines whether print from USB/SD will have the Preview function.  Enabled (=0): Print from USB/SD will have the Preview function.			n.			
			w function.			
	Disabled (=1): Print from USB/SD will not have the Preview function.					

1001	Bit Swit	Bit Switch			
010	Bit Swit	ch A	0	1	
	bit 0 to 3	DFU	-	-	
	bit 4	Not Used	-	-	
	bit 5	Store and Skip Errored Job locks the queue	0: Queue is not locked after SSEJ	1: Queue locked after SSEJ	
		If this is 1, then after a job is stored using Store and S jobs cannot be added to the queue until the stored job	•		
	bit 6	Allow use of Store and Skip Errored Job if connected to an external charge device.	0: Does not allow SSEJ with ECD	1: Allows SSEJ with ECD	
		If this is 0, Store and Skip Errored Job (SSEJ) will be automatically disabled if an external charge device is connected.  Note: We do not officially support enabling this bit switch (1). Use it at your own risk.			
	bit 7	Job cancels remaining pages when the paid-for pages have been printed on an external charge device	Job does not cancel	Job cancels	
		When setting 1 is enabled, after printing the paid-for device, the job that includes any remaining pages will This setting will prevent the next user from printing the previous user's print job.	ll be canceled.	· ·	

1001	Bit Switch			
011	Bit Switch B		0	1
	bit 0 to 1	DFU	-	-

1001	Bit Switch			
		Switch for enabling or disabling Limitless Paper Feeding for the Bypass Tray	0: Enable	1: Disable
		When the Bypass Tray is the target of the Auto Tray S configured for the Tray Setting Priority setting of the B switch the behavior whether or not Limitless Paper Fee Tray.* The default is Enabled (=0).	ypass Tray, this	BitSwitch can
		*Limitless Paper Feeding will try a matching tray of th specified to Auto Tray Select as the tray setting is sub- paper.		
		Enabled (=0: Default):		
		Limitless Paper Feeding is applied to the Bypass Tray.		
	bit 2	If a tray other than the Bypass Tray matches the job's paper size and type but has run out of paper, printing will occur from the Bypass Tray.		
Disabled (=1):				
		Limitless Paper Feeding is not applied to the Bypass T	ray.	
		If a tray other than the Bypass Tray matches the job's run out of paper, printing will stop and an alert will a stating that the tray has run out of paper. This prevent Tray.	ppear on the LC	CD screen,
		Limitations when this BitSwitch is set to "1":		
- The "Paper Tray Priority: Printer" setting must be configure Bypass Tray.			figured to a tray	y other than the
	- Jobs that contain more than one paper size cannot be printed.			
	bit 3	DFU	-	-

1001	Bit Swit	Bit Switch		
		Add "Apply Auto Paper Select" is the condition that decides if the device's paper size or paper type should be overwritten.	0:Enabled	1:Disabled
	bit 4	If this BitSwitch is set to "1" (enabled), the "Apply Auto Paper Select" setting will decide if the paper size or paper type that is specified in the device settings should be overwritten by the job's commands when "Tray Setting Priority" is set to "Driver/Command" or "Any Type".		
		- Apply Auto Paper Select = OFF: Overwritten (priorit commands)	y is given to the	e job's
		- Apply Auto Paper Select = ON: Not overwritten (pr settings)	iority is given to	the device
	bit 5 to 7	Not Used	-	-

1001	Bit Switch				
012	Bit Swit	Bit Switch C		1	
	bit 0	bit 0 DFU		-	
	bit 1 to 4	Not Used		-	
	bit 5	Change the user ID type displayed on the operation panel	0:Enabled	1:Disabled	
		As of 15S models, the Login User Name can be displayed on the operation panel.  The user ID type displayed on the operation panel can be changed by configuring  BitSwitch #12-5 as follows:			
		- 0 (default): Login User Name			
	- 1: User ID. If this is enabled, User ID will be displayed, which is equivaled behavior exhibited in 14A and earlier models.				
	bit 6 to 7	Not Used	-	-	

1003	[Clear Setting]
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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]	
1005-002	Printer Version	Displays the version of the controller firmware.

1	1006	[Sample/Locked Print]	
1	1006-001	0:Link with Doc. Srv 1:Enable	-

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.		

1102	[Resolution Settings]			
	Sets the printing mode (resolution) for the printer gamma adjustment. The asterisk (*) shows which mode is set.			
• 00: *1200x1200Photo				
	• 01: 600x600Text	OText OText		
	• 02: 1200x1200Text			
	• 03: 1200x600Text			
	• 04: 600x600Photo			
	• 05: 1200x600Photo			
	• 06: 600x600Text			
	• 07: 600x600Text			
1102-001	Tone Control Mode Selection	[0 to 99 / <b>0</b> / 1/step]		

1103	[PrnColorSheet]	
1103-001	ToneCtlSheet	Prints the test page to check the color balance
1103-002	ColorChart	before and after the gamma adjustment.

1104	[ToneCtlValue]			
	Adjusts the printer gamma for the mode selected in the Mode Selection menu.			
1104-001	Black: Highlight	[0 to 30 / <b>0</b> / 1/step]		
1104-021	Cyan: Highlight			
1104-041	Magenta: Highlight			
1104-061	Yellow: Highlight			
1104-002	Black: Shadow	[0 to 30 / <b>0</b> / 1/step]		
1104-022	Cyan: Shadow			
1104-042	Magenta: Shadow			
1104-062	Yellow: Shadow			
1104-003	Black: Middle	[0 to 30 / <b>0</b> / 1/step]		
1104-023	Cyan: Middle			
1104-043	Magenta: Middle			
1104-063	Yellow: Middle			
1104-004	Black: IDmax	[0 to 30 / <b>0</b> / 1/step]		
1104-024	Cyan: IDmax			
1104-044	Magenta: IDmax			
1104-064	Yellow: IDmax			

1105	[Save Tone Cntrol Value]			
	Saves the print gamma (adjusted with the Gamma Adj.) as the new Current Setting.  Before the machine stores the new "current settingR", it moves the data stored as the "current setting" to the "previous setting" memory-storage location.			

1105-001	Save Tone Cntrol Value	[EXECUTE]
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1106	[Toner Limit]		
	Adjusts the maximum toner amount for image development.		
1106-001	Toner Limit Value [100 to 400 / <b>0</b> / 1/step]		

1110	[Media Print Device Setting]		
	Enable or disable the media print support function.		
	0: Disable, 1:Enable		
1110-002	0: Disable 1:Enable	[0 to 1 / 1 / 1/step]	

1111	[All Job Delete Mode]		
	-		
	0: Exclusive New Job, 1:Including New Job		
1110-002	0: Exclusive New Job 1: Including New Job	[0 or 1 / <b>1</b> / 1/step]	

# **Scanner Service Mode**

### Scanner Service Mode

1001	[Scan Nv Version]			
1-001-005	- *CTL -			
	Operates automatic initialization to ensure that scanner NV is initialized if necessary.  To do this SP, specify the version of scanner NV within 9 characters.			
	"Function name"_"Machine code"_"Serial number"			
	- Function name: Enter "3".			
	- Machine code: Enter the machine code with three characters.			
	- Serial number: Enter the number (default: 001).			

1005	[Erase margin(Remote scan)]			
1-005-001	Range from 0 to 5 mm			
	If the machine has scanned the ec	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.		

1009	[Remote scan disable]			
1-009-001	0:enable 1:desable			
	Enable or disable remote scan.			

1	1010	[Non Display ClearLight PDF]			
	1-010-001	0:Display 1:Nondisplay			
		Display or nondislay ClearLight PDF function.			

1011	[Org Count Disp]

3

1-011-001	0:ON 1:OFF	*CTL	[0 or 1 / <b>0</b> / - /step]				
	Display or nondislay original counter.						
	0: Displays remaining memory.						
	1: Displays original counter.						

1012	[UserInfo Release]							
1-012-001	0:No 1:Yes							
	Set if the following user information is released or not.							
	- Destination of the mail, folder, CS							
	- Sender							
	- Message							
	- Subject							
	- Fail name							

1013	[Scan to Media Device Setting]					
1-013-002	0:OFF 1:ON	*CTL	[0 or 1 / 1 / - /step]			
	Enable or disable ScanTo media device.					

1014	[Scan to Folder Pass Input Set]					
1-014-001	0:OFF 1:ON	*CTL	[ 0 or 1 / <b>0</b> / - /step]			
	Sets enable or disable the password setting when make a Scan to Folder job.					

1040	[Scan: LT/LG Mixed Sized Sizes Setting]							
1-040-001	0:OFF 1:ON *CTL [0 or 1/1/-/step]							
	Enables or disables mixing LT/LG size documents for scanner.							
	0: Disable, 1: Enable							
	Default							
	For North America: 1							
	Others: 0							

1041	[Scan:FlairAPI Setting]								
1-041-001	0x00 – 0xff		*CTL	* see BitSwi	itch below:				
	Sets Scanner FlairAPI Fu								
	This SP is set by BitSwitch and needs to reboot the machine after making changes.								
bit	Setting		meani	ngs	Description				
Dii	Seming		0	1	Description				
bit 0	Start of FlairAPI Server		Off	On	Sets whether to start exclusive				
				(Start)	FlairAPI http server. If it is 0, scanning FlairAPI function and simple UI function will be disabled.				
bit 1	Access permission of FlairAPI from outside of the machine			Enabled	If it is "0", accessing is limited from the machine only, such as operating panel, SDK/J, MFP browsers etc If it is "1", accessing is allowed from outside of FlairAPI such as PC, Remote UI, IT-Box etc				
bit 2	IPv6 (Exclusive) / IPv4 (Priority) Switching		Pv6 clusive)	IPv4 (Priority)	If this bit is "0", only IPv6 accessing is permitted.  If this bit is "1" and IPv4 is enabled, the machine uses IPv4 accessing. If this bit is "1" and IPv4 is disabled, the machine uses IPv6 accessing. In this case, it is unable to access through Smart Operation Panel if IPv4 address is enabled.				
bit 3	Remote UI Function	No	ot Used	Use	Sets use of Remote UI for scanner function.				
bit 4	Reserved		-	-	-				
bit 5	Reserved		-	-	-				
bit 6	Reserved		-	-	-				
bit 7	Reserved		-	-	-				

## SP2-XXX (Scanning-image quality)

2021	[Compression Level(Grayscale)]						
	Selects the compression ratio for grayscale processing mode (JPEG) for the five settings that can be selected at the operation panel.						
2-021-001	Comp1:5-95 *CTL		[5 to 95 / <b>20</b> / 1 /step ]				
2-021-002	Comp2:5-95 *CTL		[5 to 95 / <b>40</b> / 1 /step ]				
2-021-003	Comp3:5-95	*CTL	[5 to 95 / <b>65</b> / 1 /step ]				
2-021-004	Comp4:5-95	*CTL	[5 to 95 / <b>80</b> / 1 /step ]				
2-021-005	Comp5:5-95	*CTL	[5 to 95 / <b>95</b> / 1 /step ]				

2024	[Compression ratio of ClearLighth	[Compression ratio of ClearLightPDF]						
	Selects the compression ratio for at the operation panel.	Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.						
2-024-0	01 Compression Ratio(Normal)	*CTL	[5 to 95 / <b>25</b> / 1 /step ]					
2-024-0	02 Compression Ratio(High)	*CTL	[5 to 95 / <b>20</b> / 1 /step ]					

2025	[Compression ratio of ClearLightPDF JPEG2000]						
	Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.						
2-025-001	Compression Ratio(Normal) JPEG2000	*CTL	[5 to 95 / <b>25</b> / 1 /step ]				
2-025-002	Compression Ratio(High) JPEG2000	*CTL	[5 to 95 / <b>20</b> / 1 /step ]				

2030	[OCR PDF DetectSens]						
2-030-001	White Lumi Value: 0 - 255	*CTL	[0 to 255 / <b>250</b> / 1 / step]				
2-030-002	White Pix Ratio: 0 - 100	*CTL	[0 to 100 / <b>80</b> / 1 / step]				
2-030-003	White Tile Ratio: 0 -100	*CTL	[0 to 100 / <b>80</b> / 1 / step]				

# Input and Output Check

## 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	

SP	Description	Red	eading	
Sr.	SP Description		1	
5803	[INPUT Check]			
5-803-001	Registration Sensor	Paper detected	Paper not detected	
5-803-002	Tray Paper End Detection Sensor	Paper detected	Paper not detected	
5-803-003	Bypass Paper End Detection Sensor	Paper detected	Paper not detected	
5-803-004	Bypass Paper Width Detection Sensor	Paper detected	Paper not detected	
5-803-006	Duplex Exit Sensor	Paper detected	Paper not detected	
5-803-007	Exit Sensor	Paper detected	Paper not detected	
5-803-008	Duplex Entrance Sensor	Paper detected	Paper not detected	
5-803-010	By-pass Lift Positon Sensor	Up	Down	
5-803-011	Tray Exit Sensor	Paper detected	Paper not detected	
5-803-012	Interlock Release Detection 1	Door open	Door close	
5-803-013	Interlock Release Detection 2	Door open	Door close	
5-803-014	Right Cover Sensor	Door close	Door open	
5-803-016	Image Transfer Contact HP Sensor	Not contact	Contact	
5-803-019	Toner Collection Full Sensor	Not full	Full	

3

0.0		Red	ading
SP	Description -	0	1
5-803-020	Toner Collection Bottle Set Detection Sensor	Set	Not set
5-803-022	Toner End Sonsor: Y	Not end	End
5-803-023	Toner End Sonsor: M	Not end	End
5-803-024	Toner End Sonsor: C	Not end	End
5-803-026	Fusing Entrance Sensor	Paper detected	Paper not detected
5-803-027	Fusing Exit Sensor	Paper detected	Paper not detected
5-803-028	Set and Destination Detection	-	-
5-803-029	Fusing New Unit Detection	New	Not new
5-803-030	Fusing High Temp Detection	Detected	Not detected
5-803-031	Zero-cross Signal	Not detected	Detected
5-803-032	Fusing Fan: Lock	Lock	Normal
5-803-033	Laser Unit Fan: Lock	Lock	Normal
5-803-034	PSU Fan: Lock	Lock	Normal
5-803-035	PCDU Cooling Fan: Lock	Lock	Normal
5-803-038	Bk Drum Motor: Lock	Lock	Normal
5-803-039	FC Dev Motor: Lock	Lock	Normal
5-803-040	FC Drum Motor: Lock	Lock	Normal
5-803-041	Fusing Motor: Lock	Lock	Normal
5-803-042	Transport Motor: Lock	Lock	Normal
5-803-044	PP:CB:SC Detection	SC detected	No SC
5-803-045	PP:T1T2:SC Detection	SC detected	No SC
5-803-047	Key Counter 1: Set Detection	Set	Not set
5-803-048	Key Counter 2: Set Detection	Not set	Set

SP	Description	Reading	
Sr.	SP Description	0	1
5-803-049	Keycard: Set Detection	Set	Not set
5-803-050	1-Bin:Exit Sensor	Paper detected	Paper not detected
5-803-051	1-Bin:Paper Remaining Sensor	Paper detected	Paper not detected
5-803-052	1-Bin: Set Detection	Set	Not set
5-803-053	Tray Lift Sensor	Down	Up
5-803-054	Tray Set Detection	Set	Not set
5-803-056	BiCU Version Detection	-	-
5-803-058	Enviro Fan 1 : Lock	-	-
5-803-059	Enviro Fan2: Lock	-	-
5-803-060	PFU Vertical Transport Sen. 1	Paper not detected	Paper detected
5-803-061	PFU Vertical Transport Sen. 2	Paper not detected	Paper detected
5-803-062	PFU Door Sensor 1	Close	Open
5-803-063	PFU Door Sensor 2	Close	Open
5-803-071	Option Cover Set Detecion SW	-	-
5-803-094	LD Off Check	-	-
5-803-200	Scanner HP Sensor	HP	Not HP
5-803-201	Platen Cover Sensor	Close	Open

SP	Danadiakian	Reading	
	Description	0	1
6007	[ADF INPUT Check]		
6-007-009	ARDF Original Sensor	-	-
6-007-013	ARDF Registration Sensor	-	-
6-007-015	ARDF Feed Cover Sensor	-	-

#### 3

## Output Check Table

Activates the electrical components for functional check.

It is not possible to activate more than one component at the same time.

SP	Display	Description
5804	[OUTPUT Check]	
5-804-001	Registration Clutch	-
5-804-002	Paper Feed Clutch	-
5-804-003	Duplex Clutch	-
5-804-004	Bypass Feed Clutch	-
5-804-005	Bypass Lift Clutch	-
5-804-007	Tray Lift Motor	-
5-804-009	Fusing Fan: High Speed	-
5-804-010	Fusing Fan: Low Speed	-
5-804-011	Laser Unit Fan: High Speed	-
5-804-012	Laser Unit Fan: Low Speed	-
5-804-013	PSU Fan: High Speed	-
5-804-014	PSU Fan: Low Speed	-
5-804-015	PCDU Cooling Fan: High Speed	-
5-804-016	PCDU Cooling Fan: Low Speed	-
5-804-021	TM Sensor Shutter Solenoid	-
5-804-022	Bk Drum Motor: Std Speed 1	-
5-804-023	Bk Drum Motor: Low Speed	-
5-804-024	FC Dev Motor: Std Speed 1	-
5-804-025	FC Dev Motor: Low Speed	-
5-804-026	Development Clutch: Bk	-

SP	Display	Description
5-804-027	FC Drum Motor: Std Speed 1	-
5-804-028	FC Drum Motor: Low Speed	-
5-804-029	Fusing Motor: Standard Speed 1	-
5-804-030	Fusing Motor: Low Speed	-
5-804-031	Transport Motor: Std Speed 1	-
5-804-032	Transport Motor: Low Speed	-
5-804-033	Image Transfer Contact Motor	-
5-804-035	Toner Supply Motor: Y	-
5-804-036	Toner Supply Motor: M	-
5-804-037	Toner Supply Motor: C	-
5-804-038	Toner Supply Motor: Bk	-
5-804-039	Toner End Sensor Power	-
5-804-042	ID Tag: Power Supply Control	-
5-804-043	Toner Sensor Power	-
5-804-044	PP:Charge DC:Y	-
5-804-045	PP:Charge DC:M	-
5-804-046	PP:Charge DC:C	-
5-804-047	PP:Charge DC:Bk	-
5-804-048	PP:Development: Y	-
5-804-049	PP:Development: M	-
5-804-050	PP:Development: C	-
5-804-051	PP:Development: Bk	-
5-804-053	PP: Image Transfer: YMC	-
5-804-056	PP: Image Transfer: Bk	-
5-804-057	PP: Paper Transfer: +	-

SP	Display	Description
5-804-058	PP: Paper Transfer: -	-
5-804-059	PP:Charge AC:Y	-
5-804-061	PP:Charge AC:M	-
5-804-063	PP:Charge AC:C	-
5-804-065	PP:Charge AC:Bk	-
5-804-071	TM/ID Sensor: Front	-
5-804-072	TM/ID Sensor: Center	-
5-804-073	TM/ID Sensor: Rear	-
5-804-074	Enviro Fan1,2: H	-
5-804-075	Enviro Fan 1,2: L	-
5-804-080	PFU Transport Motor 1: High	-
5-804-081	PFU Transport Motor 1: Low	-
5-804-082	PFU Transport Motor 2: High	-
5-804-083	PFU Transport Motor 2: Low	-
5-804-084	PFU Paper Feed CL1	-
5-804-085	PFU Paper Feed CL2	-
5-804-086	PFU Vertical Transport CL1	-
5-804-087	PFU Vertical Transport CL2	-
5-804-088	Exit Junction Sol: CW	-
5-804-089	Exit Junction Sol: CCW	-
5-804-090	Bk Drum Motor: Standard Speed 2	-
5-804-091	Fusing Motor: Standard Speed 2	-
5-804-092	Transport Motor: Standard Speed 2	-
5-804-093	Bk Drum Motor: Middle Speed	-
5-804-094	FC Dev Motor: Middle Speed	-

SP	Display	Description
5-804-095	FC Drum Motor: Middle Speed	-
5-804-096	Fusing Motor: Middle Speed	-
5-804-097	Transport Motor: Middle Speed	-
5-804-103	Polygon Motor1: Standard2	-
5-804-104	Polygon Moter1: Standard	-
5-804-105	Polygon Motor1: Low	-
5-804-107	Polygon Motor2: Standard2	-
5-804-108	Polygon Moter2: Standard	-
5-804-109	Polygon Motor2: Low	-
5-804-111	Polygon Motor1,2: Standard2	-
5-804-112	Polygon Moter1,2: Standard	-
5-804-113	Polygon Motor1,2: Low	-
5-804-202	Scanner Lamp: Color 600	-
5-804-203	Scanner Lamp: Color 1200	-
5-804-204	Scanner Lamp: Bk	-
5-804-216	LD1: Bk	-
5-804-217	LD2: Bk	-
5-804-218	LD1: Ma	-
5-804-219	LD2: Ma	-
5-804-220	LD1: Cy	-
5-804-221	LD2: Cy	-
5-804-222	LD1: Ye	-
5-804-223	LD2: Ye	-

