Model AP-P3
Machine Code: M124/M125

Field Service Manual

14 September, 2012
Subject to change

Important Safety Notices

Prevention of Physical Injury

1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine power cord is unplugged.
2. The wall outlet should be near the machine and easily accessible.
3. 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.
4. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.
5. 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.

Health Safety Conditions

1. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Immediately wash eyes with plenty of water. If unsuccessful, get medical attention.
2. The machine, which use high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, the machine must be installed in a well-ventilated room.

Observance of Electrical Safety Standards

The machine and its peripherals must be serviced by a customer service representative who has completed the training course on those models.

⚠WARNING

- ⃠Keep the machine away from flammable liquids, gases, and aerosols. A fire or an explosion might occur.

⚠CAUTION

- The Controller board on this machine contains a lithium battery. The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard batteries in accordance with the manufacturer's instructions and local regulations.
- The optional fax and memory expansion units contain lithium batteries, which can explode if replaced incorrectly. Replace only with the same or an equivalent type recommended by the

manufacturer. Do not recharge or burn the batteries. Used batteries 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, the maintenance unit which includes developer or the organic photoconductor 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.

Laser Safety

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

⚠WARNING

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

⚠WARNING

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



The Aim of Anti-tip Components and Precautions

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.

Warnings, Cautions, Notes

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

⚠WARNING

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

⚠CAUTION

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

Important

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

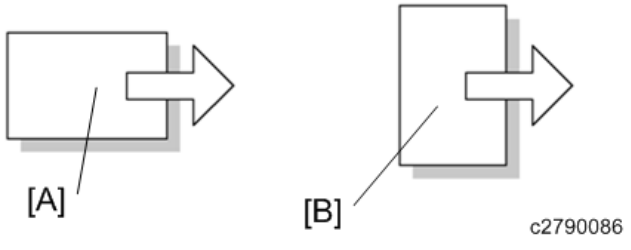
Note

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

Symbols, Abbreviations and Trademarks

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

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



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

Trademarks

Microsoft®, Windows®, and MS-DOS® are registered trademarks of Microsoft Corporation in the United States and /or other countries.

PostScript® is a registered trademark of Adobe Systems, Incorporated.

PCL® is a registered trademark of Hewlett-Packard Company.

Ethernet® is a registered trademark of Xerox Corporation.

PowerPC® is a registered trademark of International Business Machines Corporation.

Other product names used herein are for identification purposes only and may be trademarks of their respective companies. We disclaim any and all rights involved with those marks.

TABLE OF CONTENTS

Important Safety Notices....1
Prevention of Physical Injury....1
Health Safety Conditions....1
Observance of Electrical Safety Standards....1
Safety and Ecological Notes for Disposal....2
Laser Safety....2
The Aim of Anti-tip Components and Precautions....3
Warnings, Cautions, Notes....3
Symbols, Abbreviations and Trademarks....4
Trademarks....4

1. Product Information

Specifications....19
Product Overview....20
Component Layout....20
Paper Path....21
Drive Layout....22
Machine Codes and Peripherals Configuration....24
Guidance for Those Who are Familiar with Predecessor Products....27

2. Installation

Installation Requirements....29
Environment....29
Machine Level....30
Machine Space Requirements....30
Power Requirements....31
Printer Installation....32
Power Socket for Peripherals....32
Installation Flow Chart....32
Installation Procedure....34
Unpacking....34
Installing the Toner....38
Loading Paper....39
Turning Power On....41
Selecting the Panel Display Language....42

Printing the Test Page....43
Settings Relevant to the Service Contract....43
Settings for @Remote Service (Embedded RC Gate)....44
Meter Click Charge....47
External USB Keyboard (External Option)....50
Moving the Machine....51
Transporting the Machine....52
Optional Unit Combinations....53
Machine Options....53
Controller Options....53
1200 LCT (D631)....55
Component Check....55
Installation Procedure....56
Side Fence Position Change....58
Bridge Unit (D634)....60
Component Check....60
Installation Procedure....60
2000-sheet booklet finisher (D637) /3000-sheet finisher (D636)....64
Accessory Check....64
Installation Procedure....65
Support Tray Installation....70
Punch Unit (D570)....71
Component Check....71
Installation Procedure....72
Output Jogger Unit (B703)....77
Accessories....77
Installation....77
Mail Bin (M413)....80
Component Check....80
Installation Procedure....81
Anti-Condensation Heater....88
Component Check....88
Installation Procedure....89

For installing the tray heater in the main machine....89
For installing the tray heater in D580....90
For Installing the tray heater in D581....92
Controller Options....96
Overview....96
I/F Card Slots....96
SD Card Slots....96
SD Card Appli Move....97
Overview....97
Move Exec....98
Undo Exec....98

3. Preventive Maintenance

Maintenance Items....101
Touch Screen Calibration....102

4. Replacement and Adjustment

Beforehand....107
Special Tools....108
Image Adjustment....109
Registration....109
Image Area....109
Leading Edge....109
Side to Side....109
Adjustment Standard....109
Paper Registration Standard....110
Adjustment Procedure....110
Erase Margin Adjustment....111
Color Registration....112
Line Position Adjustment....112
Gamma Correction....113
Summary....113
Adjustment Procedure....115
Exterior Covers....117
Front Door....117

Left Cover....118
Rear Cover....118
Top Right and Rear Cover....119
Right Rear Cover....119
Operation Panel....120
Paper Exit Cover....122
Output Tray....123
Ozone Filter....124
Ozone filter for the charge unit....124
Ozone filter for the AC Controller....125
Laser Optics....126
Caution Decal Location....126
LD Safety Switch....127
Error Messages....127
Laser Optics Housing Unit....128
Preparing the new laser optics housing unit....128
Before removing the old laser optics housing unit....129
Recovery procedure for no replacement preparation of laser optics housing unit....129
Removing the old laser optics housing unit....130
Installing a new laser optics housing unit....131
After installing the new laser optics housing unit....132
Polygon Mirror Motor and Drive Board....133
Airflow Fans....135
Laser Optics Rear Right Thermistor....135
Image Creation....137
PCDU....137
Drum Unit and Development Unit....138
Developer....141
Toner Collection Bottle....143
Second Duct Fans....144
When reinstalling the second duct fans....145
Third Duct Fan....145
When reinstalling the third duct fan....146

Toner Pump Unit....146
When installing the new toner pump unit....149
Toner End Sensor....152
Image Transfer....153
Image Transfer Belt Cleaning Unit....153
Image Transfer Belt Unit....153
Image Transfer Belt....155
When reinstalling the image transfer belt....159
Paper Transfer....162
Paper Transfer Roller Unit....162
Paper Transfer Unit....162
ID Sensor Board....164
Cleaning for ID sensors....165
After installing a new ID sensor unit/board....166
Temperature and Humidity Sensor....166
Drive Unit....167
Gear Unit....167
When installing the drive unit....174
Adjustment after replacing the gear unit....174
Registration Motor....175
Paper Feed Motor....176
Drum/Development Motors for M, C, and Y....177
Drum/Development Motor-K....178
ITB Drive Motor....179
Fusing/Paper Exit Motor....179
Image Transfer Belt Contact Motor....180
Duplex Inverter Motor....180
Pressure Roller Contact Motor....182
Duplex/By-pass Motor....183
Paper Transfer Contact Motor....185
Toner Transport Motor....187
Toner Collection Unit....188
Paper Feed Clutches....188

Development Clutch-Y....191
Development Clutches for M and C....192
Development Clutch-K....193
Fusing....195
Fusing Unit....195
Fusing Exit Shutter Plate....197
Fusing Entrance Guide Plate....197
Cleaning Requirement....199
Fusing Exit Guide Plate Cleaning Procedure....199
Fusing Unit Upper Cover....200
Fusing Unit Lower Cover....201
Fusing Sleeve Belt Unit....202
Oil Absorber Felt....205
Pressure Roller....206
Stripper Plate....208
Cleaning Requirement....209
Pressure Roller Thermistors....209
Pressure Roller Thermostats....210
NC Sensors....210
Fusing Fan....211
When installing the fusing fan....212
Paper Exit Fan....212
When installing the paper exit fan....213
AC Controller Board Fan....213
When installing the AC controller fan....214
Fusing Entrance Thermopiles....214
When cleaning the lens of the thermopile....215
Pressure Roller HP Sensor....215
QSU fan....216
Fusing Unit Shutter Plate Drive Motor....218
Fusing Unit Shutter Plate Home Position Sensor....218
Fusing Unit Shutter Plate Drive Mechanism....219
Paper Feed....222

Paper Feed Unit....222
Pick-Up, Feed and Separation Rollers....223
Tray 1 and Tray 2....223
Tray Lift Motor....224
Vertical Transport, Paper Overflow, Paper End and Paper Feed Sensor....224
Registration Sensor....225
By-pass Paper Size Sensor and By-pass Paper Length Sensor....226
When reinstalling the by-pass paper size sensor....227
By-pass Bottom Tray....228
By-pass Paper End Sensor....231
By-pass Pick-up, Feed and Separation Roller, Torque Limiter....232
By-pass Feed Clutch....233
Paper Exit Unit....234
Fusing Exit, Paper Overflow, Junction Paper Jam and Paper Exit Sensor....235
Duplex Unit....237
Duplex Unit....237
Duplex Door Sensor....238
Duplex Entrance Sensor....239
Duplex Exit Sensor....240
Electrical Components....241
Boards....241
Controller Box closed....241
Behind the IOB....242
Controller Box Open....242
Controller Unit....243
Controller Box Right Cover....243
Controller Box....243
When opening the controller box....243
When removing the controller box....244
IOB (In/Out Board)....247
BB (Bridge Board)....248
BCU....248
When installing the new BCU....249

PSU....250
PSU bracket....250
PSU board....250
PSU fans....251
Shutdown Switch....252
ITB Power Supply Board....253
High Voltage Supply Board....254
High Voltage Supply Board Bracket....254
AC Controller Board....255
AC Controller Board Bracket....255
Controller Board....256
When installing the new controller board....258
HDD Fan....258
When installing the HDD fan....259
HDD....259
When installing a new HDD unit....260
Toner Bottle Detection Board....260
NVRAM Replacement Procedure....261
NVRAM on the BCU....261
NVRAM on the controller board....262
Tube Cooling Fan (1st Duct Fan)....263
Using Dip Switches....264
Controller Board....264
BCU Board....264

5. System Maintenance

Service Program Mode....265
SP Tables....265
Enabling and Disabling Service Program Mode....265
Entering SP Mode....265
Exiting SP Mode....265
Types of SP Modes....265
SP Mode Button Summary....266
Selecting the Program Number....267

Exiting Service Mode....268
Service Mode Lock/Unlock....268
Remarks....268
Display on the Control Panel Screen....268
Others....268
Service SP Table....270
SP1-XXX (Service Mode)....270
Engine SP Tables-1....285
SP1-XXX (Feed)....285
Engine SP Tables-2....299
SP2-XXX (Drum)....299
Engine SP Tables-3....307
SP3-XXX (Process)....307
Engine SP Tables-4....327
SP5-XXX (Mode)....327
Engine SP Tables-5....382
SP6-XXX (Peripherals)....382
Engine SP Tables-6....390
SP7-XXX (Data Log)....390
Input and Output Check....440
Input Check Table....440
Printer....440
Table 1: Paper Height Sensor....443
Table 2: Paper Size Switch (Tray 2)....443
Table 3: Paper Size (By-pass Table)....444
[FIN (EUP) INPUT Check] Finisher (D636/ D637)....445
[FIN (JAK) INPUT Check] 4bin Mail Box (M413)....447
Bridge Unit (D634)....448
Two-Tray Paper Feed Unit (D580)/ LCT 2000 (D581)/ LCT 1200 (D631)....448
Output Check Table....449
Printer....449
[FIN (EUP) OUTPUT Check] (Booklet) Finisher (D636/D637)....455
FIN(JAK)OUTPUT Check 4bin Mail Box (M413)....457

Bridge Unit (D634)....457
4bin Mail Box (M413)....457
Two-Tray Paper Feed Unit (D580)/ LCT 2000 (D581)/ LCT 1200 (D631)....457
Firmware Update....459
Type of Firmware....459
Before You Begin....460
Updating Firmware....461
Preparation....461
Updating Procedure....461
Error Messages....462
Firmware Update Error....462
Recovery after Power Loss....463
Updating the LCDC for the Operation Panel....463
Handling Firmware Update Errors....464
Error Message Table....464
NVRAM Data Upload/Download....466
Uploading Content of NVRAM to an SD card....466
Downloading an SD Card to NVRAM....467
Address Book Upload/Download....469
Information List....469
Download....469
Upload....470
Using the Debug Log....471
Overview....471
Switching ON and Setting UP Save Debug Log....471
Retrieving the Debug Log from the HDD....475
Debug Log Codes....476
SP5857-015 Copy SD Card-to-SD Card: Any Desired Key....476
SP5857-016 Create a File on HDD to Store a Log....476
SP5857-017 Create a File on SD Card to Store a Log....476
Card Save Function....477
Overview....477
Card Save:....477

Procedure....477
Error Messages....481
SMC List Card Save Function....482
Overview....482
SMC List Card Save....482
Procedure....482
File Names of the Saved SMC Lists....484
Error Messages....485

6. Troubleshooting

Service Call....487
Service Call Conditions....487
SC Code Classification....488
SC Table....491
Service Call Tables - 1....491
SC1xx: Scanning....491
Service Call Tables - 2....491
SC 2xx: Exposure....491
Service Call Tables - 3....498
SC3xx: Image Processing – 1....498
SC3xx: Image Processing – 2....499
Service Call Tables - 4....503
SC4xx: Image Processing - 3....503
Service Call Tables - 5....509
SC5xx: Paper Feed and Fusing....509
Service Call Tables - 6....529
SC6xx: Device Communication....529
Service Call Tables - 7....543
SC7xx: Peripherals....543
Service Call Tables - 8....553
SC8xx: Overall System....553
Service Call Tables - 9....569
SC9xx: Miscellaneous....569
Process Control Error Conditions....577

Developer Initialization Result....577
Process Control Self-Check Result....578
Vsg Adjustment Result....580
Line Position Adjustment Result....580
Troubleshooting Guide....582
Image Quality....582
Line Position Adjustment....584
Test....585
Countermeasure list for color registration errors....585
Stain on the Outputs....591
Problem at Regular Intervals....592
Toner End Recovery Error....592
Flow Chart for the Toner End Recovery Error....593
Toner Bottle Detection Error....594
Solid Image or Halftone Image Error....595
Recovery Procedure....595
Problem Prevention Procedure....596
Faulty Cleaning....596
Black or color lines (2-3mm)....596
Band Image Between 20mm and 30mm....597
Encryption Key Restoration for NVRAM....597
How to restore the old encryption key to the machine....597
How to do a forced start up with no encryption key....598
Other Symptoms....599
Flowchart for the error....600
Countermeasure list for the error....600
Jam Detection....603
Paper Jam Display....603
Jam Codes and Display Codes....603
Paper Size Code....608
Sensor Locations....610
Electrical Component Defects....611
Sensors....611

Blown Fuse Conditions....616
Power Supply Unit....616
AC Drive Board....616

7. Energy Saving

Energy Save....619
Energy Saver Modes....619
Timer Settings....619
Return to Stand-by Mode....620
Recommendation....620
Energy Save Effectiveness....620
Paper Save....622
Effectiveness of Duplex/Combine Function....622
1. Duplex:....622
2. Combine mode:....622
3. Duplex + Combine:....623
How to calculate the paper reduction ratio....623

1. Product Information

Specifications

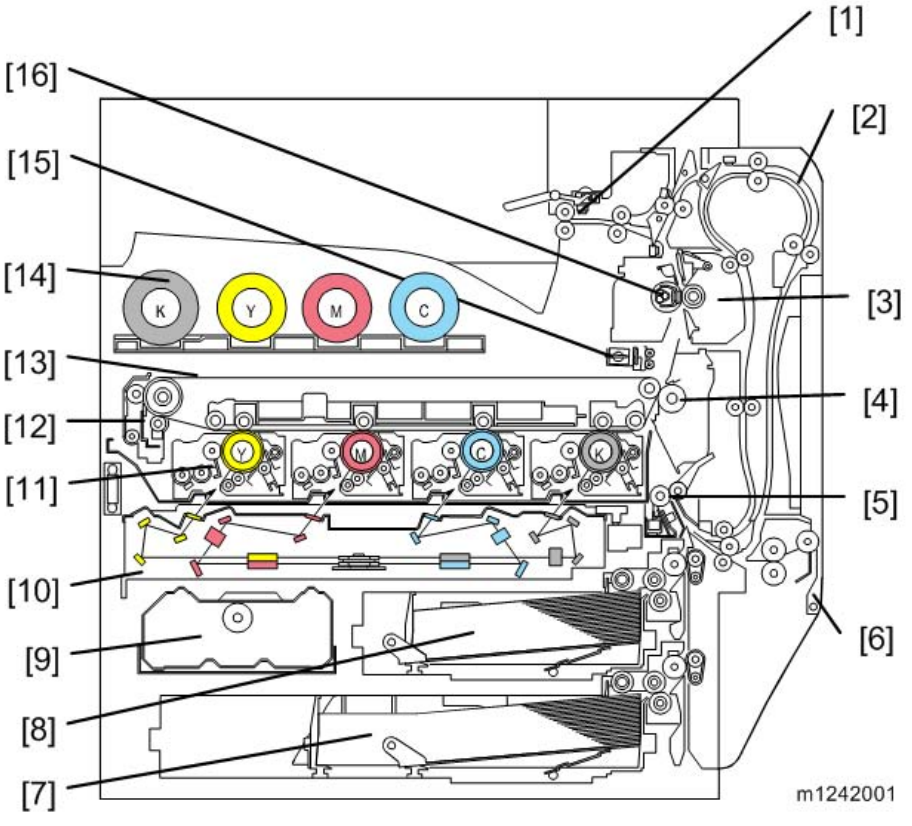
See "Appendices" for the following information:

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

Product Overview

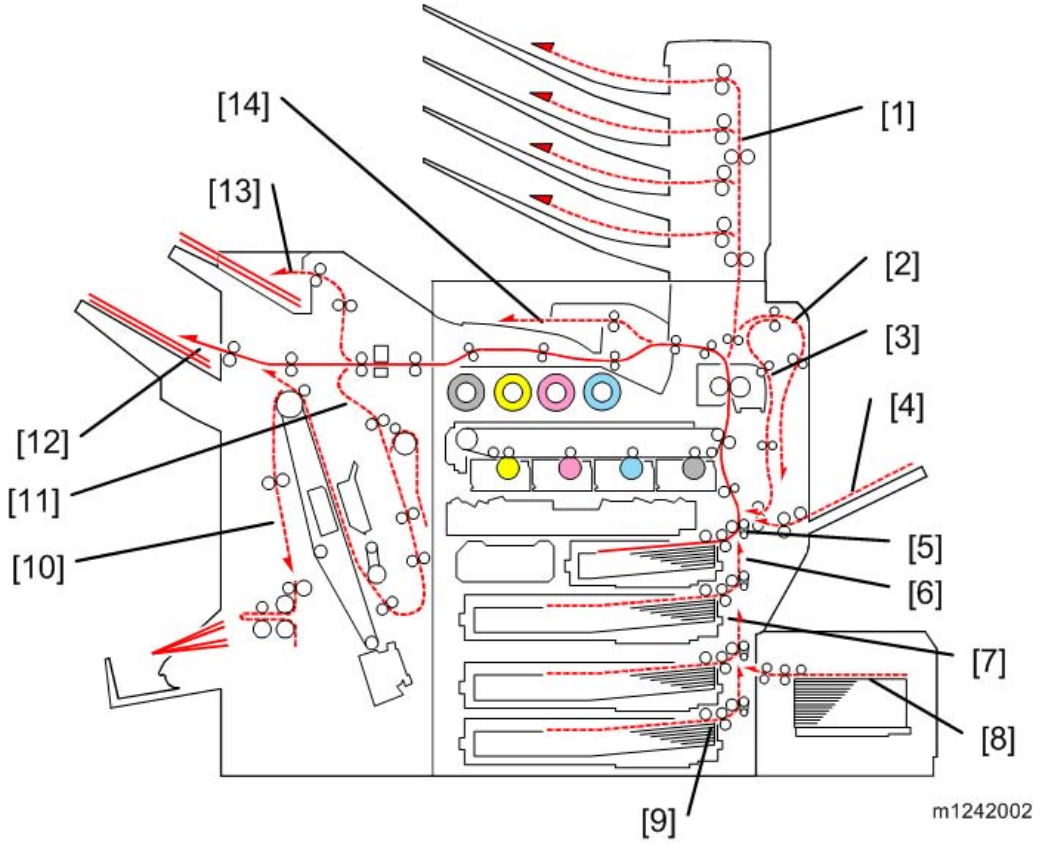
1

Component Layout



1. Paper exit rollers	9. Toner collection bottle
2. Duplex unit	10. Laser optics housing unit
3. Fusing unit	11. PCDU (4 colors)
4. Paper transfer roller	12. Image transfer belt cleaning unit
5. Registration roller	13. Image transfer belt unit
6. By-pass feed table	14. Toner bottle (4 colors)
7. Tray 2	15. ID sensor
8. Tray 1	16. Fusing sleeve belt unit

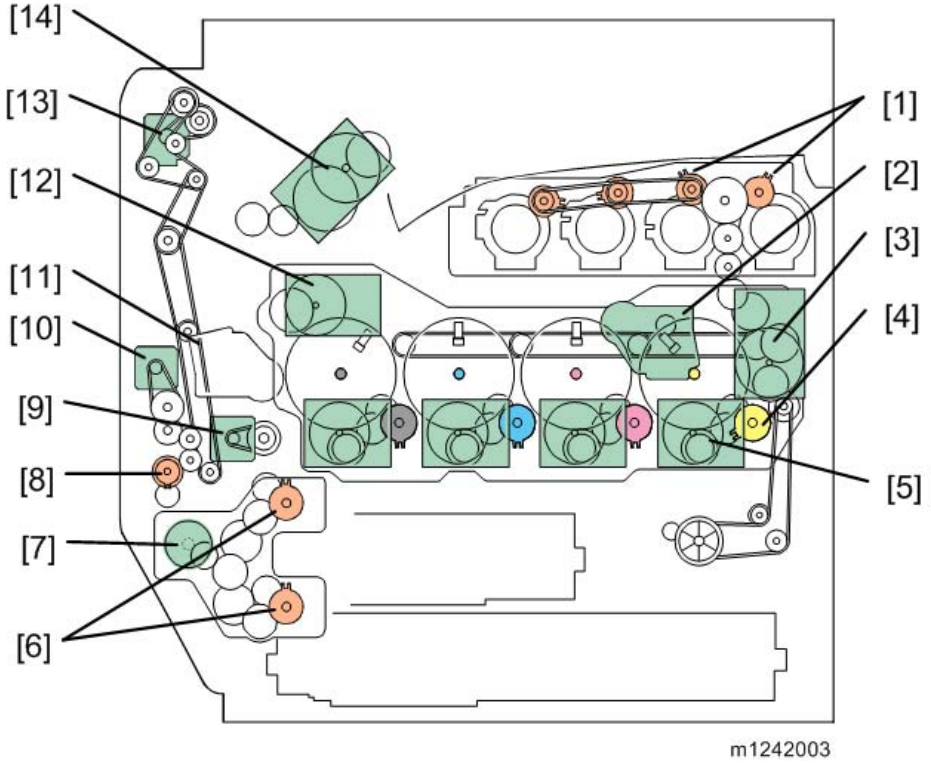
Paper Path



1. Mail bin	8. Tray 5: Optional LCT 1200
2. Duplex inverter	9. Tray 4: Optional paper feed unit
3. Duplex feed	10. Finisher booklet stapler (Optional)
4. By-pass tray feed	11. Finisher stapler (Optional)
5. Tray 1 feed	12. Finisher upper tray (Optional)
6. Tray 2 feed	13. Finisher proof tray (Optional)
7. Tray 3: Optional paper feed unit/LCT	14. Output tray

The 2000/3000-sheet (booklet) finisher requires the bridge unit and one from the two-tray paper feed unit or the LCT.

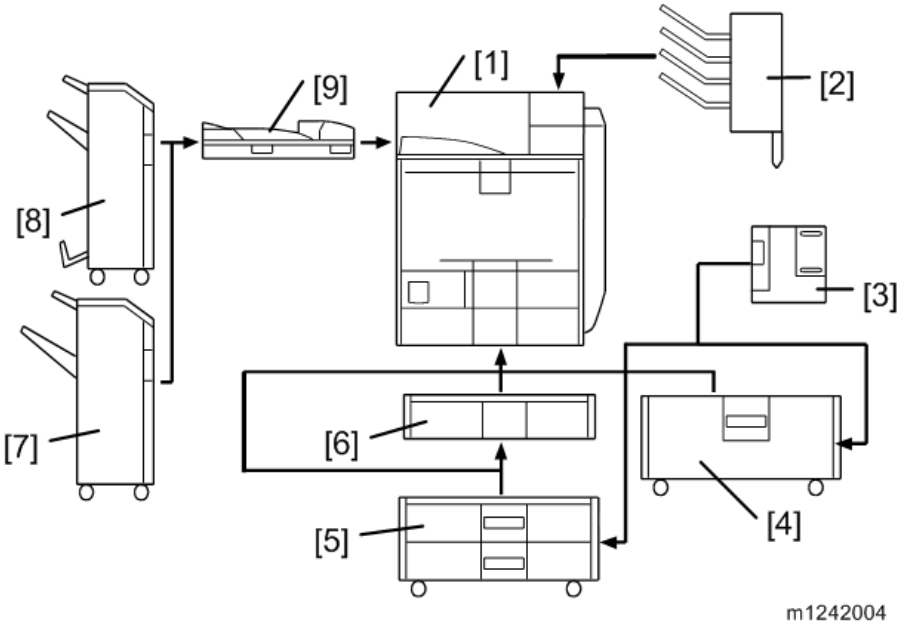
Drive Layout



1. Toner supply clutch-K and -CMY:	Turns on/off the drive power to the toner supply unit (K and -CMY).
2. ITB (Image Transfer Belt) contact motor:	Moves the ITB into contact and away from the color PCDUs.
3. Toner transport motor:	Drives the toner attraction pumps and the toner collection coils from the PCDUs, from the transfer belt unit, and inside the toner collection bottle. Also rotates the toner bottles.
4. Development clutch (K, Y, M, C):	Turns on/off the drive power to the development unit (K, Y, M, C).
5. Drum/Development drive motor (K, Y, M, C):	Drives the color drum unit and development unit (K, Y, M, C).
6. Paper feed clutch:	Switches the drive power between tray 1 and tray 2.
7. Paper feed motor:	Drives the paper feed mechanisms (tray 1/tray 2).

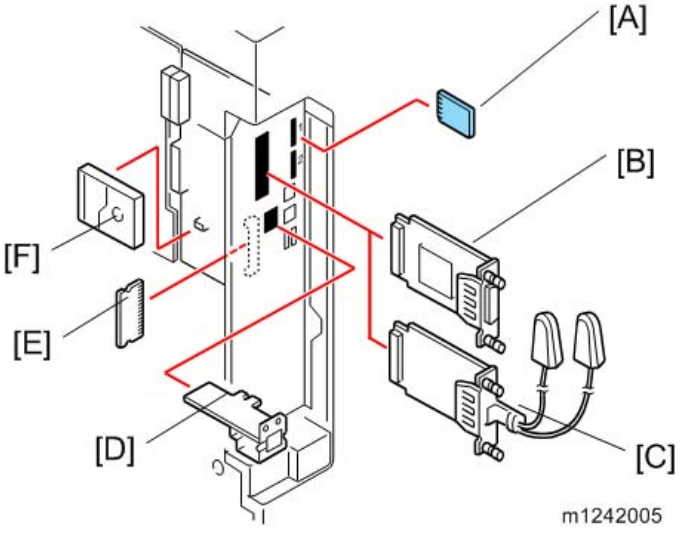
8. By-pass feed clutch:	Turns on/off the drive power to the by-pass pick-up, feed and separation rollers.
9. Registration motor:	Drives the registration roller.
10. By-pass/duplex feed motor:	Drives the by-pass pick-up, feed and separation roller, and duplex transport rollers.
11. Paper transfer contact motor:	Moves the paper transfer roller in contact with the image transfer belt.
12. ITB drive motor:	Drives the image transfer belt unit.
13. Duplex inverter motor:	Drives the duplex inverter rollers and duplex transport rollers.
14. Fusing/paper exit motor:	Drives the fusing unit and paper exit section.

Machine Codes and Peripherals Configuration



Item	Machine Code	Call out	Remarks
Mainframe	M124/M125	[1]	-
Mail bin	M413	[2]	-
1200-sheet LCT	D631	[3]	Requires [4] or [5]
2000-sheet LCT	D581	[4]	One from the two
Two-tray paper feed unit	D580	[5]	
One-tray paper feed unit	D579	[6]	-
3000-sheet finisher	D636	[7]	One from [7] and [8]; Requires one from [4] and [5]
2000-sheet booklet finisher	D637	[8]	
Punch unit 2/3 holes	D570-00 (NA)	-	Requires [7] or [8]
Punch unit 2/4 holes	D570-01 (EU)	-	Requires [7] or [8]
Punch unit 4 holes	D570-02 (Scandinavia)	-	Requires [7] or [8]
Bridge unit	D634	[9]	-

Item	Machine Code	Call out	Remarks
Output jogger unit	B703	-	Requires [7]



Item	Machine code	Call out	Remark
PictBridge	D645-15	[A]	Those cards should be installed from SD slot 2 (lower). If multiple applications are required, merge all applications in one SD card with SP mode. (☛p.97 "SD Card Appli Move")
IPDS Unit	M416-24		
SD Card for Netware Printing	M416-29		
VM Card	D640-21 (NA)		
	D640-22 (EU)		
	D640-23 (AA)		
IEEE 1284	B679	[B]	You can only install one of these at a time.
Wireless LAN	M344-01 (NA)	[C]	
	M344-02 (EU)		
	M344-08 (EU/AA)		
Gigabit Ethernet	M416-30	[D]	-
	D377		

512MB Memory Option	M354-03	[E]	-
1GB Memory Option	M416-27		
HDD*1 (250GB)	M416-28	[F]	-
Data Overwrite Security, HDD Encryption	-	-	Included in the controller ROM

*1 The hard disk (M416-28) is supplied with the M125 model as standard equipment.

Guidance for Those Who are Familiar with Predecessor Products

Machines M124/M125 are successor models to Machines G188/G189. If you have experience with the predecessor products, the following information will be of help when you read this manual.

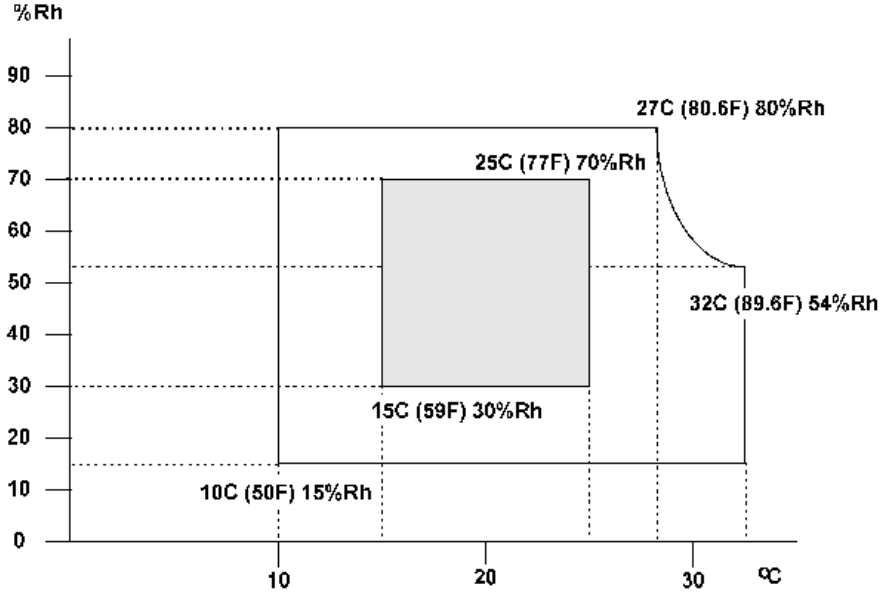
Different Points from Predecessor Products

Item	M124/M125	G188/G189
Controller Type	GW+ Controller	GW Controller
New Fusing Unit without the Decurler	Yes	No
Fusing Unit	NEW QSU-DH fusing system	IH roller fusing system
SMC data	SD card download or printing	Printing only
Operation Panel	Tiltable Operation Panel Includes USB/SD slot	Stationary Operation Panel
USB2.0/SD Slot	Standard	Optional
Data Overwrite Security, HDD Encryption	Included in the controller ROM	SD card

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. Install the machine at locations lower than 2,000 m (6,560 ft.) above sea level.
8. Install the machine on a strong, level base. (Inclination on any side must be no more than 5 mm.)
9. Do not install the machine in areas that get strong vibrations.

Important

- **Do not leave the toner bottle in a place directly exposed to sunlight.**

- **The toner bottle must be kept at a temperature of 35°C (95°F) or less. Be careful not to leave the toner bottle in a hot place when transporting or storing it.**

Machine Level

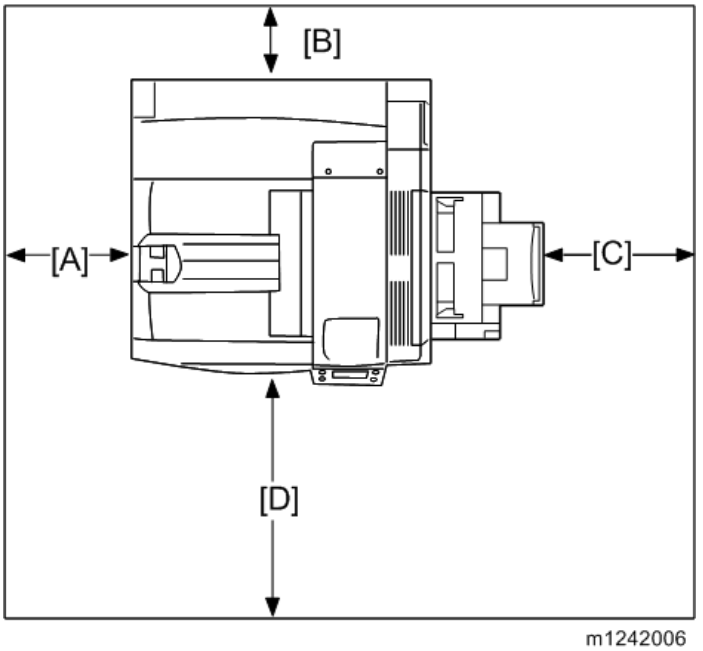
Front to back: Within 5 mm (0.2")

Right to left: Within 5 mm (0.2")

Machine Space Requirements

⚠CAUTION

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



m1242006

A: Over 100 mm (3.9")

B: Over 100 mm (3.9")

C: Over 100 mm (3.9")

D: Over 750 mm (29.5")

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

Power Requirements

⚠CAUTION

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

1. Input voltage level:

   120 to 127 V, 60 Hz: More than 12 A (NA)

   220 V to 240 V, 50 Hz/60 Hz: 10 A (EU/AA/China)
2. Permissible voltage fluctuation: +8.66 %/ -10 % (NA)

   Permissible voltage fluctuation: ± 10 % (Others)
3. Do not put things on the power cord.

Printer Installation

⚠CAUTION

- Make sure that the image transfer belt is in its correct position (away from the PCDUs) before you move the machine. Otherwise, the image transfer belt and the black PCDU can be damaged.

Power Socket for Peripherals

⚠CAUTION

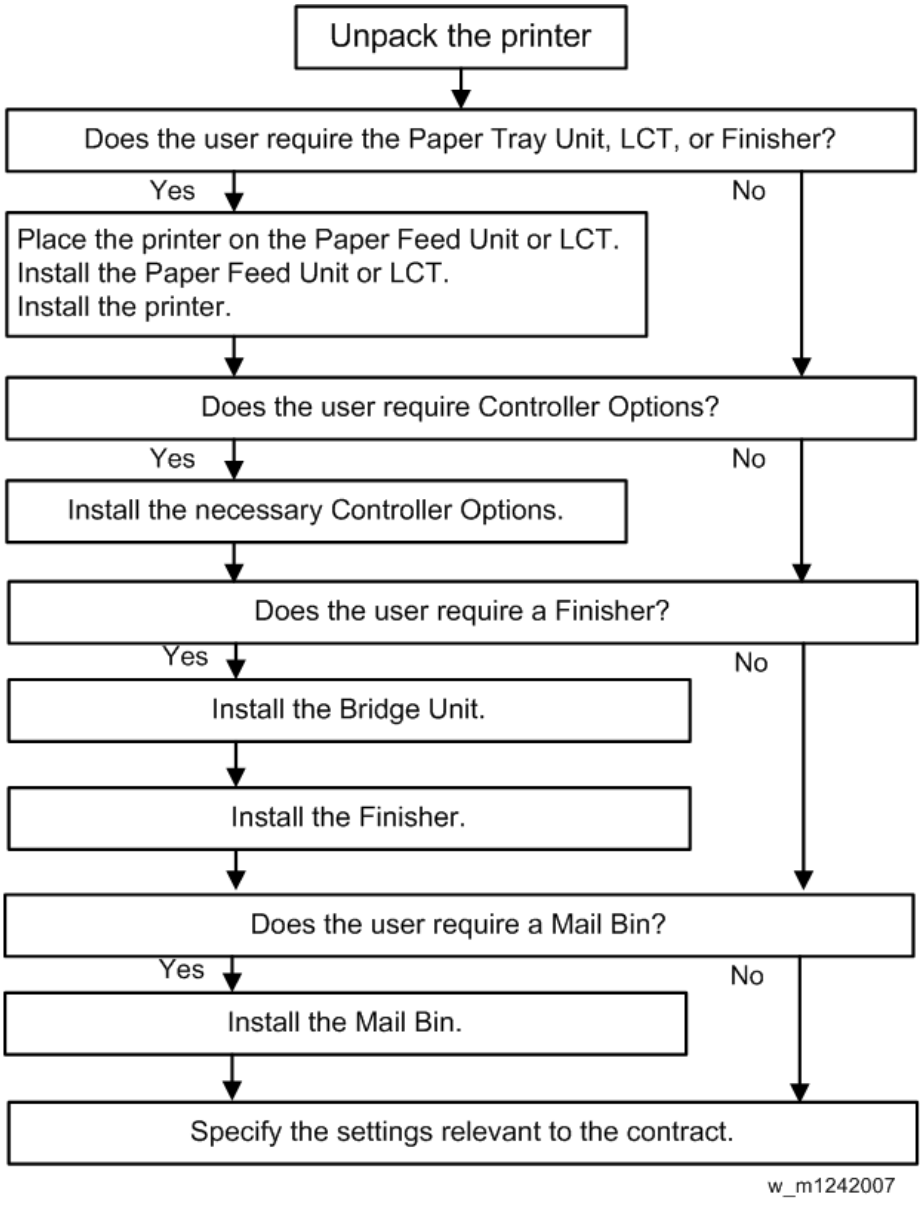
- Rating voltage for peripherals.
- Make sure to plug the cables into the correct sockets.



w_m1242008

Installation Flow Chart

This flow chart shows the best procedure for installation.



You need the optional paper tray unit or the LCT if you want to install the finisher (D636 or D637) or 1200-sheet LCT (D631).

The punch unit is for 2000-sheet booklet finisher (D637) and 3000-sheet finisher (D636).

Installation Procedure

⚠CAUTION

- Remove the tape from the development units before you turn the main switch on. The development units can be severely damaged if you do not remove the tape.

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

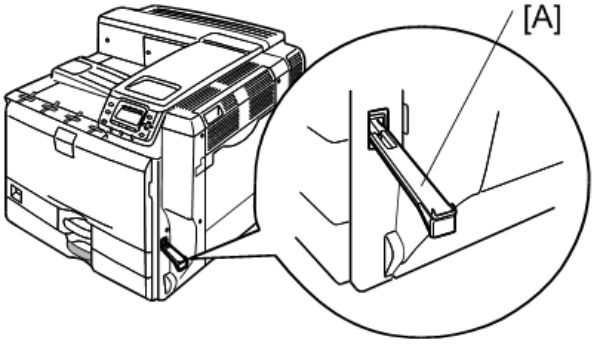
Note

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

Unpacking

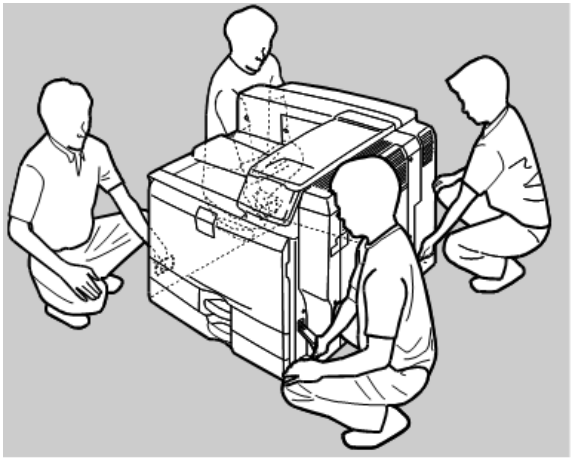
⚠CAUTION

- When lifting the machine, use the handle and grips on both sides of the machine.
- If not, the machine could be dropped. This may cause an injury and may damage the machine.



g133i501

1. Pull out the handle [A].

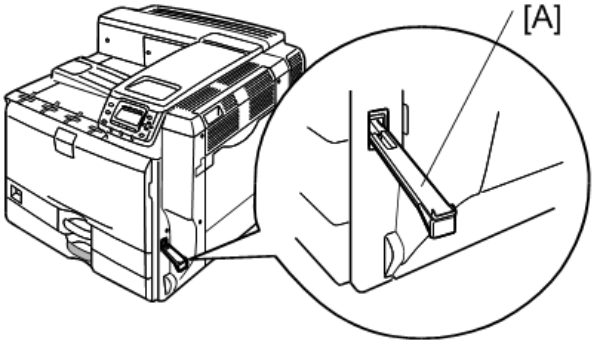


g133i502

2. Lift the machine with four people by using the handle and grips on both sides of the machine.

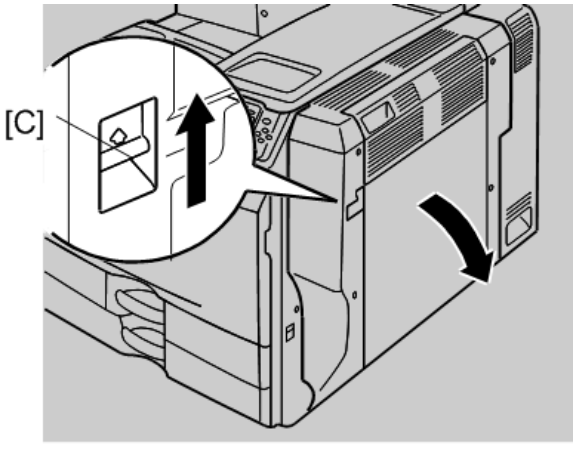
Important

- **Do not remove the tapes before placing the machine.**
- **Lower the machine slowly and carefully, so as not to pinch your hands.**



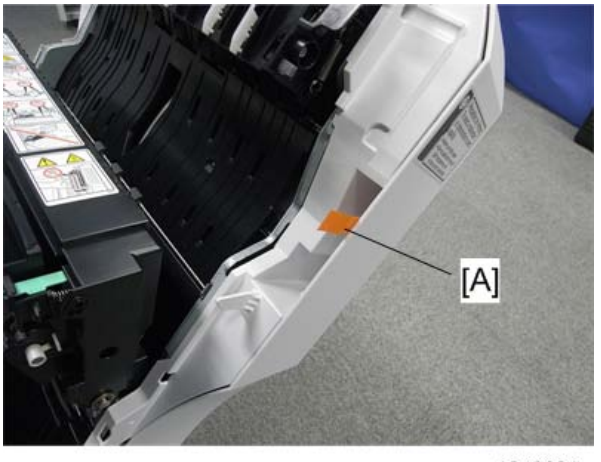
g133i501

3. Push back the handle [A] into the machine.



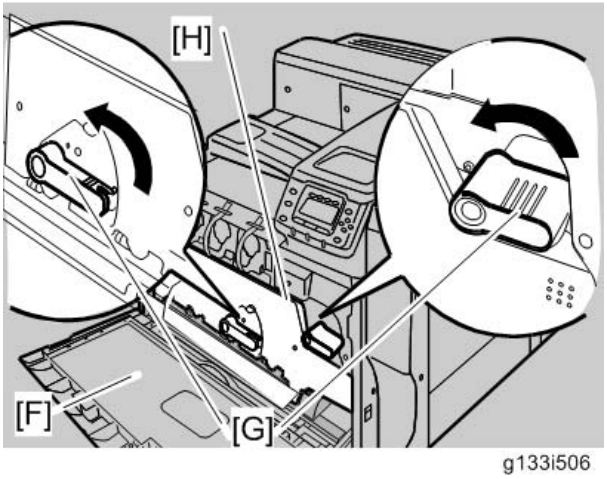
g133i504

4. Push up the lever [C] on the right door, and then open the right door.



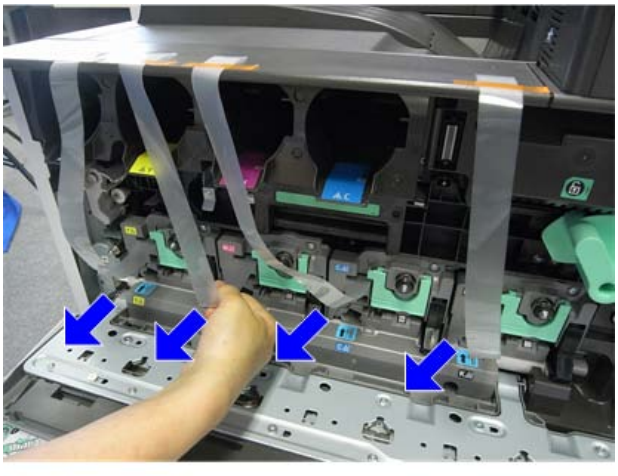
m1242021

5. Remove the tape [A].
6. Close the right door.



g133i506

7. Open the front door [F].
8. Turn the two green levers [G] counterclockwise.
9. Open the drum positioning plate [H].



m1242023

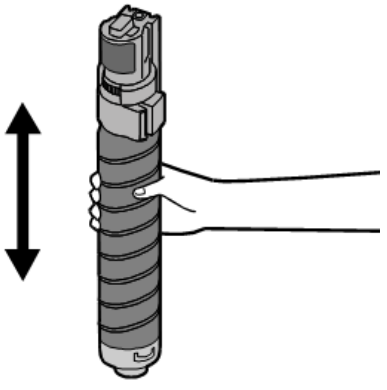
10. Remove and pull out the four tapes horizontally from all PCUs.

Note

- Make sure that all tapes are removed.

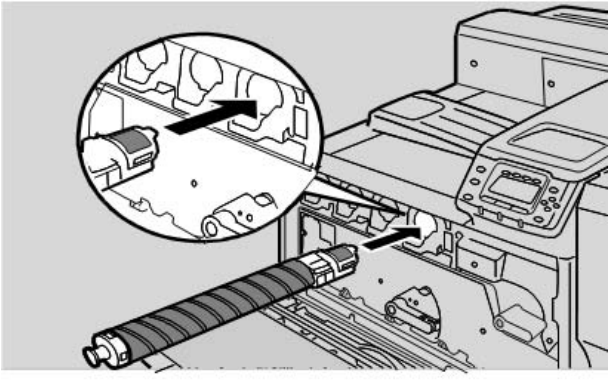
11. Close the drum positioning plate.
12. Turn the green levers clockwise to lock the levers.

Installing the Toner



g133i514

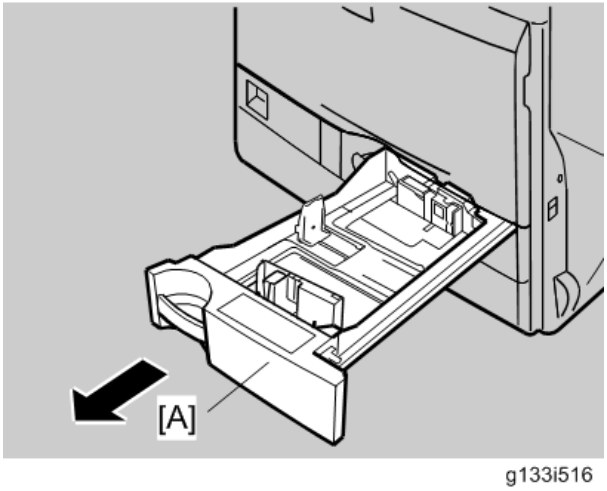
1. Shake the toner bottle up and down five or six times before installing.



g133i515

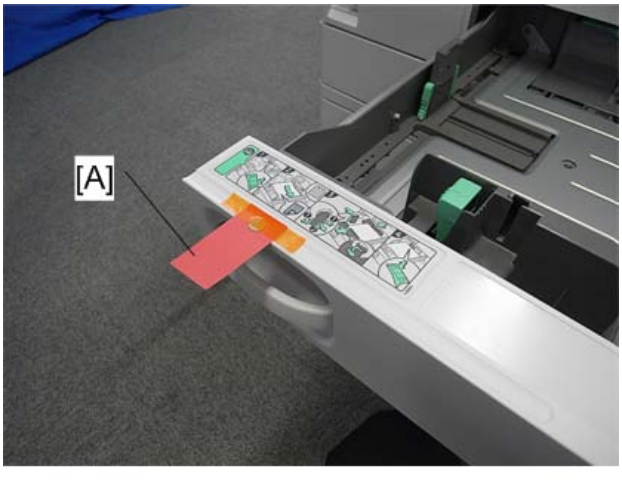
2. Insert the each toner bottle into the machine with the label facing up.
3. Close the front door.

Loading Paper



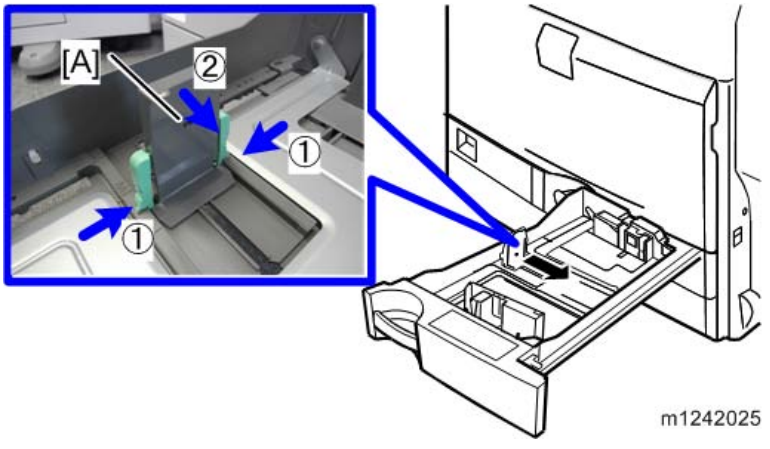
g133i516

1. Pull out the tray 1 [A] of the machine.



m1242024

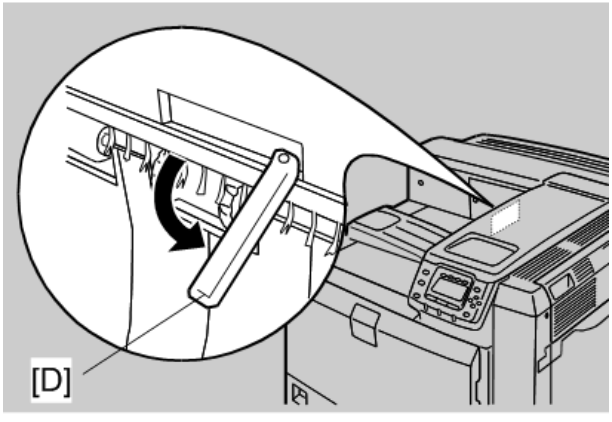
2. Remove the tape [A].
3. Take out the contents from tray 1.



4. Adjust the end plate [A] to A4 LEF/Letter LEF size.
5. Load paper in tray 1, and then close tray 1.



6. Attach the tray number decals to the trays.



g133i521

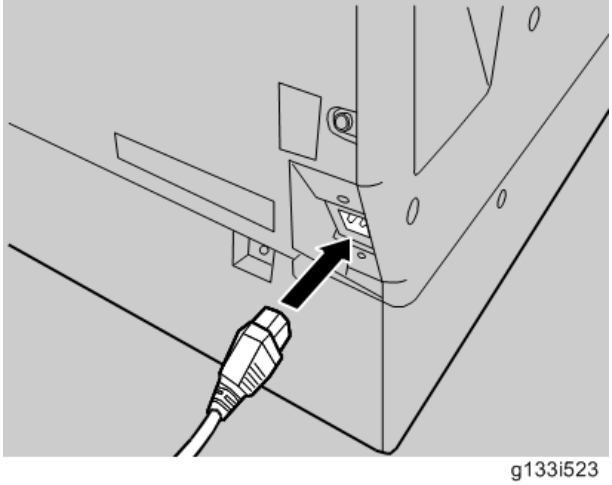
7. Pull out the feeler [D] for the output-tray-full detection mechanism.

Turning Power On

⚠CAUTION

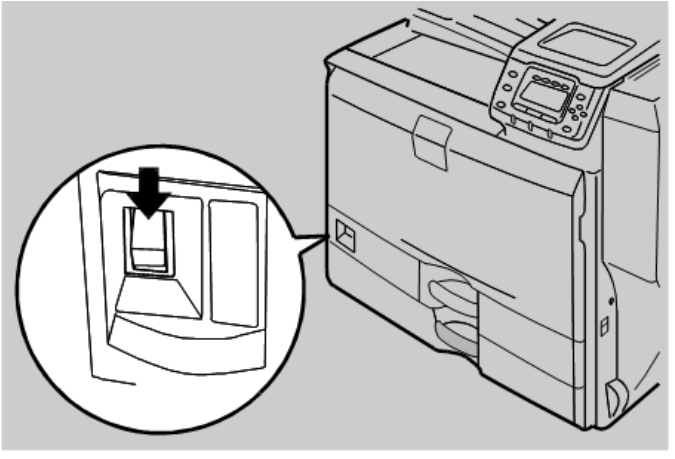
- Turn off the power switch whenever you plug in and unplug the power cord.

1. Make sure that the power switch is set to "⏻" (Standby).



g133i523

2. Plug in the machine.



m1242011

3. Turn on the power switch.

Important

- **Do not turn off the power switch until initialization is completed ('Ready' appears on the display when initialization is completed). Otherwise, the machine may malfunction.**



w_m1242019

Selecting the Panel Display Language

To change the panel display language, it is necessary to register available languages in the User Tools. Specify the settings according to the following procedure.

Note

- You can select one of these languages (the default is English): Japanese, English, German, French, Italian, Dutch, Swedish, Norwegian, Danish, Spanish, Finnish, Portuguese, Czech, Polish, Hungarian, Simplified Chinese, Russian, Greek, Catalan, Turkish, or Brazilian Portuguese.
- You do not have to do this procedure if you use English. Do this procedure if you want to use a different language.

1. Turn on the power switch of the machine.

Note

- “Ready” shows on the panel display after the machine warms up.

2. Press the "User Tools" key.
3. Press "Administrator Tools" in "System Settings".
4. Press "Select Switchable Languages".
5. Using the language button displayed on the User Tools screen, select the required language (this will then be selectable at any time with a toggle setting), and then press "OK".

Note

- Only languages available for the machine are displayed.
- At least one language must be selected.

6. Return to the User Tools menu, and then keep pressing the language button until the language you want to select appears.

Note

- The language selected in "Select Switchable Languages" becomes available for selection by a toggle setting.

Printing the Test Page

1. You can check if the machine works correctly by printing a test page such as the configuration page. However, you cannot check the connection between the machine and the computer by printing the test page.
2. Turn on the power switch.
3. Press the "User Tools" key.
4. Press "Printer Features".
5. Press "List/Test Print".
6. Press "Configuration Page".
7. The test printing starts shortly after.
8. Turn off the power switch.

Settings Relevant to the Service Contract

Change the necessary settings depending on the each customer's service contract. For details, refer to "Meter Click Charge" following this section.

Settings for @Remote Service (Embedded RC Gate)

Note

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

Check points before making @Remote settings

1. The setting of SP5816-201 in the mainframe must be "0".
2. Print the SMC with SP5990-002 and then check if a device ID2 (SP5811-003) must be correctly programmed.
   - 6 spaces must be put between the 3-digit prefix and the following 8-digit number (e.g. xxx_____xxxxxxxx).
   - ID2 (SP5811-003) and the serial number (SP5811-001) must be the same (e.g. ID2: A01_____23456789 = serial No. A0123456789)
3. The following settings must be correctly programmed.
   - Proxy server IP address (SP5816-063)
   - Proxy server Port number (SP5816-064)
   - Proxy User ID (SP5816-065)
   - Proxy Password (SP5816-066)
4. Get a Request Number.
5. Execute the @Remote Settings.
6. Enter the SP mode.
7. Input the Request number which you have obtained from @Remote Center GUI, and then press the "OK" key with SP5816-202.
8. Confirm the Request number, and then press the "EXECUTE" key with SP5816-203.
9. Check the confirmation result with SP5816-204.

Value	Meaning	Solution/ Workaround
0	Succeeded	-
1	Request number error	Check the request number again.
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.
5	Proxy error (Illegal user name or password)	Check Proxy user name and password.

Value	Meaning	Solution/ Workaround
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.

10. Make sure that the screen displays the Location Information with SP5816-205 only when it has been input at the Center GUI.
11. Press the "EXECUTE" key to execute the registration with SP5816-206.
12. 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.

13. Exit the SP mode.

SP5816-208 Error Codes

Cause	Code	Meaning	Solution/ Workaround
Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring Request No.	Obtain a Request Number before attempting the Inquiry or Registration.
	-12003	Attempted registration without execution of a confirmation and no previous registration.	Perform Confirmation before attempting the Registration.
	-12004	Attempted setting with illegal entries for certification and ID2.	Check ID2 of the mainframe.
	-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.	Make sure that "Remote Service" in User Tools is set to "Do not prohibit".
	-12006	A confirmation request was 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 and that of the certificate does not match.	-
	-12010	The certificate domain has not been initialized.	-

Cause	Code	Meaning	Solution/ Workaround
Error Caused by Response from GW URL	-2385	Other error	-
	-2387	Not supported at the Service Center	-
	-2389	Database out of service	-
	-2390	Program out of service	-
	-2391	Two registrations for the same mainframe	Check the registration condition of the mainframe
	-2392	Parameter error	-
	-2393	External RCG not managed	-
	-2394	Mainframe not managed	-
	-2395	Box ID for external RCG is illegal.	-
	-2396	Mainframe ID for external RCG is illegal.	-
	-2397	Incorrect ID2 format	Check the ID2 of the mainframe.
	-2398	Incorrect request number format	Check the Request No.

Meter Click Charge

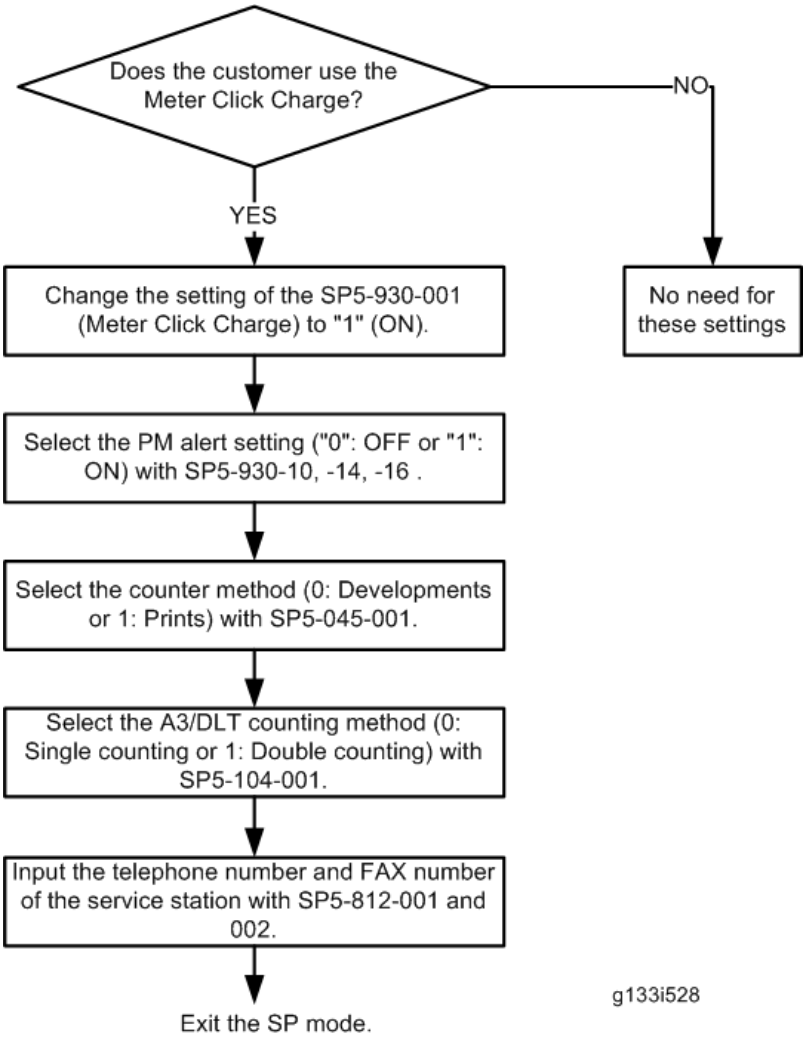
Basically, there are two ways to set up this function.

Meter click change enabled (SP 5-930-001 set to 'enabled'): The counter can be displayed and printed by the customer. The technician can then call the customer and ask them to read the counter.

Meter click charge disabled (SP 5-930-001 set to 'disabled'; this is the default setting): The counter cannot be displayed or printed by the customer. To check the counter, the technician must print the SMC report (SP 5-990).

Note

- You must select one of the counter methods (developments/prints) in accordance with the contract (☛ SP5-045-001).



Item	SP No.	Function	Default

Meter Click Charge	SP5-930-001	Enables or disables Meter Click Charge. When enabled: • The counter menu shows immediately after you push the "Menu" key. The "Counter Method" (SP5-045) sets the type of the counter. • You can print the counter from the counter menu. When disabled: • The counter menu does not show.	"0": OFF
Meter Click Charge: PCU	SP5-930-010	Enables or disables the PM alert for the PCUs. If this SP is enabled, an alert message is displayed when the PCUs need to be replaced.	"1": No alert
Meter Click Charge: Image Transfer Belt Unit	SP5-930-014	Enables or disables the PM alert for the image transfer belt unit. If this SP is enabled, an alert message is displayed when the image transfer belt unit needs to be replaced.	"1": No alert
Meter Click Charge: Fusing Unit	SP5-930-016	Enables or disables the PM alert for the fusing unit. If this SP is enabled, an alert message is displayed when the fusing unit needs to be replaced.	"1": No alert
Counter method	SP5-045-001	Specifies if the counting method used in meter charge mode is based on developments or prints.	“1”: Prints
A3/DLT double count	SP5-104-001	Specifies whether the counter is doubled for A3/DLT paper.	“0”: Single counting

Service Tel: Telephone / Facsimile	SP5-812-001 and -002	-001: shows or sets the telephone number of the service representative. -002: shows or sets the fax number of the service station. The number is printed on the counter list when the "Meter Click Charge" is enabled. User can send a fax message with the counter list.	-

External USB Keyboard (External Option)

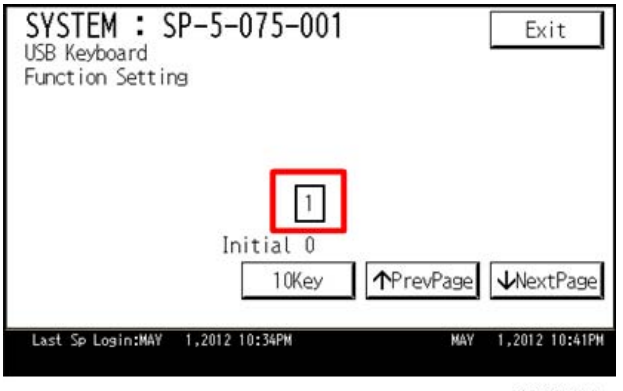
Customers can use an external USB keyboard when the software keyboard is shown on the operation panel, if an external USB keyboard is connected to the USB port at the side of the operation panel or the controller box USB port.

If customers would like to use an external USB keyboard, execute the following steps to enable this feature.

1. Connect the external keyboard to the USB port at the right side of the operation panel or the controller box USB port.

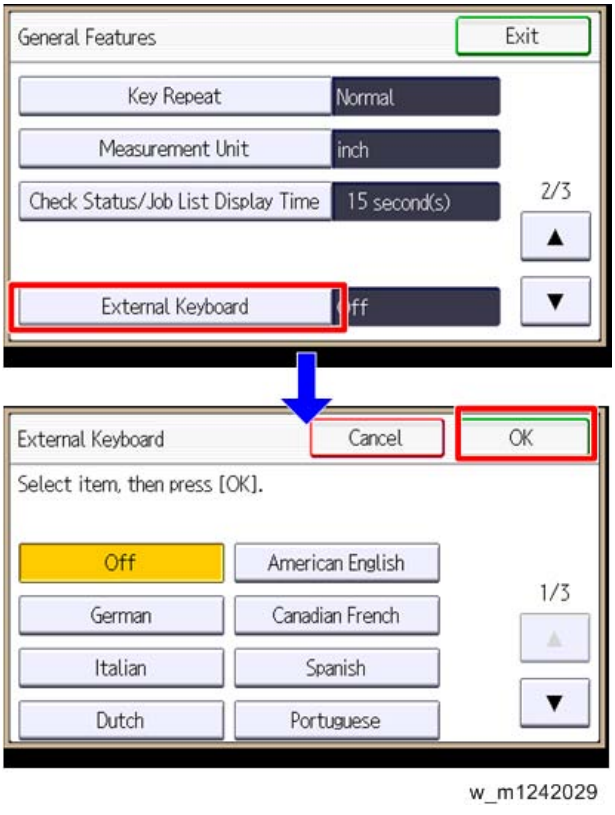
Note

- The external keyboard that is available in this machine is principally for the Windows OS. However, no compatibility check is done, and there is no warranty.



w_m1242028

2. Enter the SP mode and set SP5075-001 to ON (1) (USB keyboard).
3. Exit the SP mode and turn the main power off and on.



w_m1242029

4. Select a language type for the external USB keyboard with [User Tools] ➔ [System Settings] ➔ [General Features] ➔ [External Keyboard].
5. Press [OK] to set it.
6. Turn the main power off and on.

Moving the Machine

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

- Remove all trays from the optional paper feed unit or LCT.
- Remove peripherals physically attached to the main machine: Paper feed unit, LCT and finisher.
- Attach the caster stands for the paper feed unit or LCT if these have been removed before moving the machine.

Transporting the Machine

1. Remove the toner cartridges. 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.
2. Make sure there is no paper left in the paper trays. Then fix down the bottom plates with a sheet of paper and tape.
3. Empty the toner collection bottle. Then attach securing tape to stop the toner bottle from coming out.
4. Do one of the following:
    - Attach shipping tape to the covers and doors.
    - Shrink-wrap the machine tightly.

Note

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

Optional Unit Combinations

Machine Options

U: User installation, C: CE installation

No.	Options	Remarks	
1	One-tray paper feed unit	U	One from No.1, No.2, No.3
2	Two-tray paper feed unit	U	
3	2000-sheet LCT	U	
4	1200-sheet LCT	C	Requires No.2 or 3
5	Bridge unit	C	-
6	3000-sheet finisher	C	One from No.6 and No.7.
7	2000-sheet booklet finisher	C	Requires No.5 and one from No.2 and No.3.
8	*Punch kit (3 types)	C	No.6 or No.7 required. One of the three types
9	Output Jogger Unit	C	Requires No. 6 or No. 7.
10	Mail bin	C	

*: Child options (Child options require a parent option.)

Note

- For details about installation procedures for the user installation options, see "Hardware Guide" of this model.

Controller Options

U: User installation, C: CE installation

No.	Options	Remarks	
1	IEEE 1284	U	One from No.1 and No.2
2	Wireless LAN	U	
3	Gigabit Ethernet	U	Gigabit Ethernet Slot
4	HDD	U	Option only for M124
5	PictBridge	U	You can merge all applications in one SD card with SP mode. (p.97 "SD Card Appli Move"). If the VM card is installed, merge applications in VM card.
6	IPDS Unit	U	
7	SD Card for Netware Printing	U	
8	VM Card	U	
9	512MB Memory Option	U	One from No.10 and No.11
10	1GB Memory Option	U	

Note

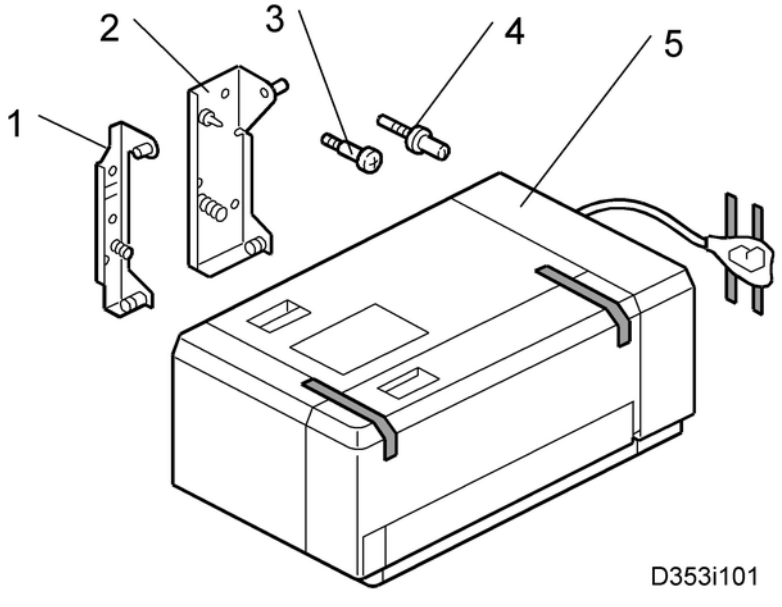
- For details about installation procedures for the user installation options, see "Hardware Guide" of this model.

1200 LCT (D631)

Component Check

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

No.	Description	Q'ty
1	Front Bracket	1
2	Rear Bracket	1
3	Stud Screw	4
4	Joint Pin	2
5	LCT	1



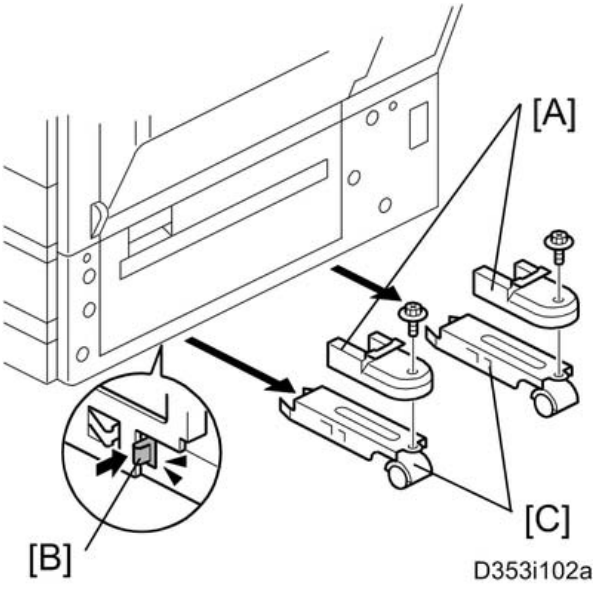
Installation Procedure

⚠CAUTION

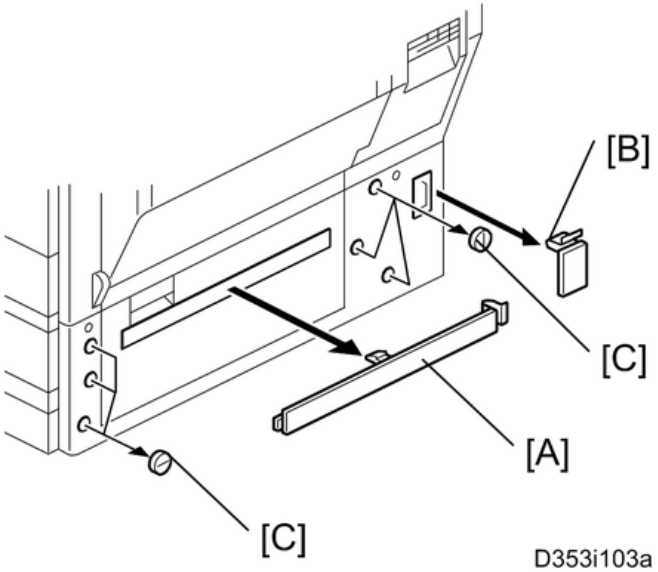
- Unplug the main machine power cord before starting the following procedure.

Note

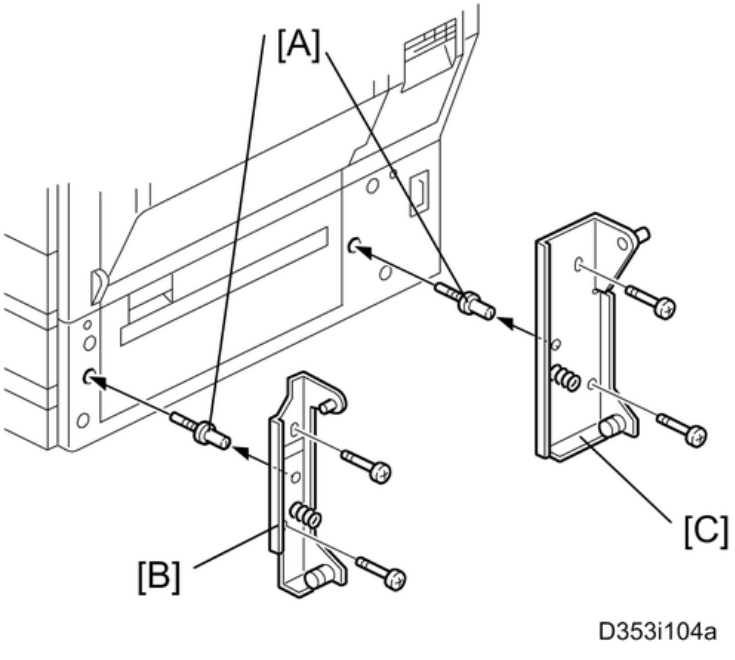
- The Paper Tray Unit (D580) or LCT 2000-sheet (D581) must be installed before installing this 1200-sheet LCT.



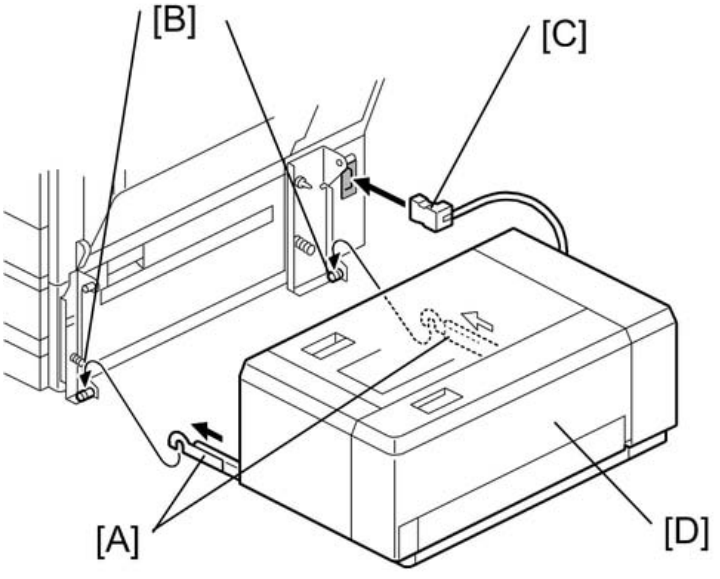
1. Unpack the LCT and remove the tapes.
2. Remove the stand covers [A].
3. Release the locks [B] of the front and rear caster stands.
4. Remove the caster stands [C].



5. Remove the paper path cover [A], connector cover [B] and six hole covers [C].



6. Insert the joint pins [A].
7. Attach the front [B] and rear brackets [C]. (x 2 each)

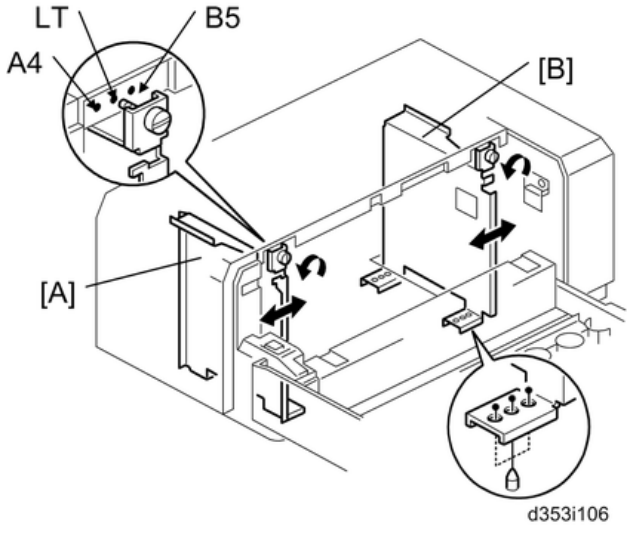


D353i105a

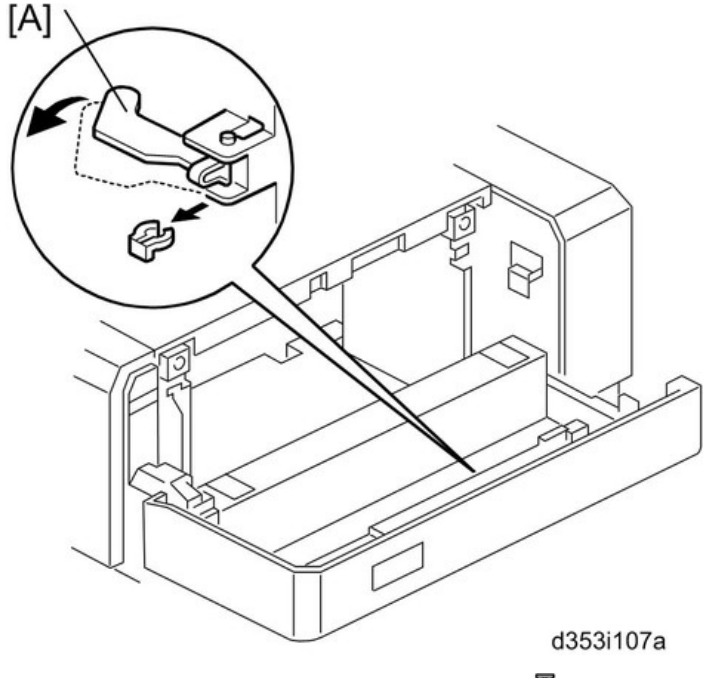
8. Pull out the front and rear rails [A], and then hang them on each bracket [B].
9. Connect the LCT cable [C] to the main machine.
10. Slide the LCT [D] into the main machine.
11. Make sure that the front and rear sides of the LCT are closely attached to the main machine.

Side Fence Position Change

1. Open the right door of the LCT.
2. Push the down switch to lower the tray bottom plate until it reaches its lowest position.



3. Remove the front and rear side fences [A, B] (x 1 each).
4. Install the side fences in the correct position (A4 LEF/ LT LEF/ B5 LEF).



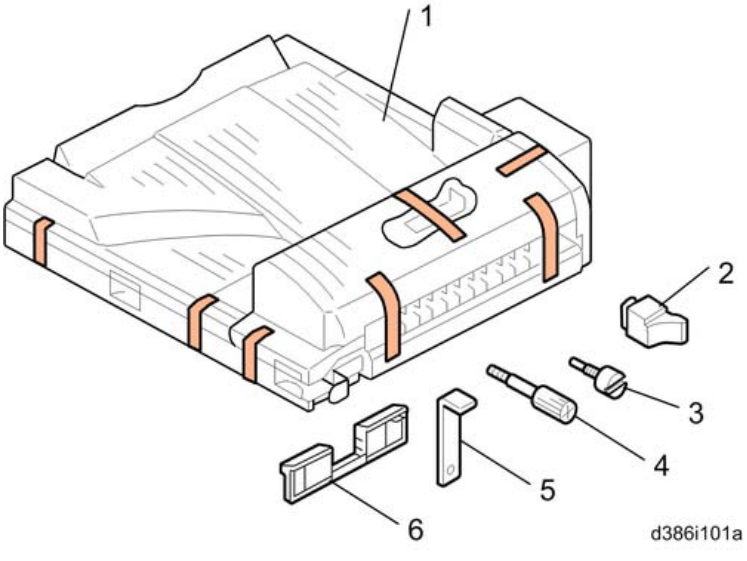
5. Pull the end fence [A] for B5 size paper as shown (x 1) if the side fences are adjusted for B5 size paper.
6. Close the right door.
7. Turn on the main power switch, and then go into the SP mode.
8. Input the correct paper size for the1200-sheet LCT with SP5181-018.

Bridge Unit (D634)

Component Check

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

No.	Description	Q'ty
1	Bridge Unit	1
2	Frame Cover	1
3	Knob screw	1
4	Long Knob Screw	1
5	Holder bracket	1
6	Guide	2



Installation Procedure

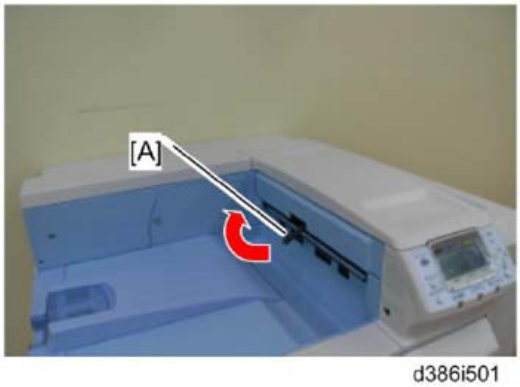
⚠CAUTION

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

Note

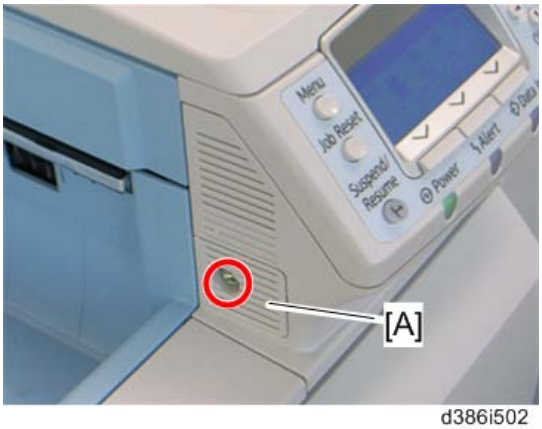
- If you will install a finisher unit (D636 or D637) on the machine, install it after installing the bridge unit (D634).

1. Remove all tapes.



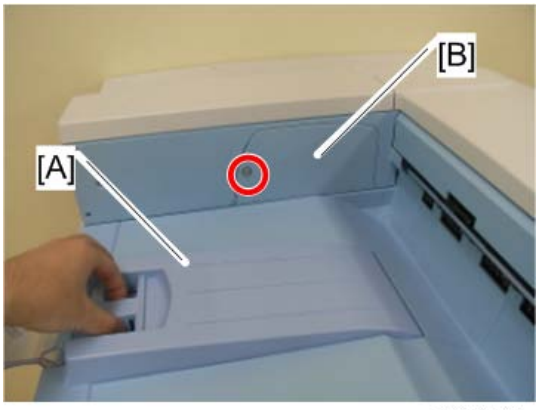
d386i501

2. If the sensor feeler [A] is out, fold it into the machine.



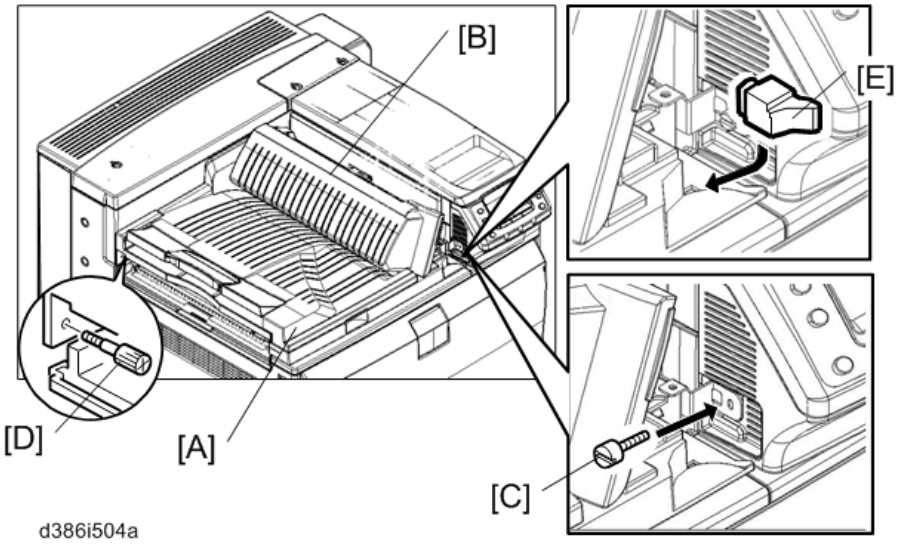
d386i502

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



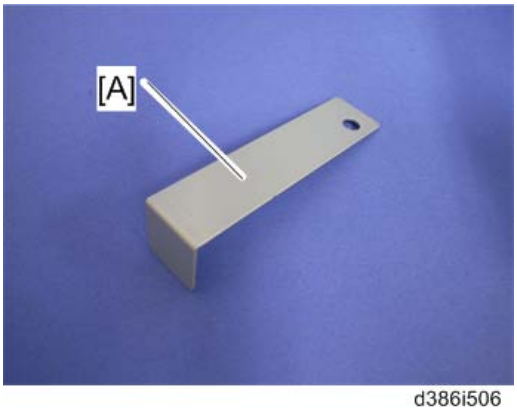
d386i503

4. Remove the inner tray [A].
5. Remove the connector cover [B] (x 1).



d386i504a

6. Install the bridge unit [A].
7. Open the bridge unit cover [B]
8. Secure it with the knob screw [C] and long knob screw [D].
9. Attach the frame cover [E].
10. Close the bridge unit cover [B].



d386i506

11. Reassemble the machine.
12. Install the optional finisher (refer to the finisher installation procedure).

Note

- Holder bracket [A] is used in the installation procedure of the finisher (D636 or D637). Do not install it yet.

13. Turn on the main power switch of the machine.

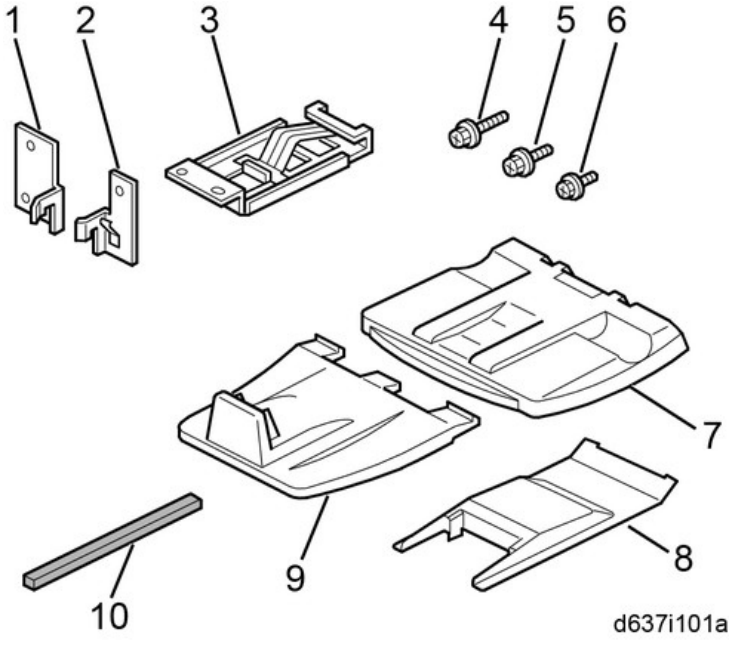
    Check the bridge unit operation.

2000-sheet booklet finisher (D637) /3000-sheet finisher (D636)

Accessory Check

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

No.	Description	Q'ty
1	Rear joint bracket	1
2	Front joint bracket	1
3	Ground (earth) plate	1
4	Tapping screws - M4 x14	4
5	Tapping screws - M3 x 8	1
6	Tapping screws - M3 x 6	2
7	Upper output tray	1
8	Support Tray	1
9	Lower output tray (D637 only)	1
10	Cushion (with double-sided tape)	1



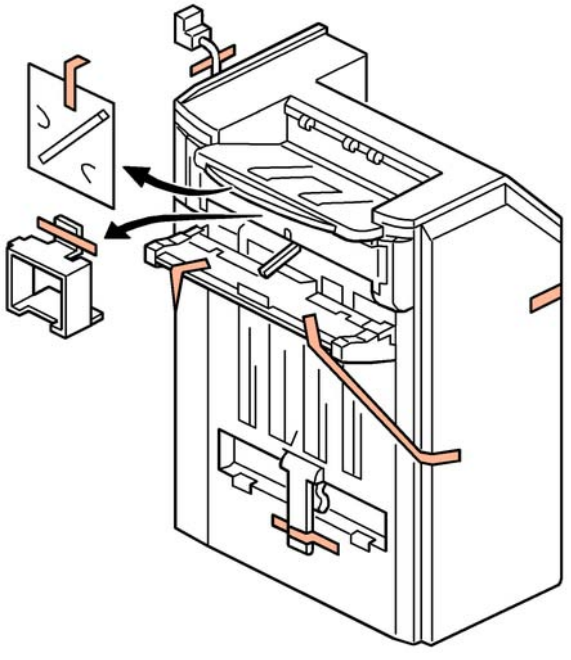
Installation Procedure

⚠CAUTION

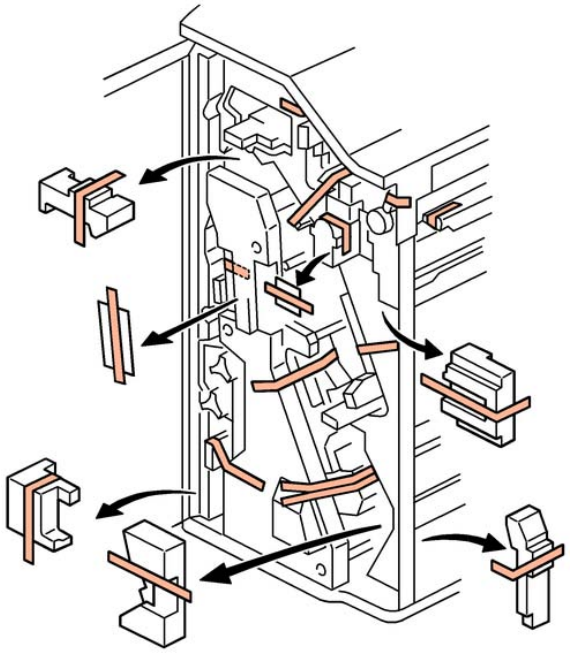
- Unplug the main machine power cord before starting the following procedure.

If this finisher is installed on this machine, the following options must be installed before installing this finisher.

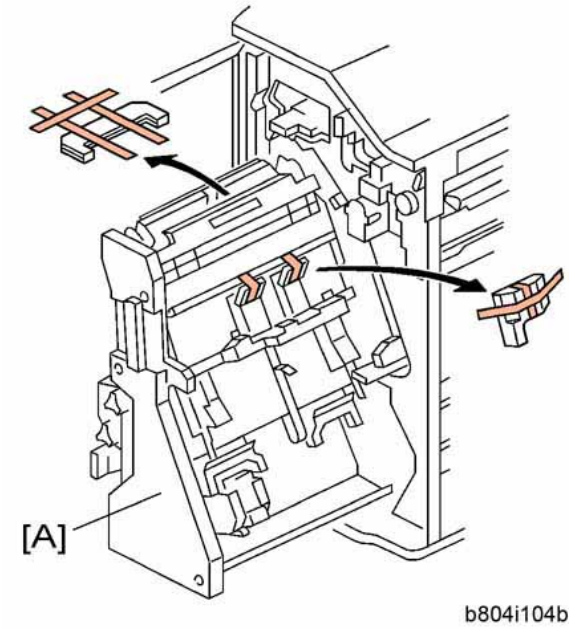
- Bridge Unit (D634)
- Two Tray Paper Feed Unit (D580) or LCT (D581)



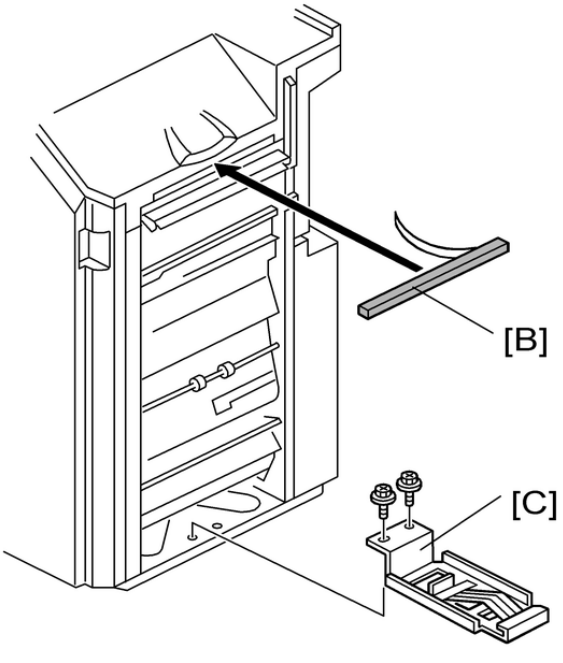
1. Unpack the finisher and remove all tapes and packing materials from the finisher.



2. Open the front door, and then remove all tapes and packing materials from the inside of the finisher.



3. Pull out the jogger unit [A], and then remove all tapes and retainers.

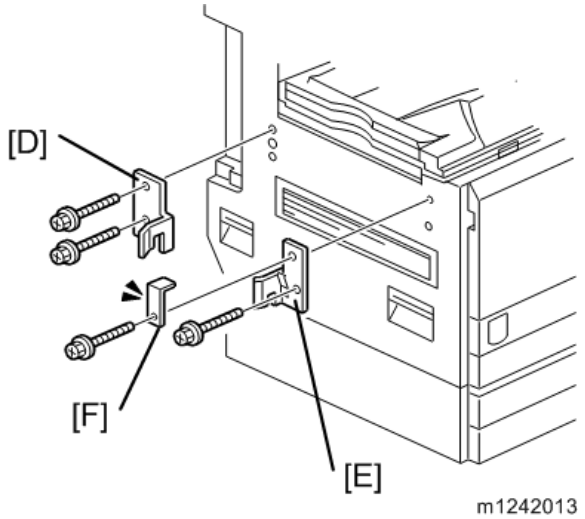


4. Attach the cushion [B] to the finisher.

Note

- Make sure that the cushion is placed within 0 to 1 mm from the edge of the cover.

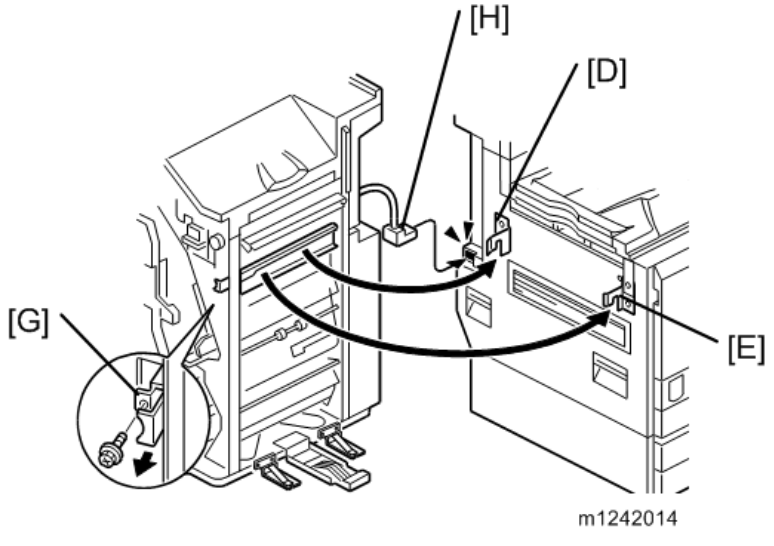
5. Install the ground plate [C] on the finisher (x 2; M3 x 6).



6. Attach the rear joint bracket [D] (x 2; M4 x 14).
7. Attach the front joint bracket [E] and the holder bracket [F] (x 2; M4 x 14).

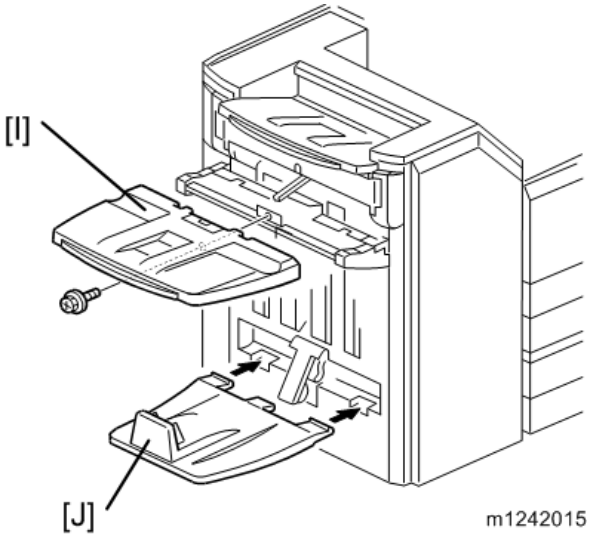
Note

- Holder bracket [F] must be placed outside the front joint bracket [E]. This bracket is provided with the Bridge Unit (D634).



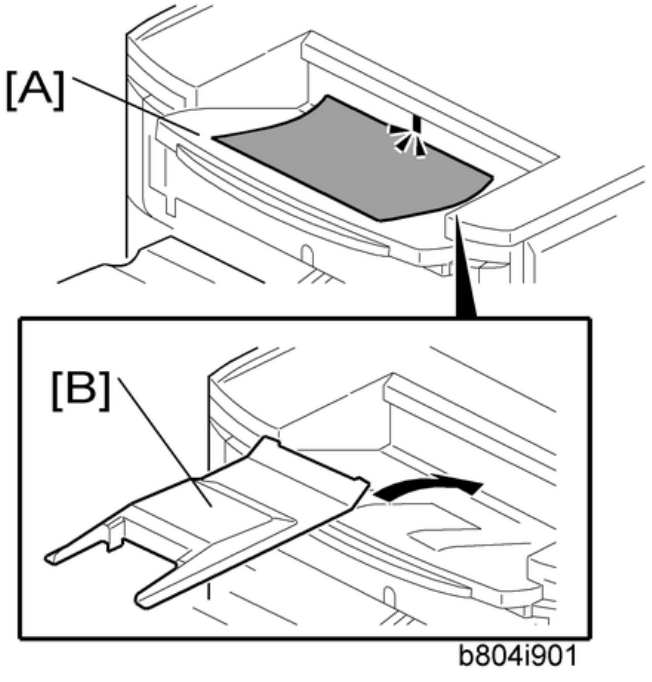
8. Pull the lock lever [G] (x 1).
9. Slowly push the finisher to the left side of the machine, keeping its front door open until the brackets [D] [E] go into their slots.
10. Push the lock lever [G], and then secure it (x 1).
11. Close the front door of the finisher.

12. Connect the finisher connector [H] to the machine.



13. Install the upper output tray [I] (x 1; M3 x 8).
14. Only for D637, install the lower output tray [J].
15. Turn on the main power switch of the machine.
16. Check the finisher operation.

Support Tray Installation



If a stacking problem occurs several times on the upper output tray [A], put the support tray [B] on the tray as shown.

Note

- Keep this tray in the manual pocket if this tray does not need to be installed.

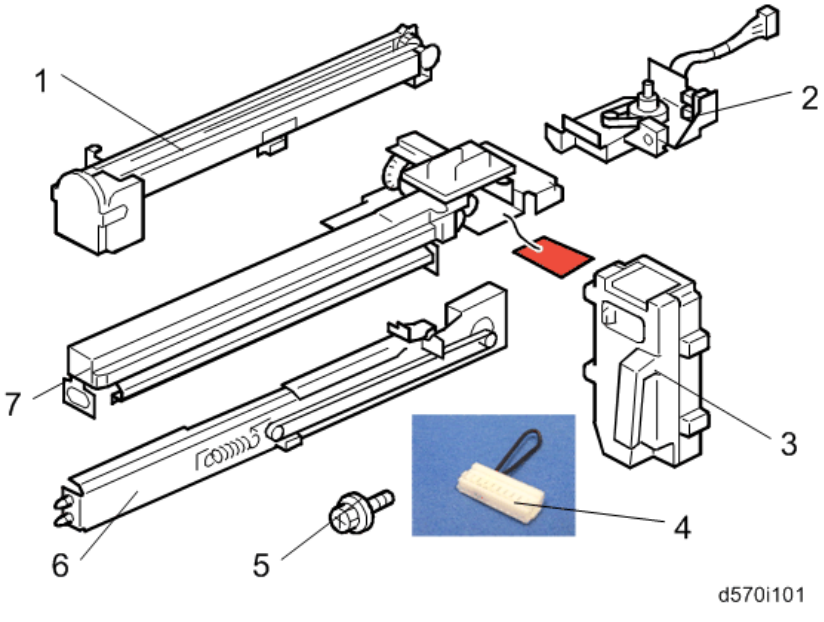
Punch Unit (D570)

The Punch Unit (D570) is installed in the 2000-Sheet Booklet (D637) Finisher/ 3000-Sheet Finisher (D636).

Component Check

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

No.	Description	Q'ty
1	Punch-out Waste Unit	1
2	Slide Drive Unit	1
3	Punch Waste Hopper	1
4	Wire harness: short-circuit	1
5	Screws: M3 x 6	5
6	Side-to-Side Detection Unit	1
7	Punching Unit	1

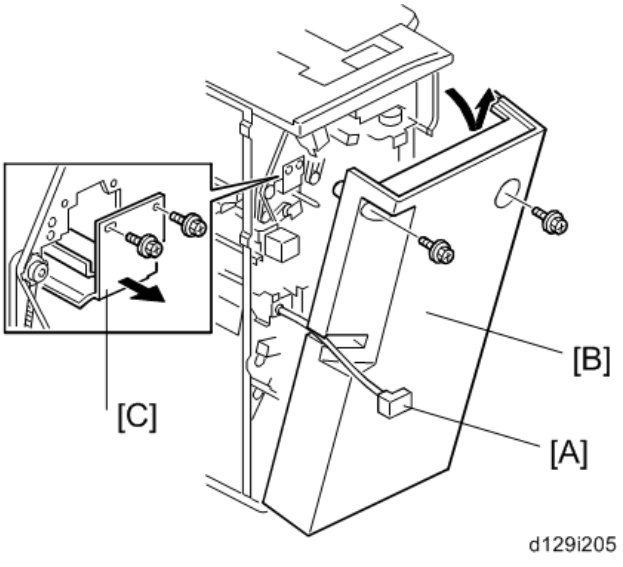


Installation Procedure

⚠CAUTION

- Unplug the main machine power cord before starting the following procedure. If the 2000-sheet booklet/ 3000-sheet finisher has been installed, disconnect it and pull it away from the machine.

1. Remove all tapes and shipping retainers.

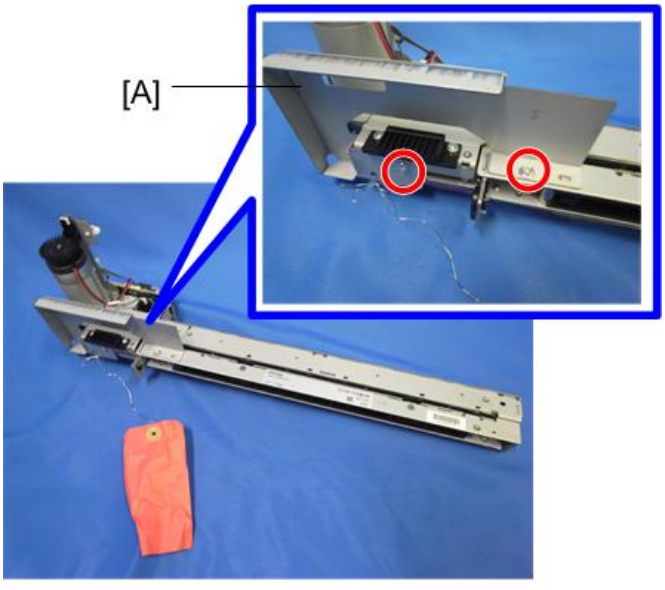


2. If the finisher is connected to the machine, disconnect the power connector [A] and separate the finisher from the machine.
3. Remove the rear cover [B] (x 2) and open the front door.

Note

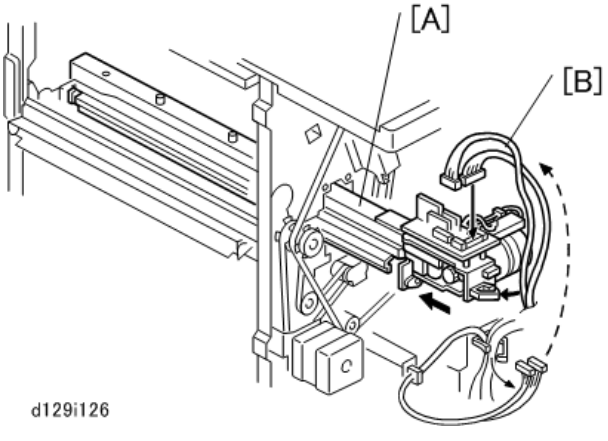
- At the bottom of the rear cover, make sure to disconnect the tabs that attach the cover to the frame.

4. Remove the guide plate [C] (x 2).



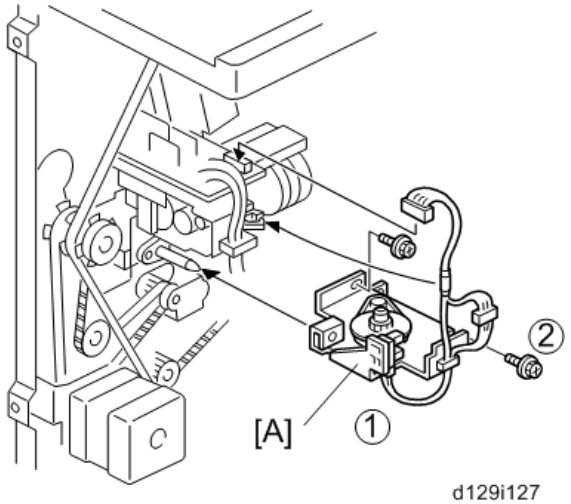
d129i204

5. Remove the shipping retainer [A] from the punch unit (x 2).



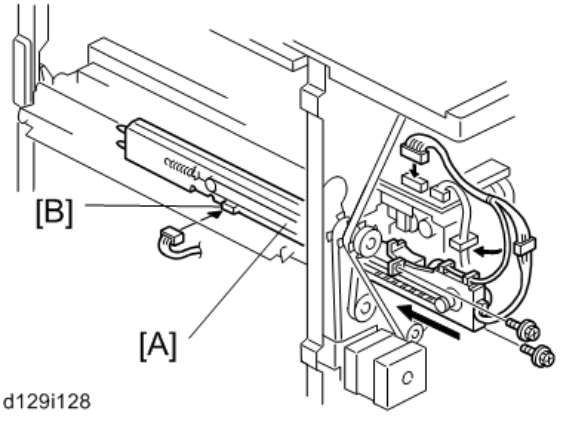
d129i126

6. Move the punch unit [A] along its rails into the finisher. Make sure that the pin engages correctly at the front and rear.
7. Connect the cables [B] of the finisher to the connectors (CN601 and CN602) on the punch unit board (x 2, x 1).
    - The cables [B] are coiled and attached to the PCB.



d129i127

8. Attach the slide drive unit [A] to the finisher and connect it to the punch unit (x 2, x 1). Push in the slide drive unit at ① when you attach the screw ②.
9. Make sure that the punch unit moves freely and is not blocked by the screws.

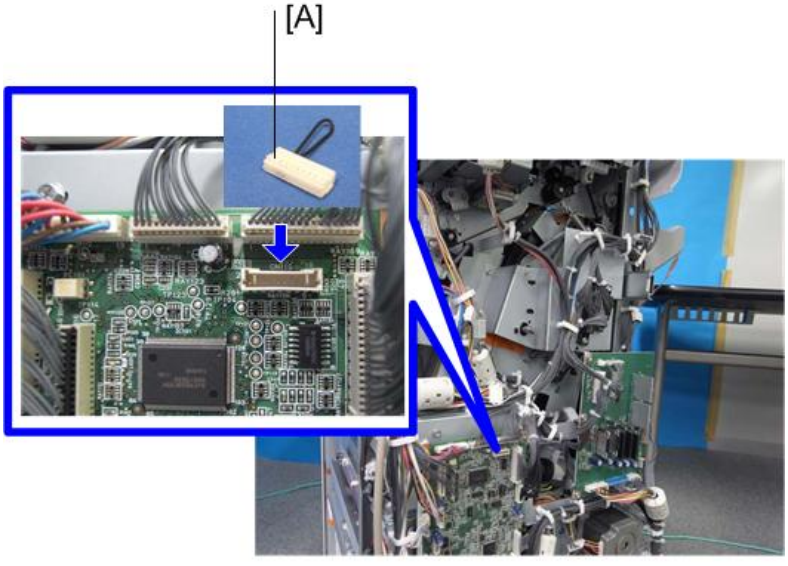


d129i128

10. Put the side-to-side detection unit [A] in the machine. Make sure that the two pins are engaged correctly at the front.
11. Make sure that the side-to-side detection unit moves smoothly on its rails. If it does not, make sure that the rails are aligned with their grooves.
12. Attach the side-to-side detection unit and connect it at the rear (x 2, x 1, x 1).
13. Pull the short connector out of the connector [B] then connect the cable of the finisher (x 1).

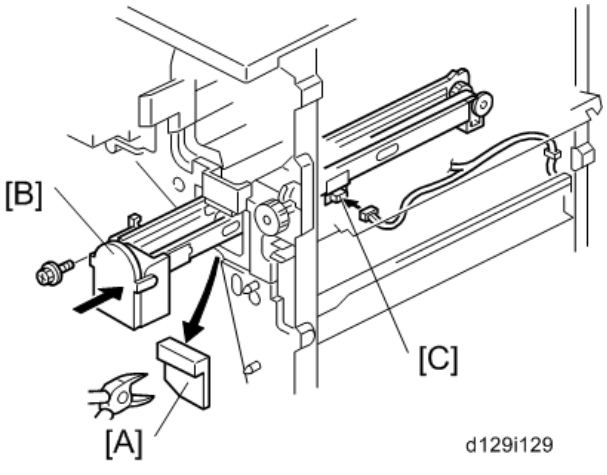
Note

- This is the 3-pin connector.



d129i133

14. Connect "Wire harness: short-circuit" [A] to the CN110 connector.



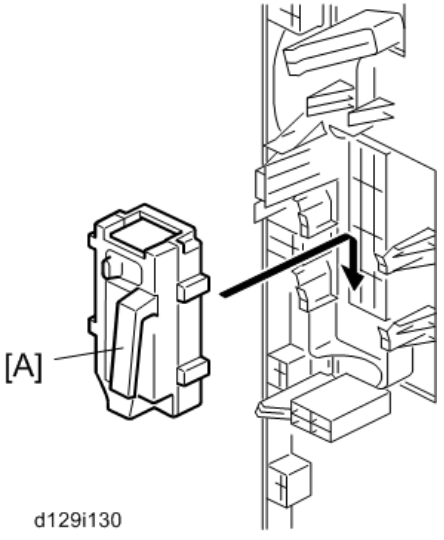
d129i129

15. At the front, use a pair of wire cutters to remove the part [A] of the cover.
16. Install the punch-waste transport unit [B] in the finisher.
17. Make sure that the punch-waste transport unit moves smoothly on its rails. If it does not, make sure that the rails are aligned with the grooves.
18. Remove the short connector from the connector [C].

Note

- This is the 4-pin connector.

19. Connect the cable to connector [C] and attach the punch-waste transport unit (x 1, x 1, x 1).



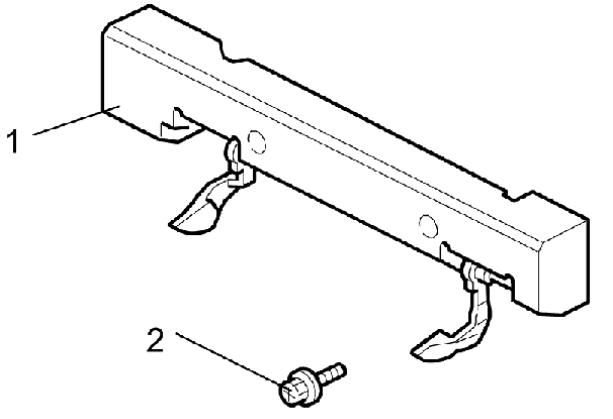
20. Set the hopper [A] in its holder.
21. Reassemble the finisher, and then install it on the main machine.
22. Connect the power cord to the outlet, and then turn the main power switch on.
23. Check the punch unit operation.

Output Jogger Unit (B703)

Accessories

Check the accessories and their quantities against this list.

No.	Description	Q'ty
1	Jogger Unit	1
2	Tapping Screws M3x6	2



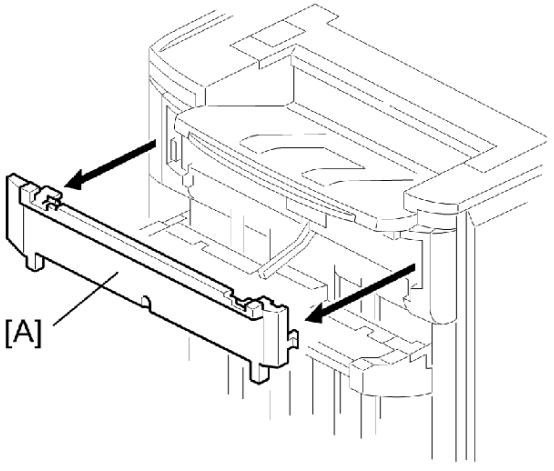
Installation

The Output Jogger Unit B703 is installed only on the 3000-Sheet Finisher (D636) and 2000-sheet Booklet Finisher (D637).

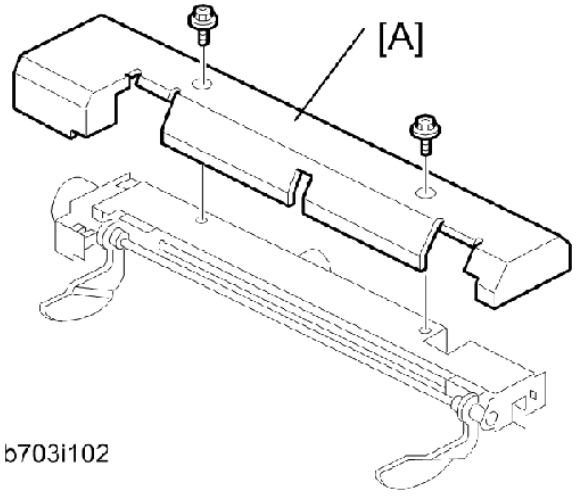
⚠WARNING

- Always switch the machine off and unplug the machine before doing any of the following procedures

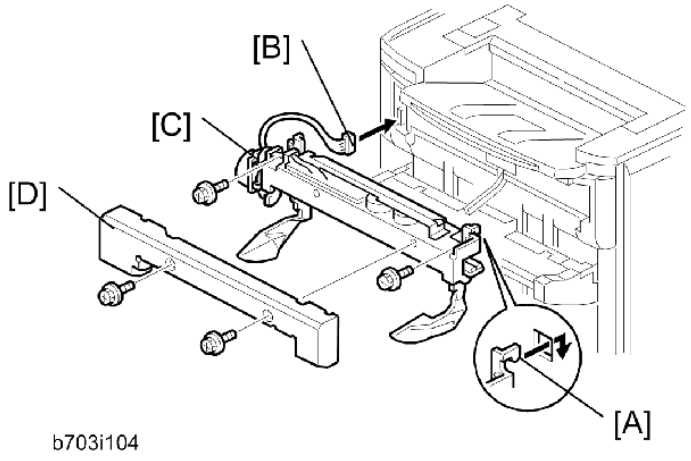
1. Turn the main machine switch off.
2. Disconnect the finisher from the main frame.



3. Use the flat head of a screwdriver to remove the left upper cover [A].



4. Remove the cover plate [A] (x 2). Keep the screws.



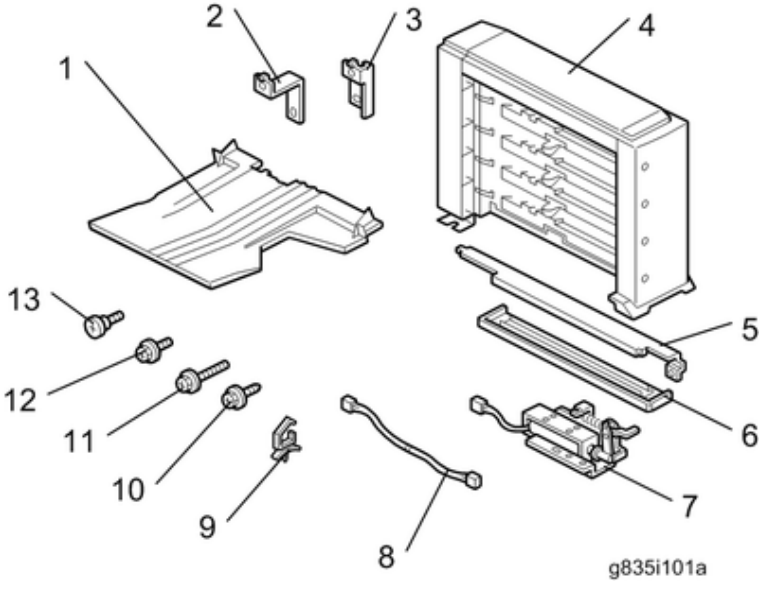
5. While holding the jogger unit with the connector on the left, put the hooks on the frame of the jogger unit [A] into the holes in the left and right side of the finisher frame.
6. Connect connector [B] to the socket (x 1).
7. Attach the jogger unit [C] to the finisher (x 2).
8. Reattach the jogger unit cover [D] to the jogger unit (x 2).

Mail Bin (M413)

Component Check

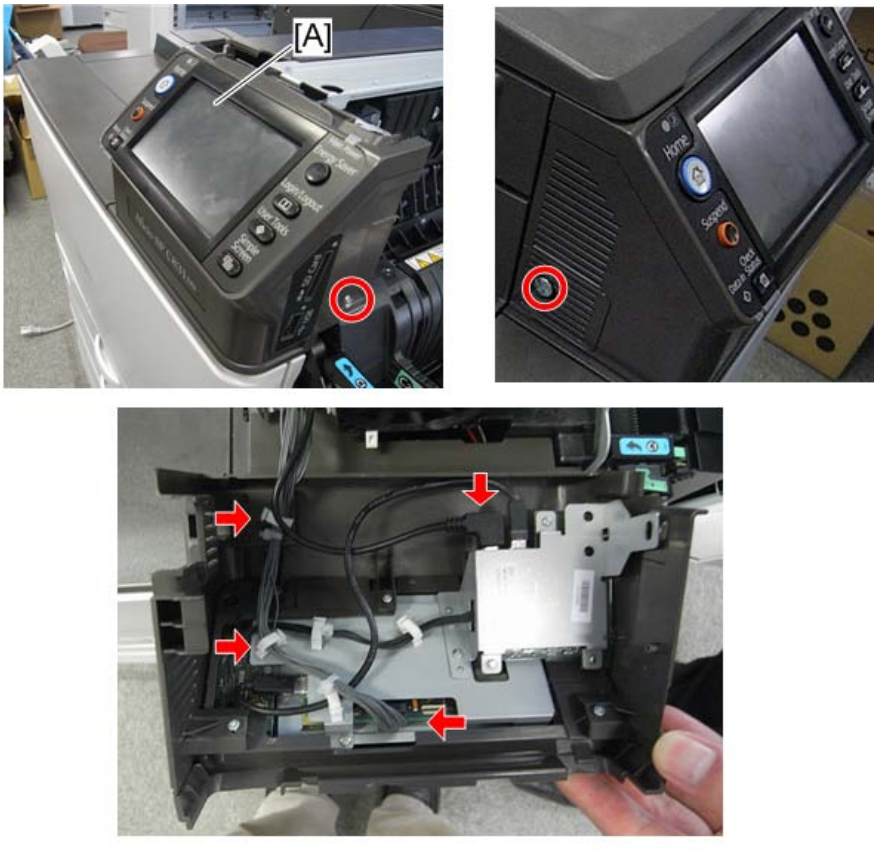
Check the quantity and condition of the components against the following list.

No.	Description	Q'ty
1	Tray	4
2	Rear Hold Bracket	1
3	Front Hold Bracket	1
4	Mail Bin	1
5	Right Stay	1
6	Guide Plate	1
7	Mail Bin Solenoid	1
8	Harness	1
9	Clamp (Not used)	1
10	Screw: M3x8	2
11	Screw: M4x10	3
12	Screw: M3x6	7
13	Step Screw	2
-	Decal Sheet	1



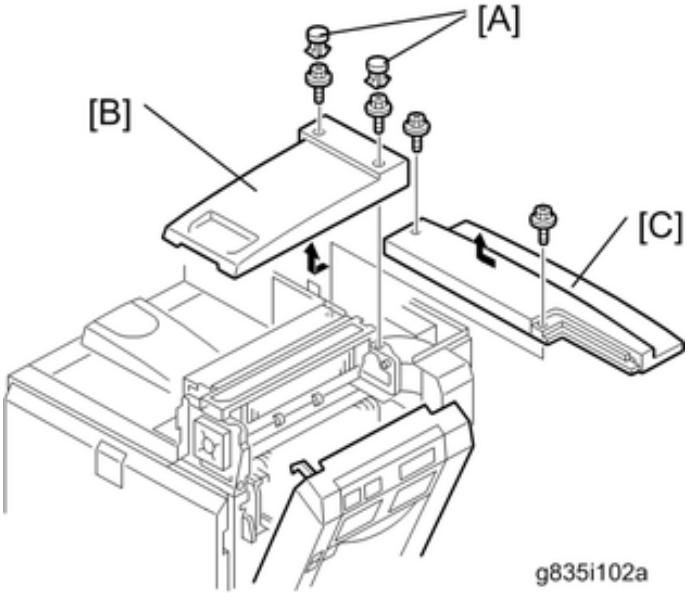
Installation Procedure

1. Open the right door.



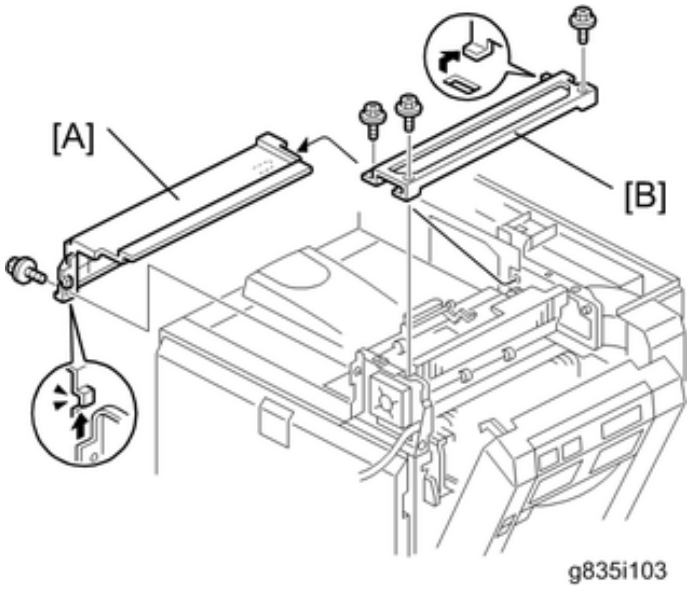
m1242033

2. Operation panel [A] (x 2, x 1, x 2, USB x 1)

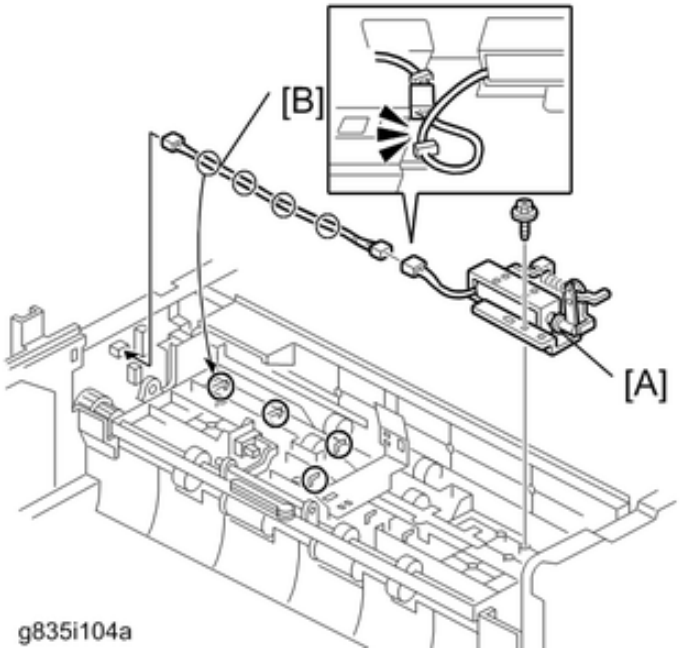


g835i102a

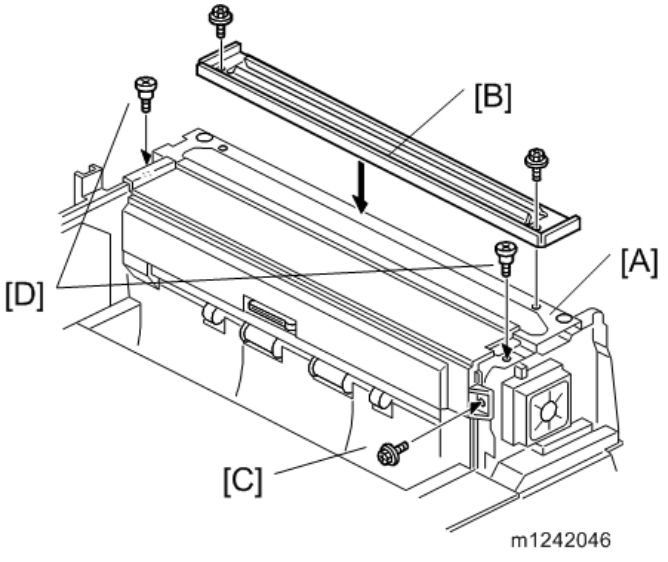
3. Remove the following:
    - Screw caps [A]
    - Top right cover [B] (x 2)
    - Top rear cover [C] (x 2)



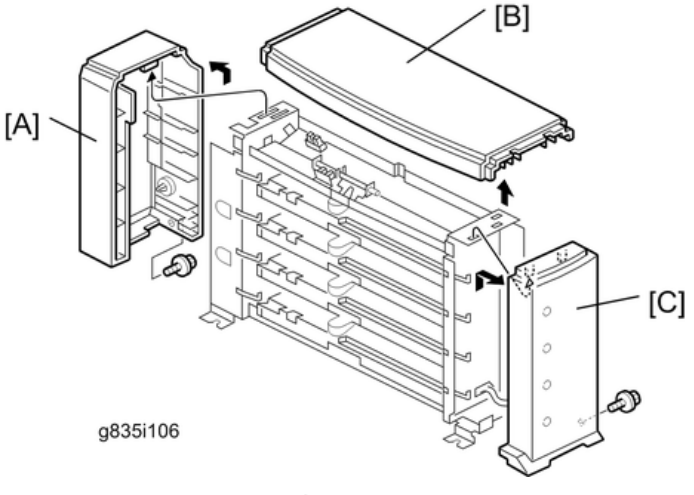
4. Remove the paper exit cover [A] (x 1).
5. Remove the top right stay [B] (x 3).



6. Install the mail bin solenoid [A] (x 1: M3x8).
7. Connect the harness [B] and then clamp the harness with the four clamps.



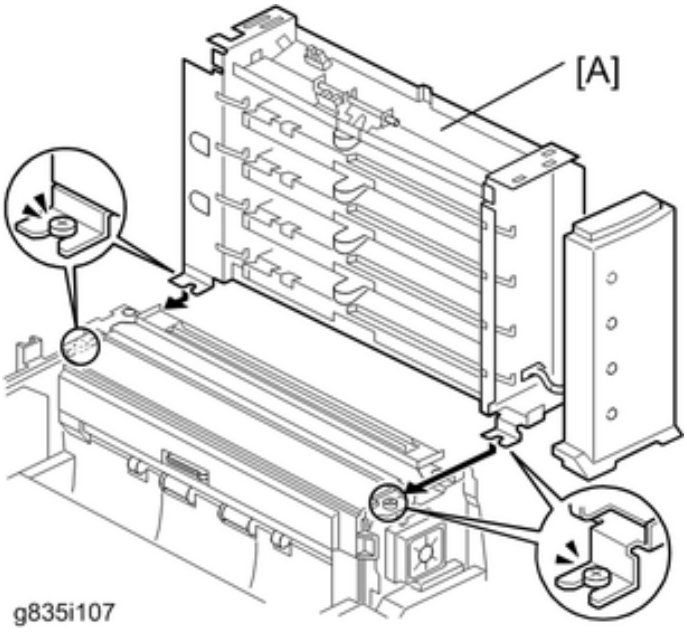
8. Reinstall the top right stay [A] (x 3).
9. Install the guide plate [B] (x 2: M3x6).
10. Install the paper exit cover [C] (x1).
11. Install the two step screws [D].



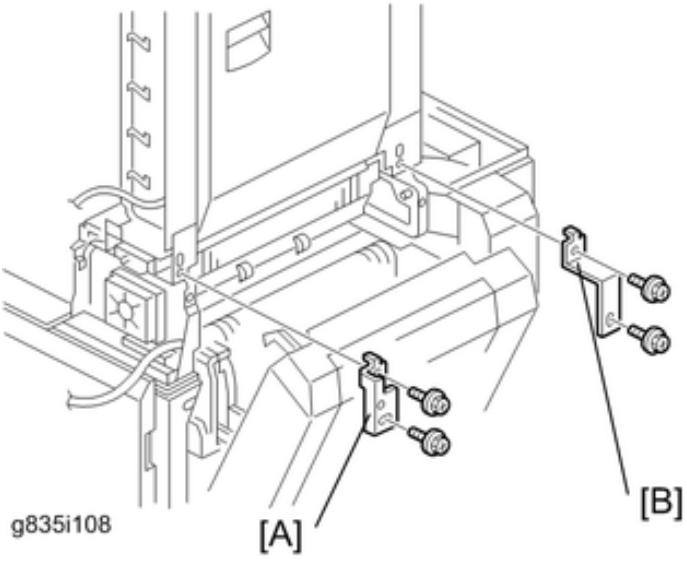
12. Remove the rear cover [A] (x1).
13. Remove the top cover [B] of the mail bin unit.
14. Remove the front cover [C] (x1).

Note

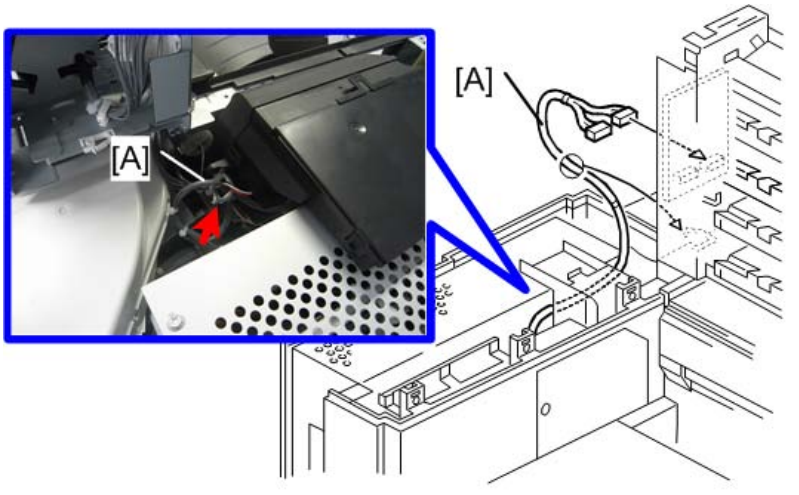
- The front cover is connected to the mail bin unit with the harnesses. It is not necessary to disconnect the harnesses from the front cover. However, take care not to break or disconnect the harnesses during this installation procedure.



15. Install the mail bin unit [A] on the machine as shown above.

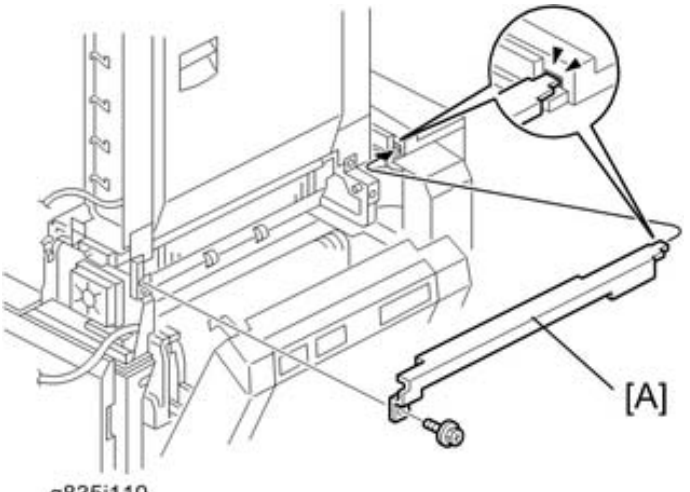


16. Attach the front hold bracket [A] and rear hold bracket [B] (x 2 each).



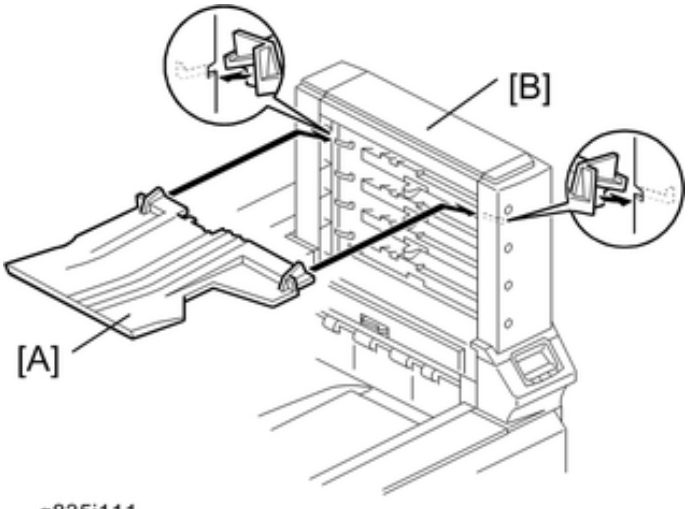
m1242012

17. Release the harness [A] from the machine (x 1).
18. Connect the harness [A] to the main board of the mail bin unit (x 1).
19. Reinstall the top rear cover (x 2)



g835i110

20. Install the right stay [A] (x 1).
21. Reinstall the top, front and rear covers of the mail bin unit (x 2).
22. Reinstall the operation panel and connection cover (x 2).
23. Close the right door.



g835i111

24. Install the tray [A] in each bin of the mail bin unit [B].
25. Plug in and turn on the machine.
26. Check the operation of the mail bin unit.

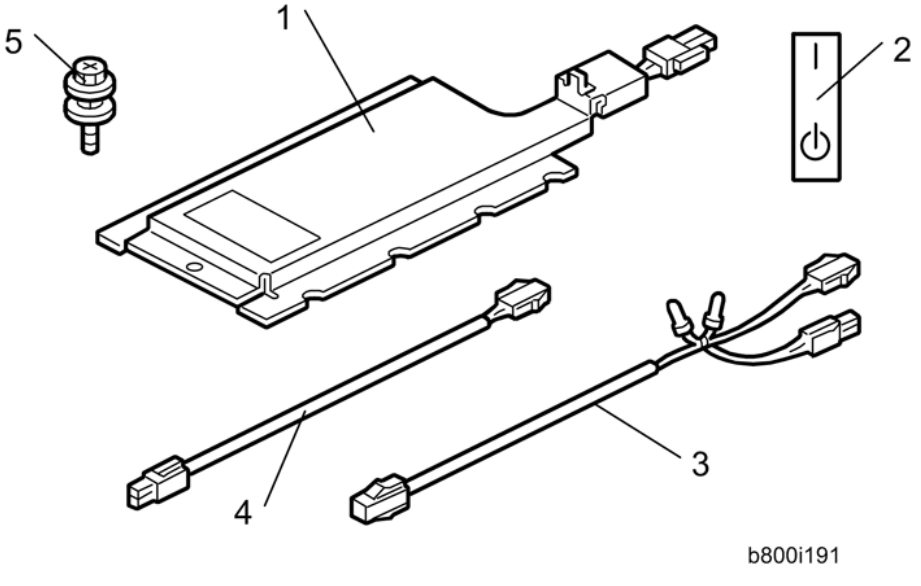
Anti-Condensation Heater

Note

- This option is provided as a service part.

Component Check

No.	Description	Q'ty
1	Tray heater	1
2	On-standby decal	1 (-90) or 2 (-91)
3	Harness 2 (For D579)	1
4	Harness 1 (For D580/D581)	1
5	Screw M4 x 10	2
-	Installation procedure	1

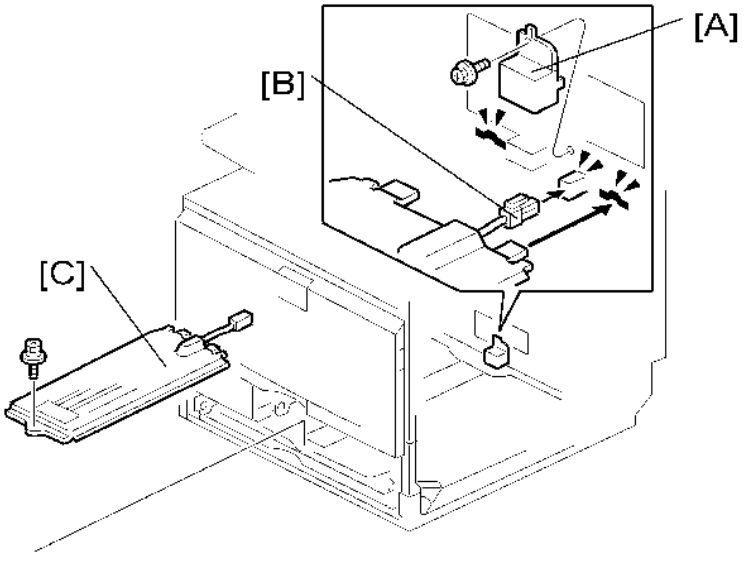


Installation Procedure

⚠CAUTION

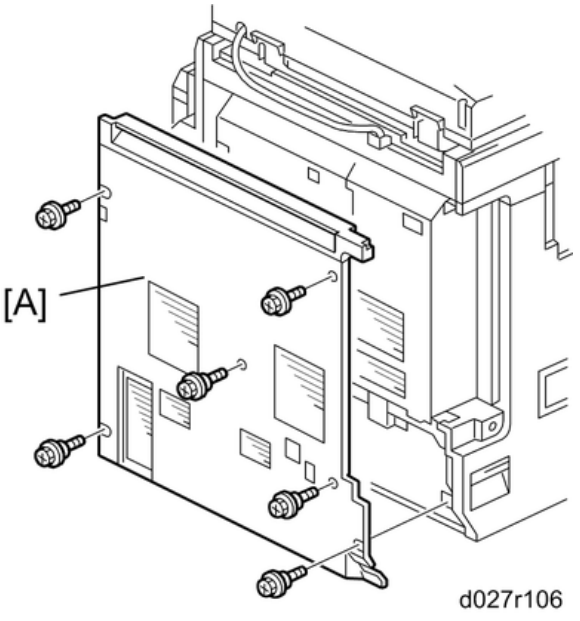
- Unplug the machine power cord before starting the following procedure.
- Do the following procedure not to damage any harnesses.
- Check that any harnesses are not damaged nor pinched after installation.

For installing the tray heater in the main machine

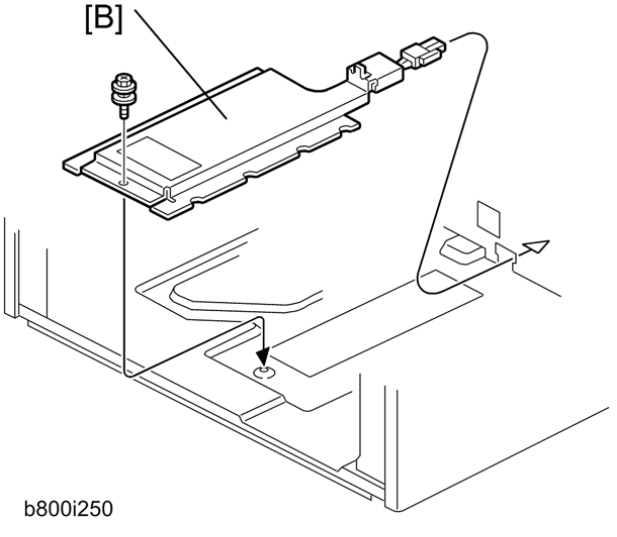


1. Remove trays 1 and 2 from the machine.
2. Remove the connector cover [A] (x 1).
3. Connect the connector [B] of the heater to the connector of the main machine.
4. Install the heater [C] inside the machine (x 1)
5. Reassemble the machine.

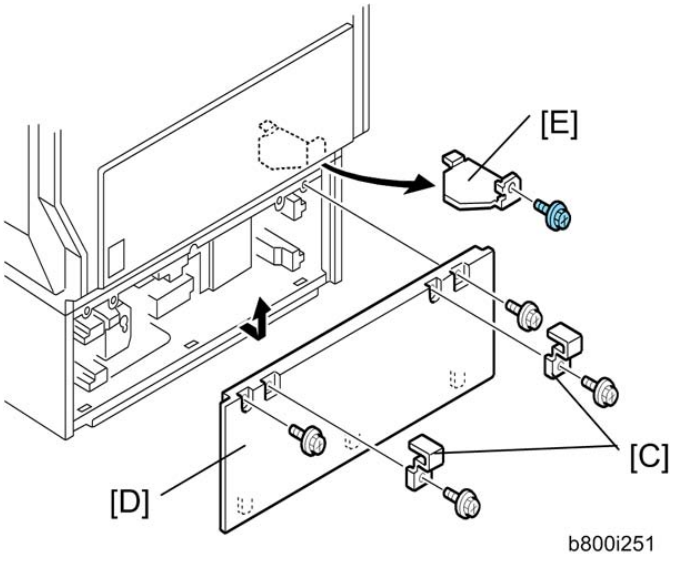
For installing the tray heater in D580



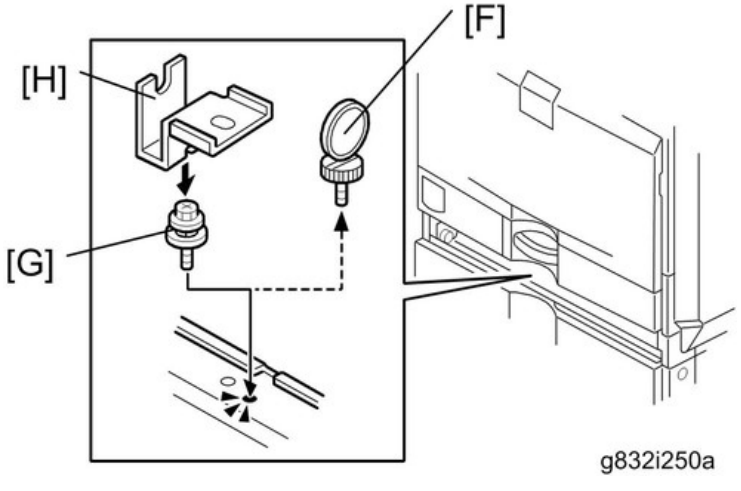
1. Rear cover [A] (x 6)
2. Pull out the two trays in the optional paper feed unit.



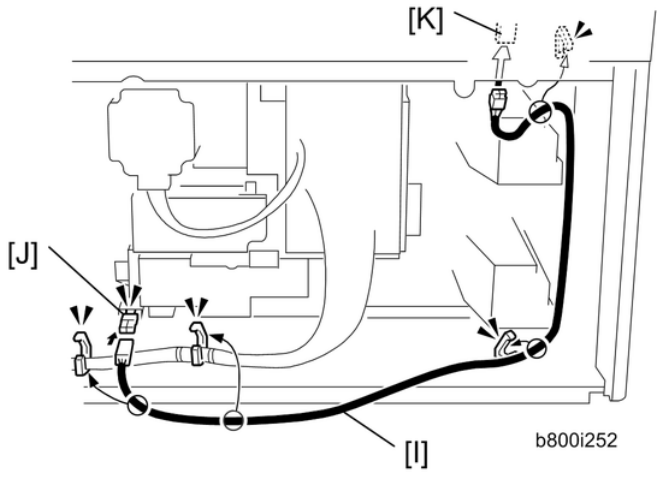
3. Install the tray heater [B] in the optional paper feed unit (x 1).



4. Remove the two securing brackets [C] (x 1 each), and then the rear cover [D] of the optional paper feed unit (x 2).
5. Remove the harness cover bracket [E] (x 1).



6. Pull out tray 2 from the mainframe.
7. Replace the shoulder screw [F] with the washer screw [G], using securing bracket [H] (x 1).



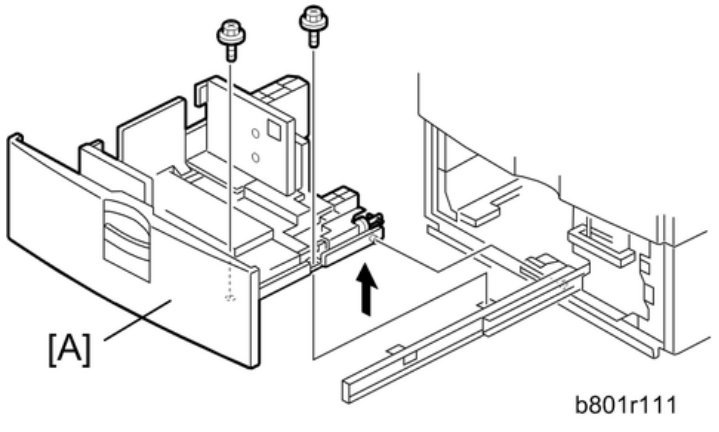
8. Connect the harness [I] to the connector [J] of the tray heater.
9. Route the harness [I] as shown and clamp it with four clamps (x 4).
10. Connect the harness [I] to the connector [K] of the mainframe.
11. Reassemble the mainframe and optional paper feed unit.

For Installing the tray heater in D581

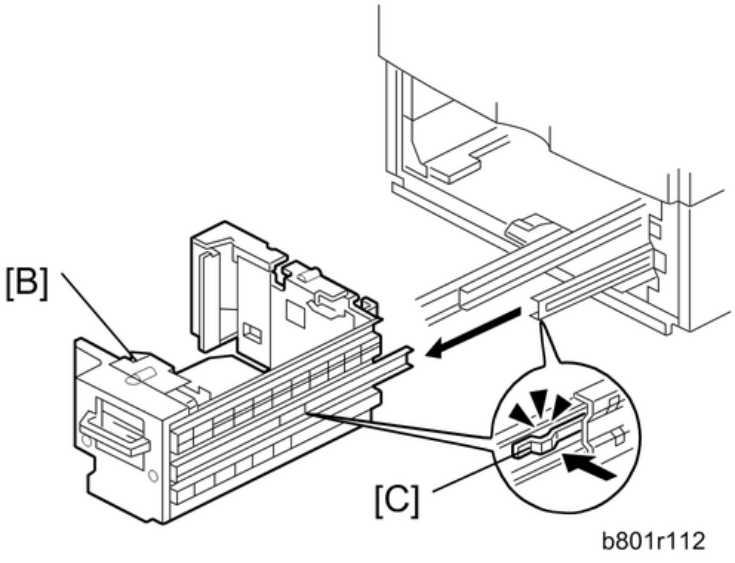
1. Remove the rear cover of the mainframe (step 1 in "For Installing the Tray Heater in D580").
2. Pull out the LCT drawer.

Note

- If the right tray comes out with the left tray, push the right tray into the LCT.



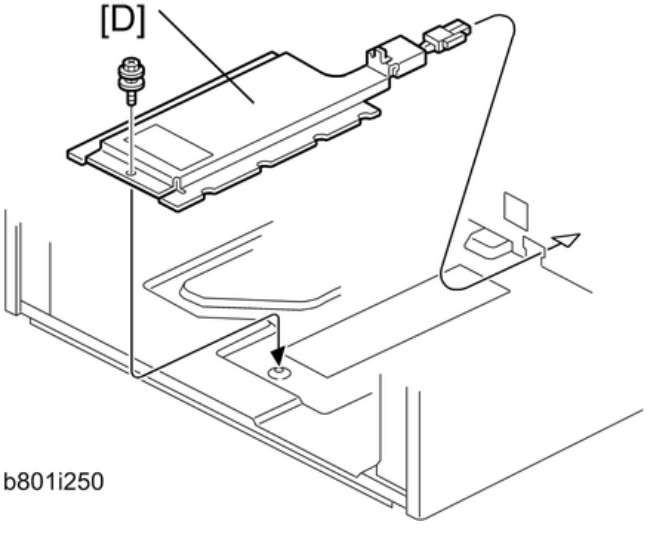
3. Left tray [A] (x 2)



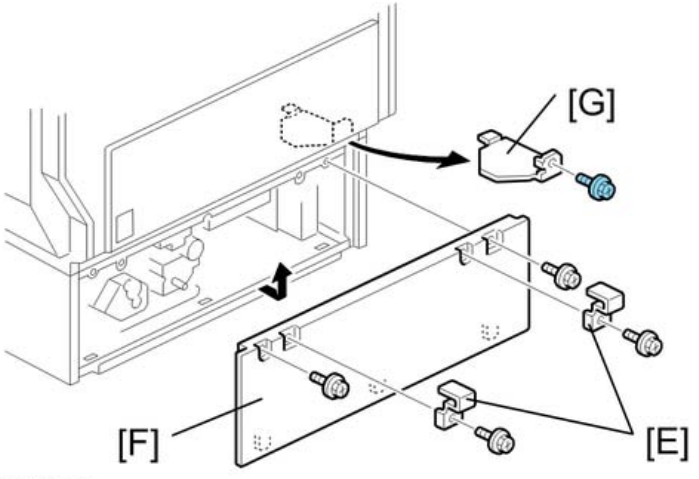
4. Remove the right tray [B] while pressing down the stopper [C].

Note

- When reinstalling the right tray, set the right tray on the guide rail and carefully push the tray in, making sure to keep the tray level.

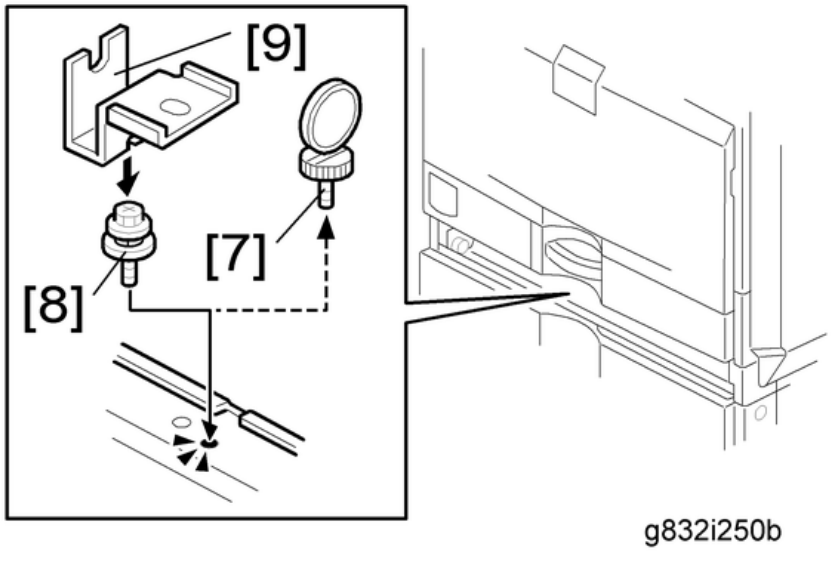


5. Install the tray heater [D] in the optional LCT (x 1).



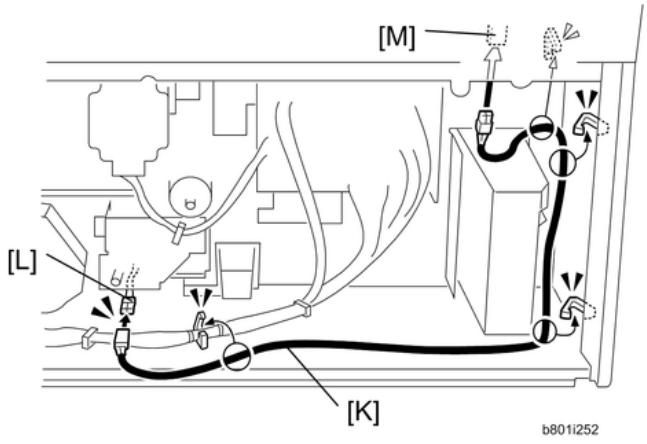
b801i251

6. Remove the two securing brackets [E] (x 1 each), and the then rear cover [F] of the optional LCT (x 2).
7. Remove the harness cover bracket [G] (x 1).



g832i250b

8. Pull out tray 2 from the mainframe.
9. Replace the shoulder screw [7] with the washer screw [8], using the securing bracket [9] (x 1).



10. Connect the harness [K] to the connector [L] of the tray heater.
11. Route the harness [K] as shown and clamp it with four clamps (x 4).
12. Connect the harness [K] to the connector [M] of the mainframe.
13. Reassemble the mainframe and optional LCT.
14. Reassemble the mainframe and optional paper feed unit.

Controller Options

Overview

Important

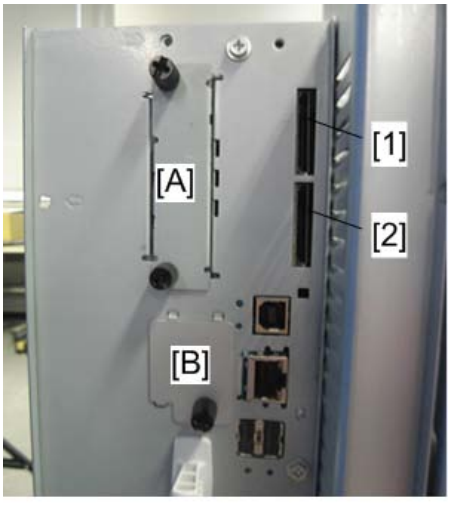
- **Always touch a grounded surface to discharge static electricity from your hands before you handle SD cards, printed circuit boards, or memory boards.**

Note

- If the VM card is installed, use the VM card as a target SD card.

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 "Check All Connections" at the end of this section).



m1242064

I/F Card Slots

- Slot [A] is used for one of the optional I/F connections (only one can be installed): IEEE1284 or IEEE802.11a/g (Wireless LAN).
- Slot [B] is used for Gigabit Ethernet.

SD Card Slots

- Slot [1] (upper) is used for optional applications (e.g.: Netware, PictBridge, IPDS unit, etc).

- Slot [2] (lower) is also used for installing applications, or for service only (for example, updating the firmware).

SD Card Appli Move

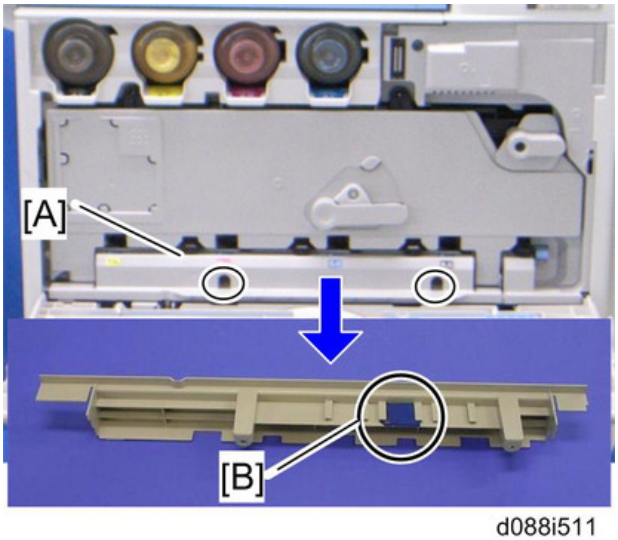
Overview

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

If more than one application is required, the applications must be moved to one SD card with SP5873-1 (Security Application, PictBridge, IPDS unit, etc.).

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

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



d088i511

- Remove the cover [A] (x 2), and then keep the SD card in the place [B] after you move the application program from one card to another card. This is done for the following reasons:
  - The SD card can be the only proof that the user is licensed to use the application program.
  - You may need to check the SD card and its data to solve a problem in the future.

Move Exec

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

Important

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

1. Turn the main switch off.
2. Make sure that a target SD card is in SD Card Slot 1 (upper). The application program is moved to this SD card.
3. 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.
4. Turn the main switch on.
5. Start the SP mode.
6. Select SP5-873-001 "Move Exec".
7. Follow the messages shown on the operation panel.
8. Turn the main switch off.
9. Remove the source SD card from SD Card Slot 2 (lower).
10. Turn the main switch on.
11. Check that the application programs run normally.

Undo Exec

"Undo Exec" (SP5-873-002) lets you move back application programs from an SD card in SD Card Slot 1 (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).

Important

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

1. Turn the main switch off.
2. Insert the original SD card in SD Card Slot 2 (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 on.
11. Check that the application programs run normally.
12. Make sure that the machine can recognize the option.

3. Preventive Maintenance

Maintenance Items

See "Appendices" for the following information:

- Preventive Maintenance Items
- Other Yield Parts

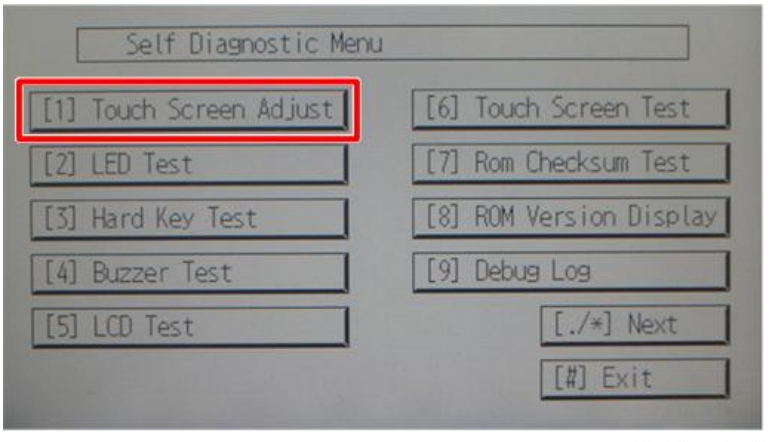
Touch Screen Calibration

Do the following procedure to calibrate the touch screen after you clear the memory, replace the operation panel, LCDC board or NVRAM, or if the touch panel detection function is not working correctly.

Note

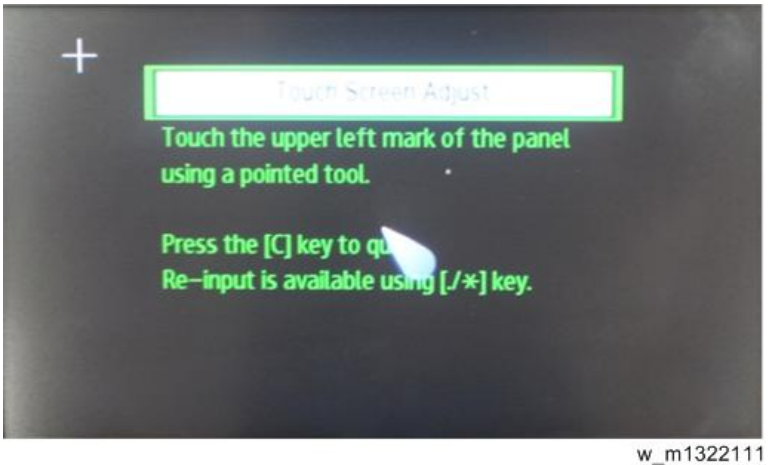
- Do not attempt to use items [2] to [7] on the Self Diagnostic Menu. These items are for design use only.

1. Turn on the main switch.
2. Press the "Simplified Screen" key 4 times, the "Suspend" key one time, and then the "Simplified Screen" key 4 times to open the Self Diagnostic menu.



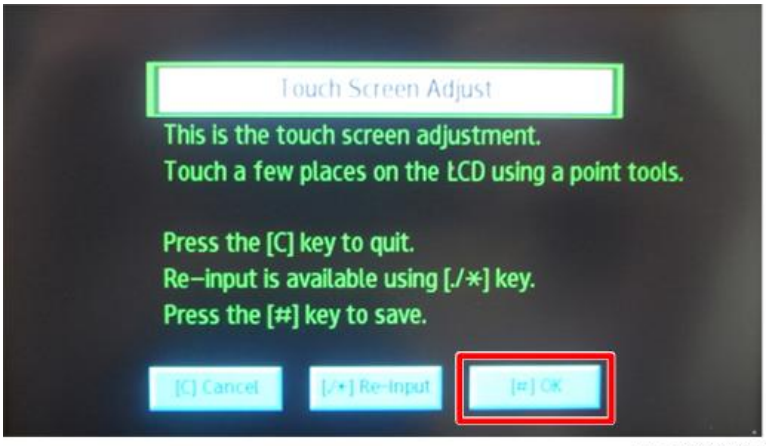
w_m1322110

3. On the touch panel screen, press "[1] Touch Screen Adjust".



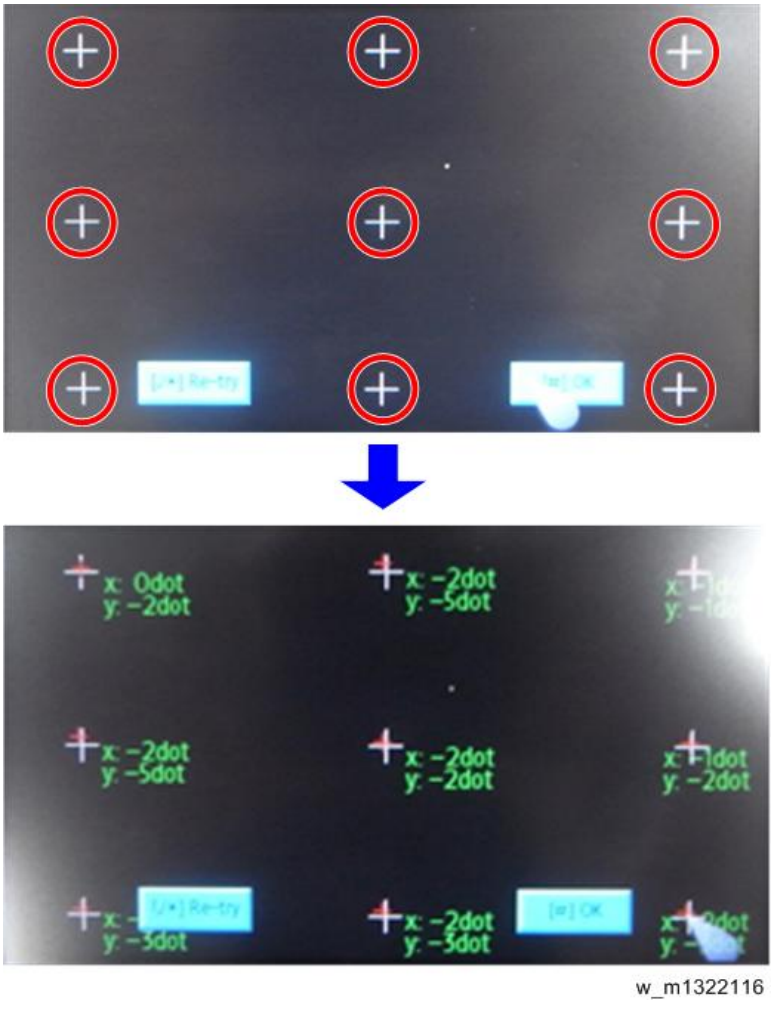
w_m1322111

4. Use a pointed (not sharp!) tool to press the mark + that appears in the upper left, lower right, lower left, center, and upper right in turns on the LCD panel.



w_m1322115

5. Press "[#] OK".
6. Press "[6] Touch Screen Test" on the Self Diagnostic menu.



w_m1322116

7. Touch the nine points circled in red in the illustration above, and make sure that each point (both x and y) is within +/- 5 dots of the original "+" displayed.



w_m1322117

8. When you are finished, press "[#] OK" on the screen.
9. Touch "[#] Exit" on the screen to close the Self Diagnostic menu and save the calibration settings.

4. Replacement and Adjustment

Beforehand

⚠CAUTION

- Before installing options, please do the following:
- 1. If there are printer jobs in the machine, print out all jobs in the printer buffer.
- 2. Turn off the main switch and disconnect the power cord and the network cable.

Important

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

Special Tools

The following special tools should be prepared for maintenance of this model in the field:

No.	Part Number	Description	Q'ty
1	B6455010	SD Card 128MB	1
2	B6455020	SD Card 1GB	1
3	52039502	Silicone Grease G-501	1
4	G0219350	Loop Back Connector *Note 1	1
5	B6795100	Plug - IEEE1284 Type C	1
6	C4019503	20X Magnification Scope	1
7	A2579300	Grease Barrierta - S552R	1
8	B1329700	Lubricant Powder	1

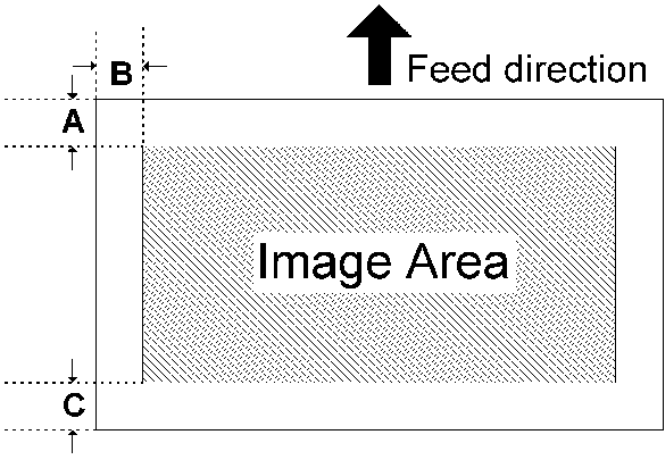
Note

- Loop-back Connector – Parallel (item 4) requires Plug - IEEE1284 Type C (item 5).
- A PC (Personal Computer) is required for creating the Encryption key file on an SD card when replacing the controller board for a model in which HDD encryption has been enabled.

Image Adjustment

Registration

Image Area



A = C = 5.2 mm (0.2"), B = 2.0 mm

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

Leading Edge

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

Side to Side

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

Adjustment Standard

- Leading edge (sub-scan direction): 5.2 ± 2 mm
- Side to side (main-scan direction): 2 ± 1 mm

Paper Registration Standard

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

- Sub-scan direction: 0 ± 9 mm
- Main-scan direction: 0 ± 4 mm

Adjustment Procedure

1. Enter SP2-109-003.
2. Select the test pattern (14: Trimming Area) with SP2-109-003.
3. Exit SP mode.
4. Enter the menu mode, and then select "Operations Test" (User Tools>"Printer Features">"List Test Print">"Operations Test".).

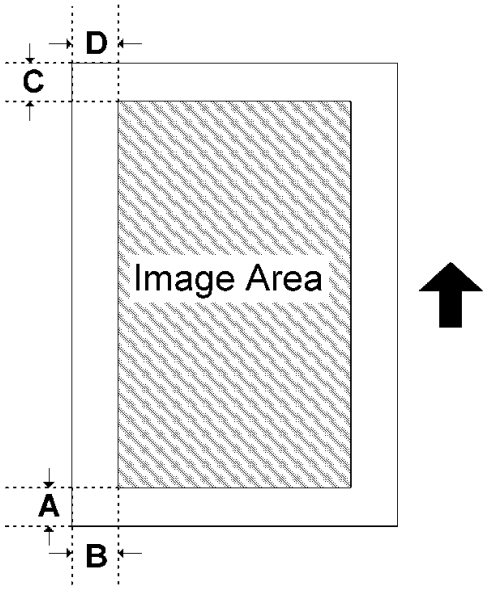
   Note

   - Registration can change slightly as shown on the previous page. Print some pages of the test pattern (Trimming Area) for step 5 and 6. Then average the leading edge and side-to-side registration values, and adjust each SP mode.
5. Do the leading edge registration adjustment.
   a. Check the leading edge registration and adjust it with SP1-001.
   b. Select the adjustment conditions (paper type and process line speed).
   c. Press "10 key" to display the number keys.
   d. Input the value, then press "OK".
   e. Generate a trim pattern to check the leading edge adjustment.
6. Do the side-to-side registration adjustment.
   a. Check the side-to-side registration and adjust it with SP1-002.
   b. Select the adjustment conditions (paper feed station).
   c. Press "10 key" to display the number keys.
   d. Input the value, then press "OK".
   e. Generate a trim pattern to check the leading edge adjustment.
7. Return the value of the setting in SP2-109-003 to "00" before completing this procedure.

Erase Margin Adjustment

Note

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



1. Enter SP2-109-003.
2. Select the test pattern (14: Trimming Area) with SP2-109-003.
3. Exit SP mode.
4. Enter the menu mode, and then select "Operations Test" (User Tools>"Printer Features">"List Test Print">"Operations Test".).
5. Check the erase margin A and B. Adjust them with SP2-103-001 to -020 if necessary.
    - 001 Leading edge: 0.0 to 9.9 mm (default: 4.2 mm)
    - 002 Trailing edge: 0.0 to 9.9 mm (default: 4.2 mm)
    - 003/004 Side-to-side: 0.0 to 9.9 mm (default: 2.0 mm)
    - 006 Trailing edge (Duplex, L size): 0.0 to 4.9 mm (default: 1.0 mm)
    - 007 Trailing edge (Duplex, M size): 0.0 to 4.0 mm (default: 0.8 mm)
    - 008 Trailing edge (Duplex, S size): 0.0 to 4.0 mm (default: 0.6 mm)
    - 009/010 Side-to-side (Duplex): 0.0 to 1.5 mm (default: 0.3 mm)
    - 011 Trailing edge (Duplex, L size, Thick): 0.0 to 4.0 mm (default: 1.0 mm)

- 012 Trailing edge (Duplex, M size, Thick): 0.0 to 4.0 mm (default: 0.8 mm)
- 012 Trailing edge (Duplex, S size, Thick): 0.0 to 4.0 mm (default: 0.6 mm)
- 014/015 Side-to-side (Duplex, Thick): 0.0 to 1.5 mm (default: 0.3 mm)
- 016 Leading edge (Thin): 0.0 to 9.9 mm (default: 4.2 mm)
- 017 Trailing edge (Thin): 0.0 to 9.9 mm (default: 4.2 mm)
- 018 Trailing edge (Duplex, L size, Thin): 0.0 to 4.0 mm (default: 1.0 mm)
- 019 Trailing edge (Duplex, M size, Thin): 0.0 to 4.0 mm (default: 0.8 mm)
- 020 Trailing edge (Duplex, S size, Thin): 0.0 to 4.0 mm (default: 0.6 mm)

6. Return the value of the setting in SP2-109-003 to "00" before completing this procedure.

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 "Forced Line Position" as follows to do the forced line position adjustment.

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

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

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

Gamma Correction

Note

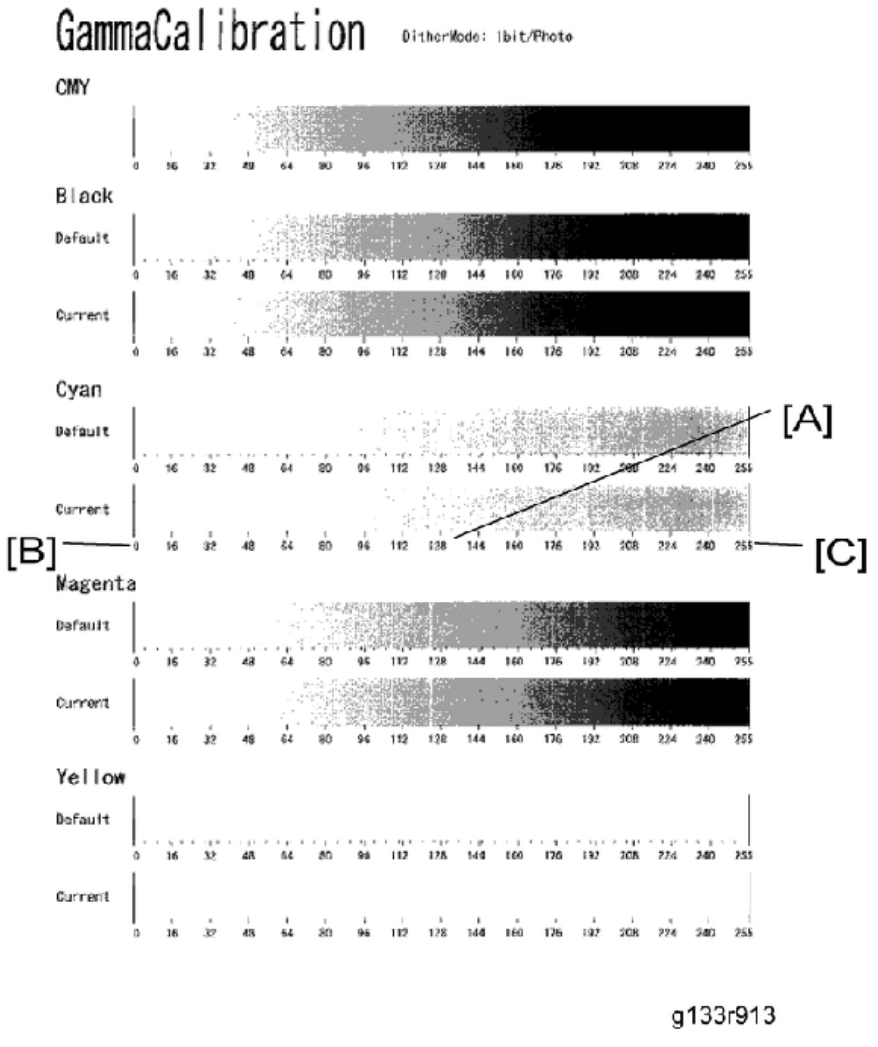
- Clean and/or replace related parts first to solve color quality problems. Do these procedures if adjustments are necessary:

Summary

To adjust the printer gamma:

- Select the print mode you want to calibrate
- Print a color calibration test sheet
- Make the gradation scales on the printout smooth from the lowest to the highest density. Adjust the CMY gradation scale at the top of the chart by balancing the density of the C, M, and Y gradation scales – the CMY gray scale should change smoothly from minimum to maximum. There should be no coloration.

Examine this color adjustment sheet:



You can adjust 15 points for each color: (example [A]) between 0 (lowest density) [B] and 255 (highest density) [C]. For each point, you can adjust the density within 0 and 255.

The gradation scales marked 'Default' are printed according to the default gamma settings in the flash ROM in the controller. The gamma adjustment changes the densities at the adjustable points in the gradation scale. The gradation scale marked "Current" shows the current settings.

Compare the "Current" gradation scale with the 'Default' at the time you do the adjustment procedure.

Select the density for each of the 15 adjustable points, excluding points 0 and 255, from the 'Default' gradation scale.

The NVRAM holds three sets of controller gamma settings:

- Those saved this time: Controller SP1-101 "ToneCtlSet" - "Tone (Current)"

- Those saved in the previous adjustment: Controller SP1-101 "ToneCtlSet - Tone (Prev)"
- The factory settings: Controller SP1-101 "ToneCtlSet - "Tone (Factory)".

Adjustment Procedure

1. Enter the controller service mode.
2. Select SP1-102-001 "ToneCtlSet".
3. Press "10 key" to display the number keys.
4. Enter the number of mode you want to calibrate, then press "OK".

SP Input Value	Resolution	Mode	Number of bits	Number of colors
0	1200x1200	Photo	1	4
1	600x600	Photo	4	4
2	600x600	Photo	2	4
3	600x600	Photo	1	4
4	1200x1200	Text	1	4
5	600x600	Text	4	4
6	600x600	Text	2	4
7	600x600	Text	1	4

5. Press "Exit" to return the controller service mode menu.
6. Select SP1-103-001 “ToneCtlSheet”.
7. Press "Execute" to print out the “color calibration test sheet”.
8. Press "Exit" to return the controller service mode menu.
9. Select SP1-104 “ToneCtlValue”, then select the setting you want to adjust from 001-075. The three digits in the display (example ‘016’) indicate a position on the color calibration test sheet.

Operation Panel Display	Color Calibration Test Sheet
Set Black 1	Default Value 16
Set Black 2	Default Value 32
Set Black 3	Default Value 48

Operation Panel Display	Color Calibration Test Sheet
:	:
:	:
Set Black 13	Default Value 208
Set Black 14	Default Value 224
Set Black 15	Default Value 240
Set Cyan 1 - 15	See Set Black 1 - 15
Set Magenta 1 - 15	See Set Black 1 - 15
Set Yellow 1 - 15	See Set Black 1 - 15

Adjust the color density at each of the 15 points for each of the four colors.

Do the following to decide what density value to input:

a) Look at the color adjustment sheet.

b) Look at the gradation scale entitled 'Default' for the color you want to adjust.

c) Go along the scale until you reach the density you want to input.

d) Read off the value on the scale and store it in the machine.

- Press "10 key" to display the number keys.
- Change the digit, then press "OK".
- Press "Exit" to exit from the menu.

e) Do the same for all 15 points.

10. When the density setting is complete for all colors, print out a color adjustment sheet again and make sure that the gradation scale for each printed color is smooth and that the CMY gradation scale is gray. Do the adjustment again if there is an anomaly (normally, repeat this procedure 3 to 5 times).
11. Do these when the adjustment results are satisfactory.
12. Use SP1-105-001 to keep the adjusted settings.

Note

- You must reset the controller to keep the new settings in the controller NVRAM.

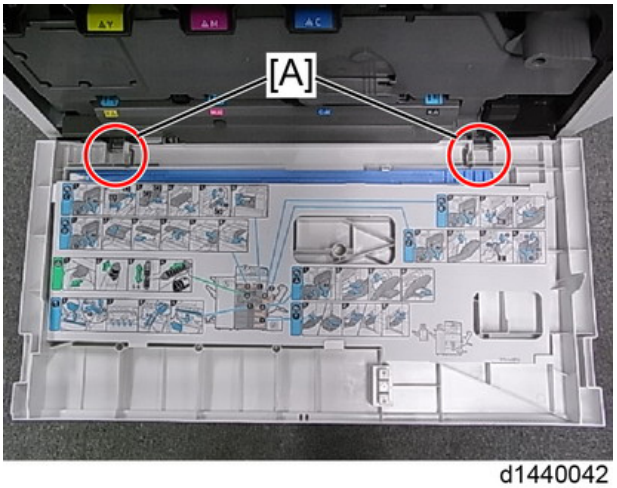
Exterior Covers

Front Door



m1242030

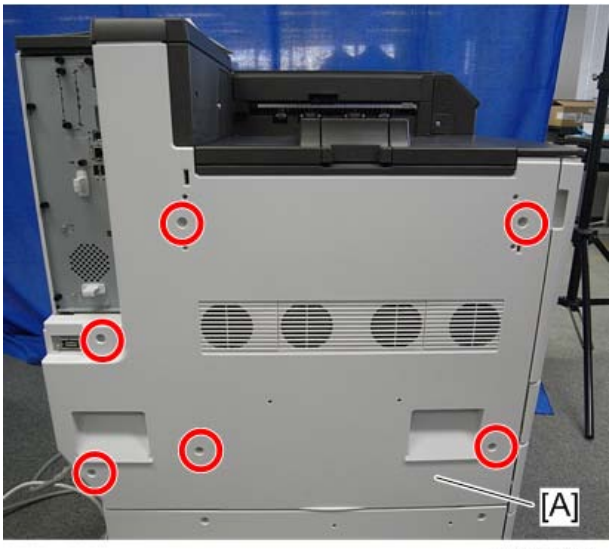
1. Open the front door [A].



d1440042

2. Remove the two pins [A], and then remove the front cover.

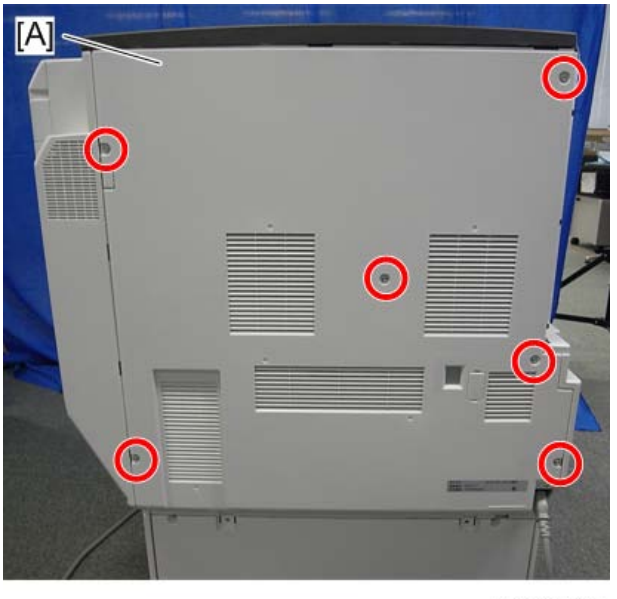
Left Cover



m1242031

1. Left cover [A] (x 6)

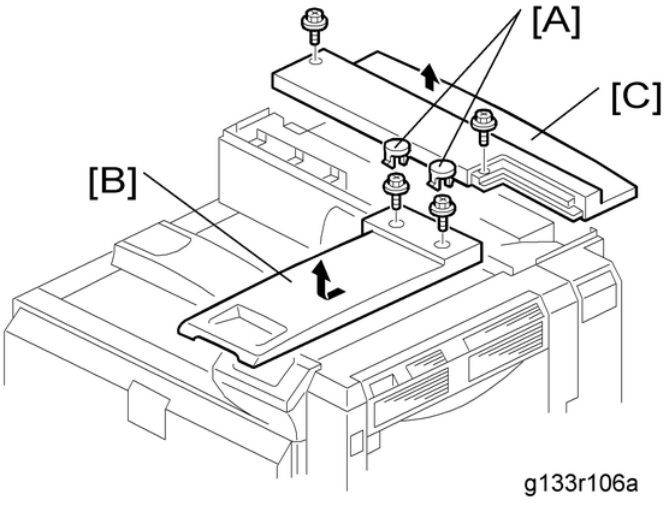
Rear Cover



m1242032

1. Rear cover [A] (x 6)

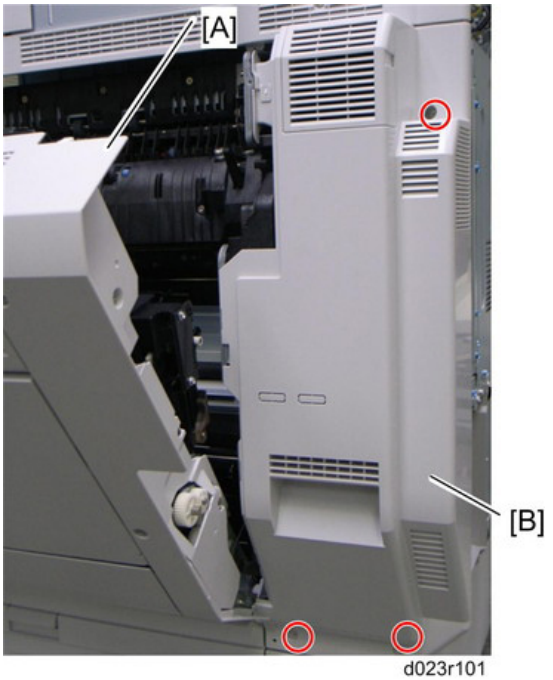
Top Right and Rear Cover



1. Remove the screw caps [A].
2. Top right cover [B] (x 2)
3. Top rear cover [C] (x 2)

Right Rear Cover

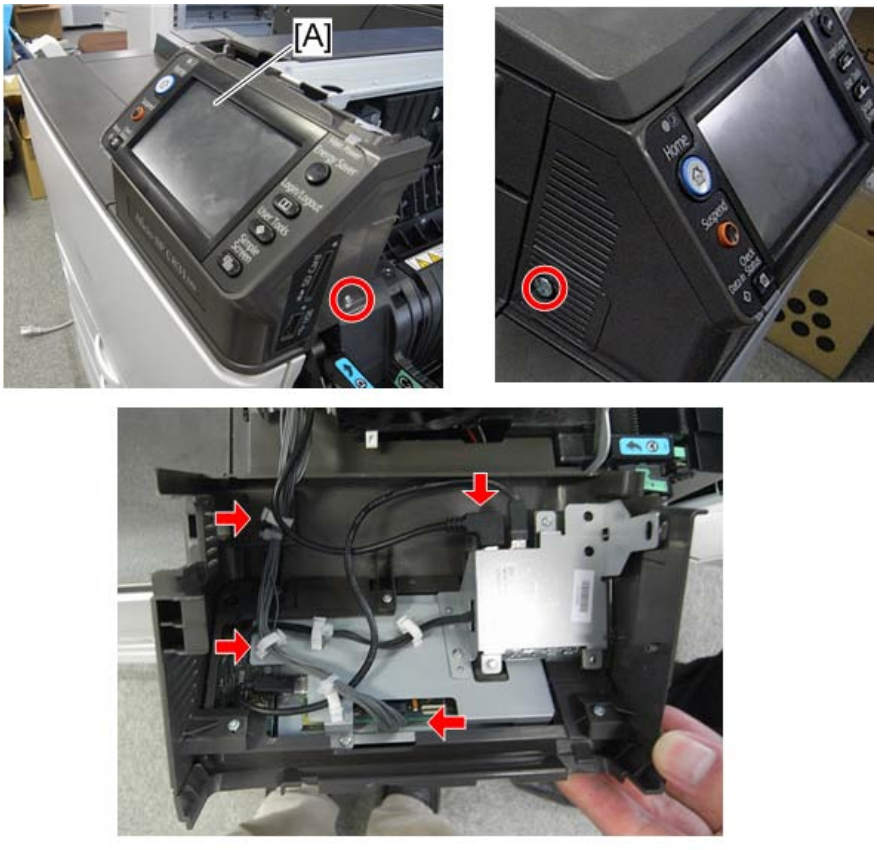
1. Rear cover (p.118)



2. Open the right door [A].
3. Right rear cover [B] (x 3)

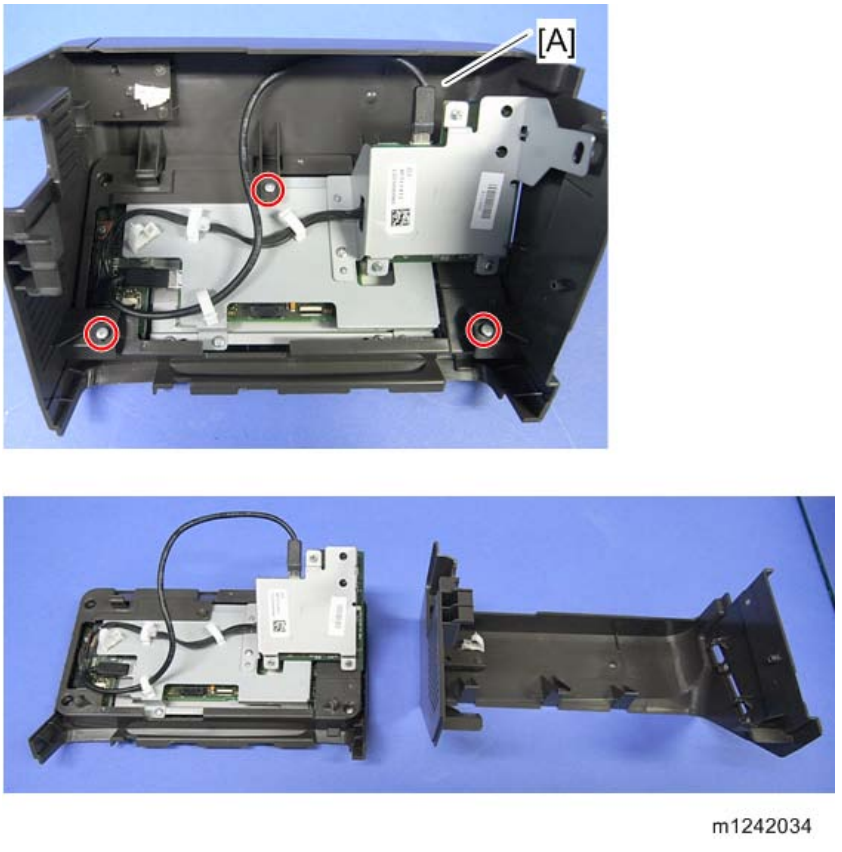
Operation Panel

1. Open the right door.



m1242033

2. Operation panel [A] (x 2, x 1, x 2 USB x 1)



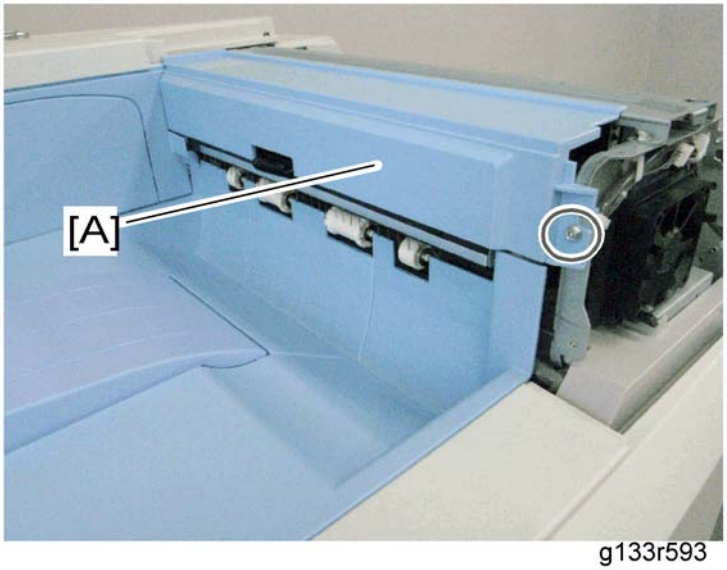
3. Operation panel cover [A] (x 3)

Note

- Do the touch screen calibration after you replace the operation panel.(☛ p.102 "Touch Screen Calibration")

Paper Exit Cover

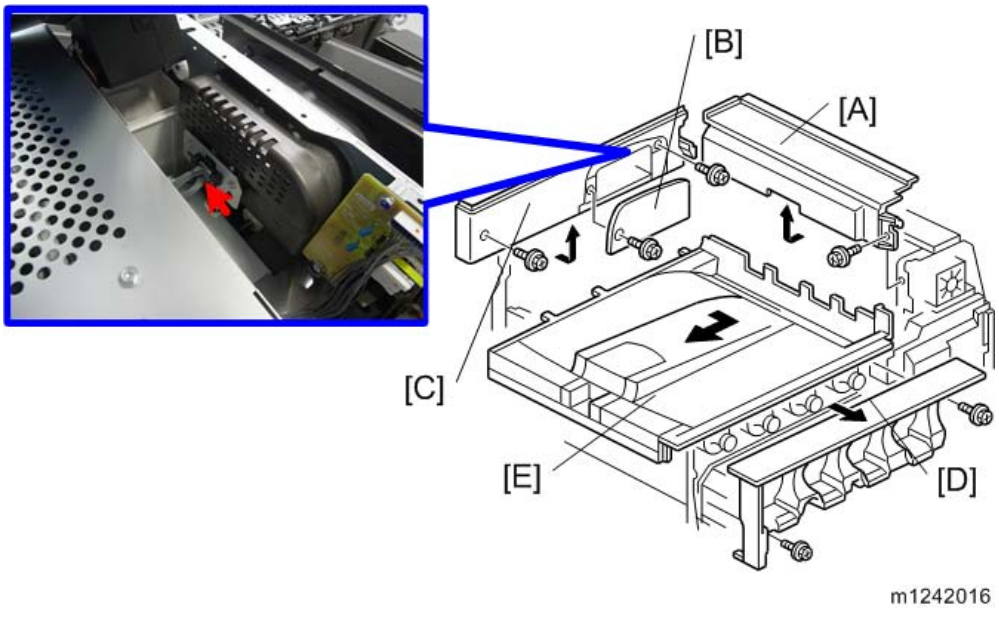
1. Top right cover (☛p.119)
2. Operation panel cover (☛p.120)



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

Output Tray

1. Top right cover and top rear cover (☛p.119)
2. Operation panel cover (☛p.120)
3. Left cover (☛p.118)

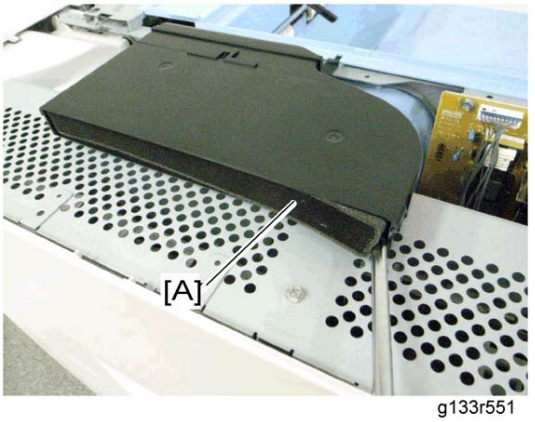


4. Paper exit cover [A] (x 1)
5. Inner rear cover [B] (x 1)
6. Connector cover [C] (x 2, x1)
7. Open the front door.
8. Open the right door.
9. PCDU (p.137)
10. Toner cartridge cover [D] (x 2)
11. Output tray [E]

Ozone Filter

Ozone filter for the charge unit

1. Top right cover (p.119)
2. Top rear cover (p.119)



g133r551

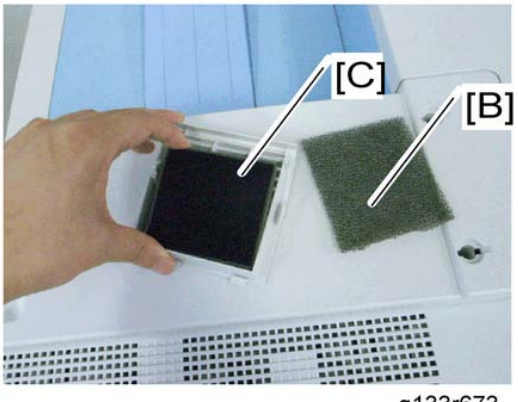
3. Ozone filter [A]

Ozone filter for the AC Controller



g133r672

1. AC controller fan cover [A] (hook)



g133r673

2. Filter [B]
3. Ozone filter [C]

Laser Optics

⚠WARNING

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

Caution Decal Location

Caution decals are placed as shown below.

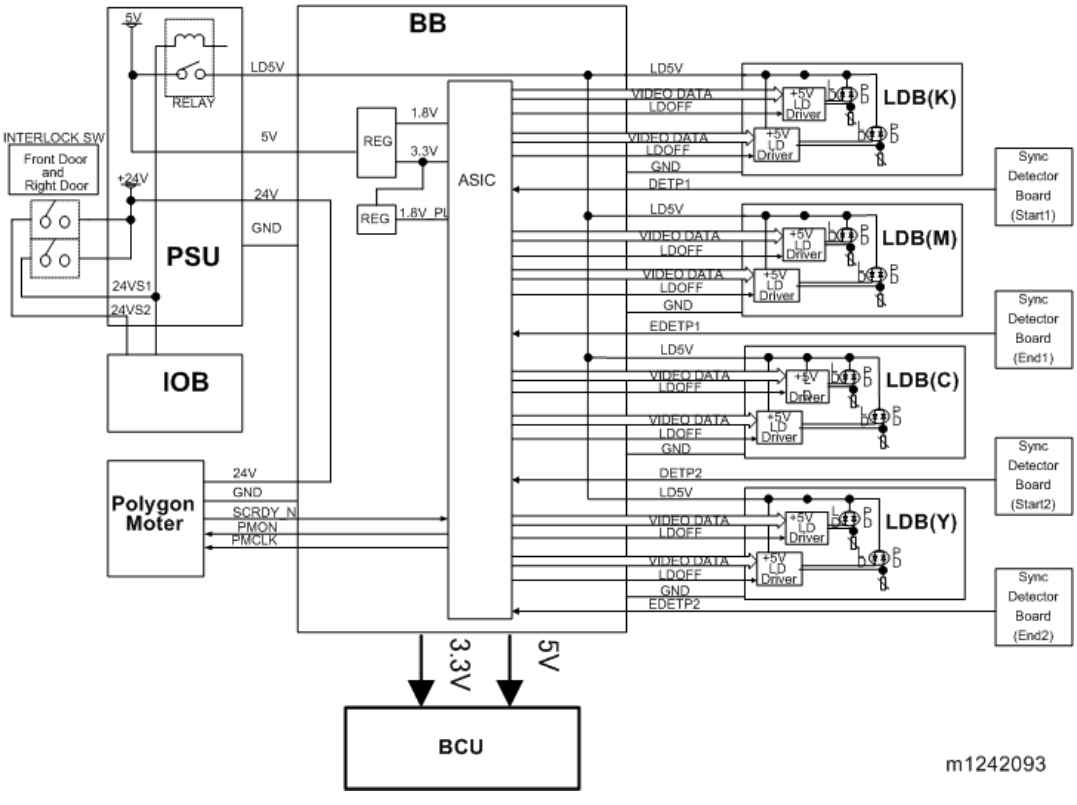


d088r113

⚠WARNING

- Be sure to turn off the main switch and disconnect the power plug from the power outlet before beginning any disassembly or adjustment of the laser unit. This machine uses a class IIIb laser beam with a wavelength of 658 nm and an output of 9 mW. The laser can cause serious eye injuries.

LD Safety Switch



A relay on the PSU ensures technician and user safety. It also prevents the laser beam from turning on during servicing. This relay turns off when the front cover, upper left cover, or right door is opened. At this time it cuts the power (+5V) supplied to the LD board for each color through the BB (Bridge Board).

Two safety switches are turned on or off by the front door or right door, and this opens the relay.

- LD Driver: Precise Pulse Modulation ASIC on C-MOS technology
- LDB: LD Drive Board (included in the LD Unit)

Error Messages

Along with other switches, the LD safety switches help show error messages related to external covers. When one or more covers are open, the messages, "Cover is open." and "Close the indicated cover," show with a diagram. The diagram shows which cover is open.

Laser Optics Housing Unit

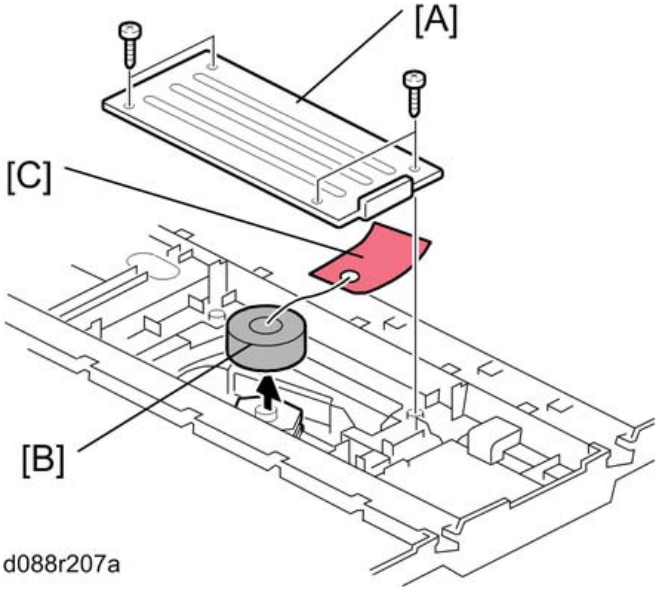
⚠CAUTION

- Before installing a new laser optics housing unit, remove the sponge padding and the tag from the new unit.

Note

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

Preparing the new laser optics housing unit



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

Before removing the old laser optics housing unit

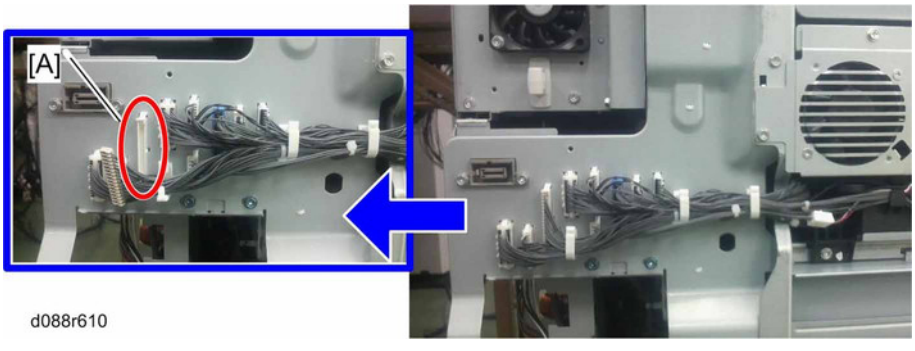
Do the following settings before removing the laser optics housing unit. These are adjustments for skew adjustment motors in the laser optics housing unit.

1. Plug in and turn on the main power switch of the machine.
2. Enter the SP mode.
3. Execute SP2220-001 to clear the L2 lens positioning motor setting for Magenta.
4. Execute SP2220-002 to clear the L2 lens positioning motor setting for Cyan.
5. Execute SP2220-003 to clear the L2 lens positioning motor setting for Yellow.
6. Exit the SP mode.
7. Turn off the main power switch and disconnect the power cord of the machine.

Recovery procedure for no replacement preparation of laser optics housing unit

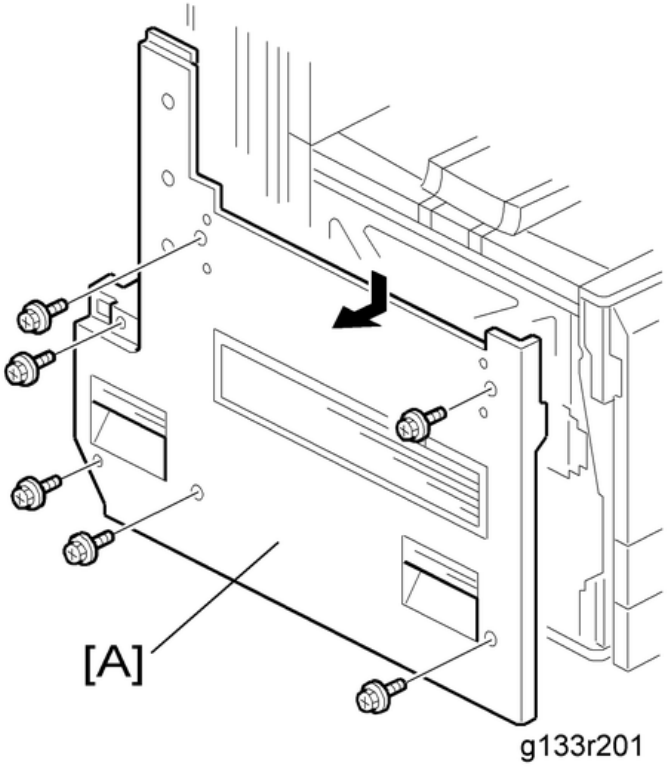
If you did not do the procedure in 'Before removing the old laser optics housing' before removing the old laser optics housing unit, you must do the following.

1. Turn off the main power switch and disconnect the power cord.
2. Remove the left cover and harness cover bracket (see the following "Removing the old laser optics housing unit")

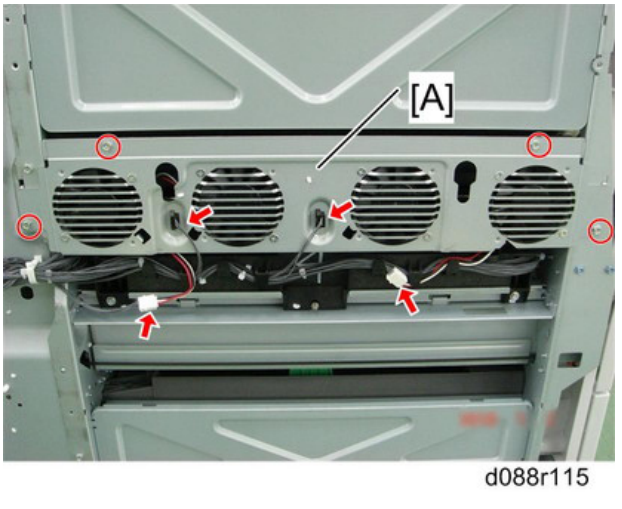


3. Disconnect the harness [A] of the skew correction motor.
4. Do steps 1 to 7 of "Before removing the old laser optics housing unit".
5. Connect the harness [A] and reinstall the harness bracket and left cover.
6. Plug in and turn on the main power switch.

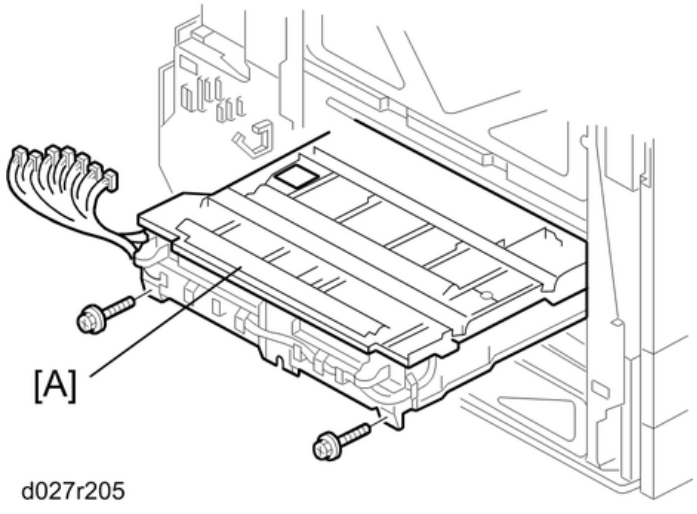
Removing the old laser optics housing unit



1. Left cover [A] (x 6)



2. Left fan bracket [A] for the laser housing optics unit (x 4, x 4)

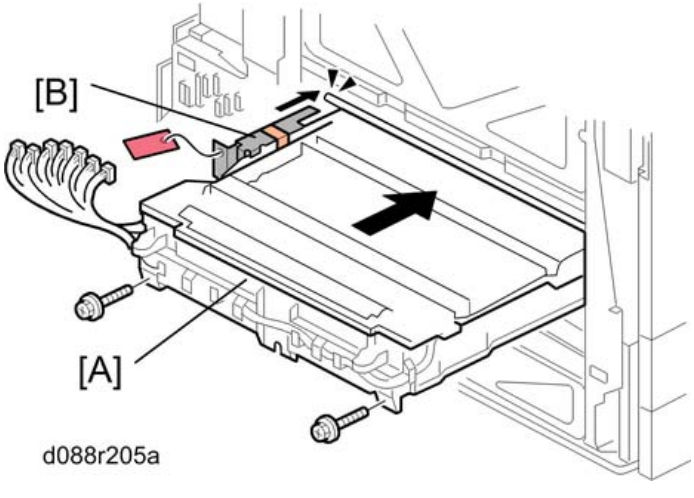


3. Remove the old laser optics housing unit [A] (x 2, All s, x 3)

Installing a new laser optics housing unit

Note

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



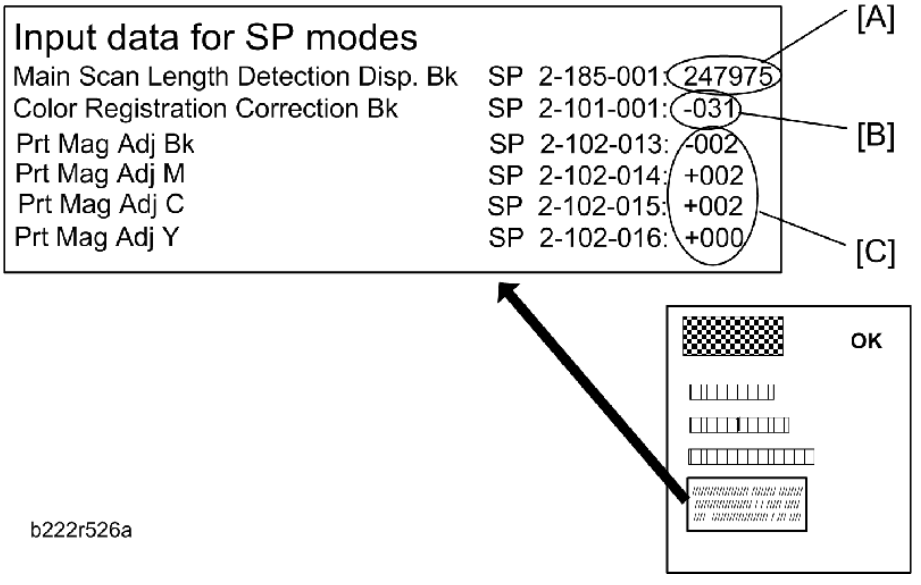
1. Push the new laser optics housing unit [A] slowly into the machine until the bracket [B] bumps against the frame of the machine.

2. Remove the bracket [B], and then push the new laser optics housing unit fully into the machine (x 2, All 's, x 3).
3. Reassemble the machine.

After installing the new laser optics housing unit

Do the following adjustment after installing the new laser optics housing unit.

1. Plug in and turn on the main power switch.



2. Adjust the main scan magnification for K, M, C, Y.
   - Input the standard values [C] provided with a new laser optics housing unit for the main scan magnification adjustment with SP2-102-013, 014, 015, 016.

Note

   - The values [C] are different for each laser optics housing unit.
3. Adjust the main scan magnification only for black (K).
   - Input the standard value [A] provided with a new laser optics housing unit for the main scan magnification adjustment with SP2-185-001.

Note

   - The value [A] is different for each laser optics housing unit.
   - Print the test pattern (14: 1-dot trimming pattern in the SP2-109-003).
   - Check that the left and right trim margin is within 4 ± 1 mm. If not, change the standard value for the main scan magnification adjustment.
4. Adjust the main scan registration only for black (K).

- Input the registration value [B] provided with a new laser optics housing unit for the main scan registration adjustment with SP2101-001.

Note

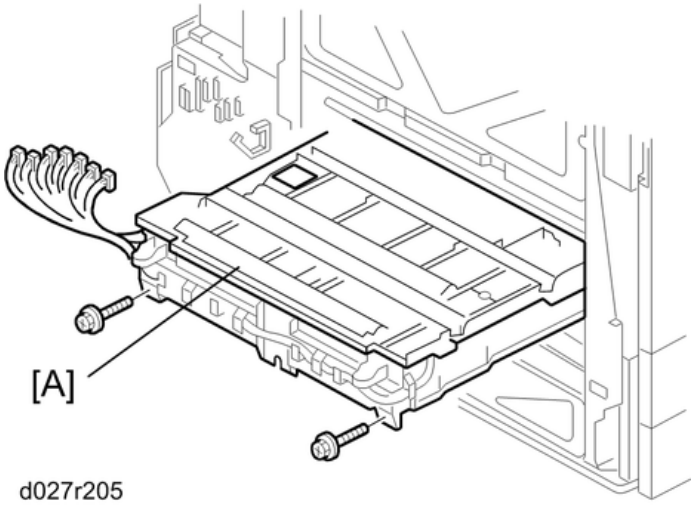
- The value [B] is different for each laser optics housing unit.
- Print the test pattern (14: 1-dot trimming pattern in the SP2-109-003).
- Check that the left trim margin is within 2 ± 1 mm. If not, change the registration value for the main scan registration adjustment.

5. Select "0" with SP2-109-003 after printing the "1-dot trimming pattern.
6. Do the line position adjustment.
   - First do SP2-111-3.
   - Then do SP2-111-1.

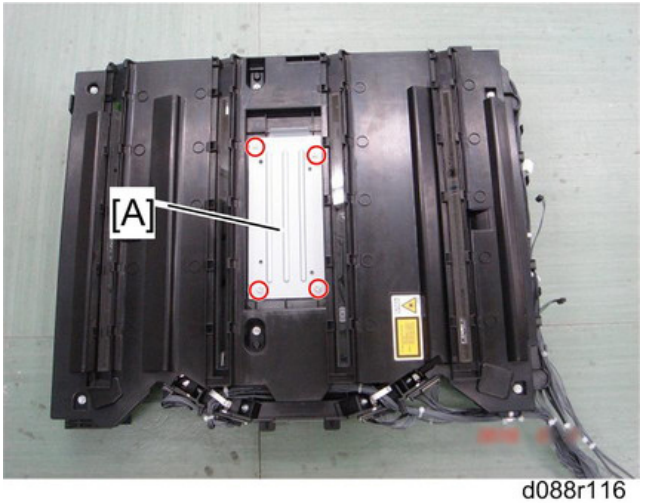
     To check if SP 2-111-1 was successful, watch the screen during the process. A message is displayed at the end. Also, you can check the result with SP 2-194-10 to -12.
7. Exit the SP mode.

After you replace the housing unit, do the adjustments in the following section of the manual: Image Adjustment – Registration.

Polygon Mirror Motor and Drive Board

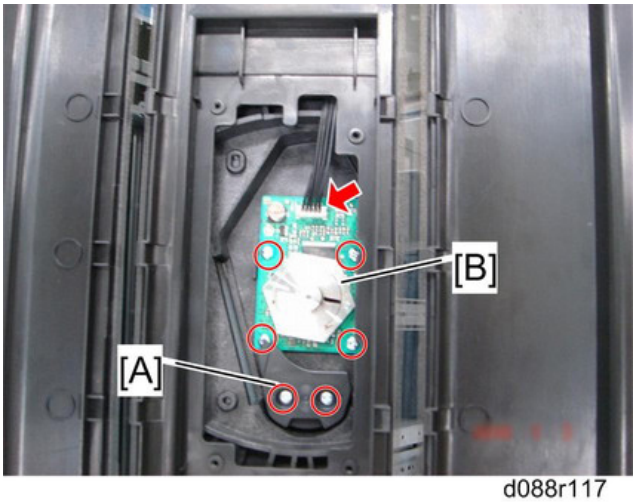


1. Laser optics housing unit [A] (p.128)



d088r116

2. Polygon mirror motor cover [A] of the laser optics housing unit (x 4)



d088r117

3. Polygon mirror motor holder [A] (x 2)
4. Polygon mirror motor [B] (x 4, x 1)

After installing the polygon mirror motor:

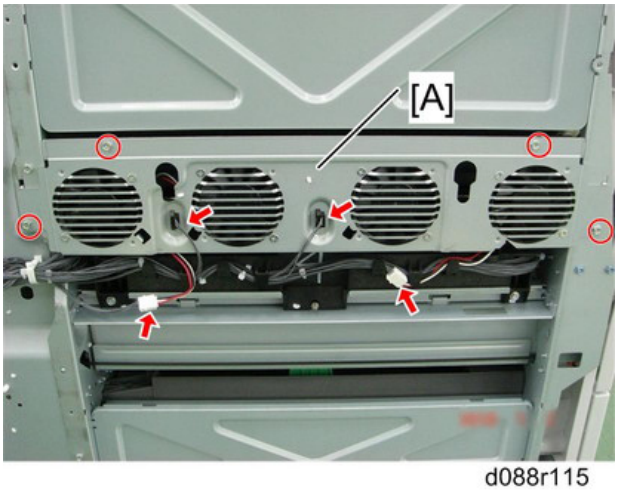
- 1) Do the "Forced Line Position Adj. Mode c" (SP2-111-3).
- 2) Then do the "Forced Line Position Adj. Mode a" (SP2-111-1).

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

After you replace the motor, do the adjustments in the following section of the manual: Image Adjustment – Registration.

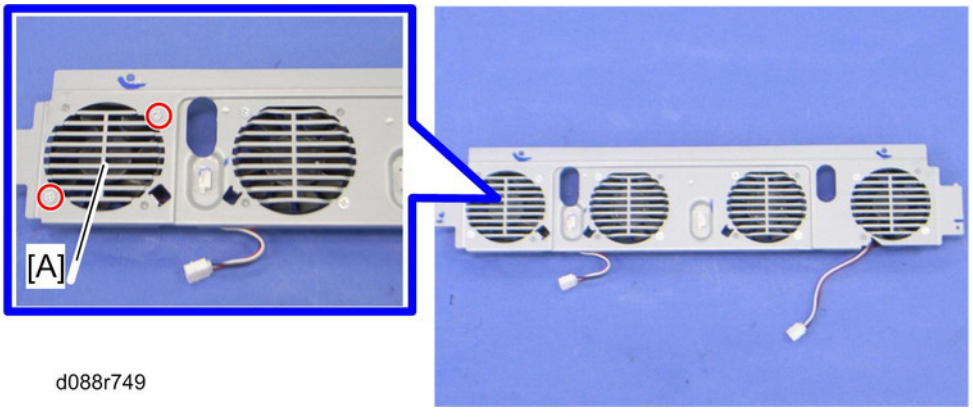
Airflow Fans

1. Left cover (☛ p.118)



d088r115

2. Left fan bracket [A] for the laser housing optics unit (x 4, x 4)

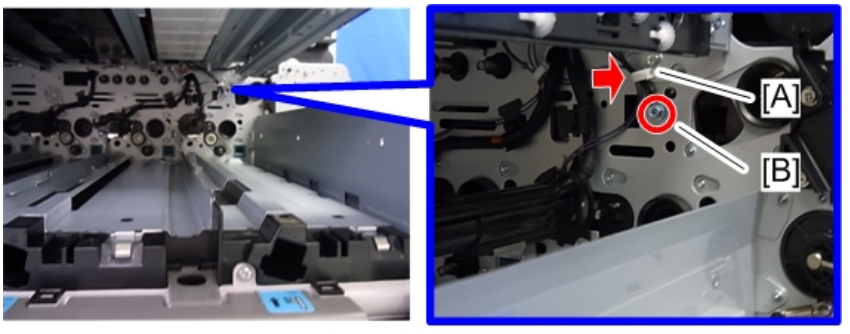


d088r749

3. Airflow fans [A]
    - There are four airflow fans on the bracket.

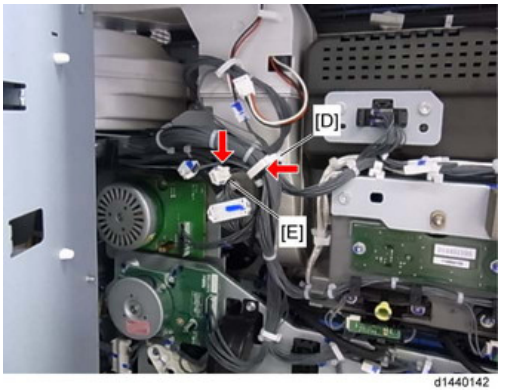
Laser Optics Rear Right Thermistor

1. Open the right door.
2. Fusing unit (☛ p.195)
3. Open the front door.
4. All PCDUs (☛p.137)
5. Image transfer belt unit (☛ p.153)



m1242094

6. Release the harness clamp [A] and remove the screw [B].
7. Open the controller box (☛ p.243).



d1440142

8. Release the harness clamp [D] and disconnect the thermistor connector [E].
9. Pull out the laser optics rear right thermistor gently from behind by pinching its harness (x 2, x 1, x 1).

Note

- **When reinstalling the laser optics rear right thermistor:**
- The thermistor harness is about 25 cm long. When routing the harness, use tweezers, and pay extra attention to avoid damaging the harness.

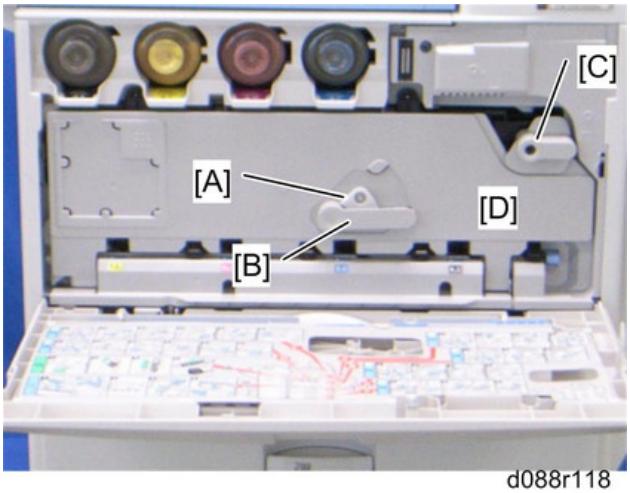
Image Creation

PCDU

Note

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

1. Open the front door.



d088r118

2. Lever lock [A] (x 1)
3. Turn the drum positioning plate lever [B] and the image transfer unit lock lever [C] counter-clockwise.
4. Open the drum positioning plate [D].



d088r119

5. Pull out the PCDU (hold the grip while you pull it out).

Drum Unit and Development Unit

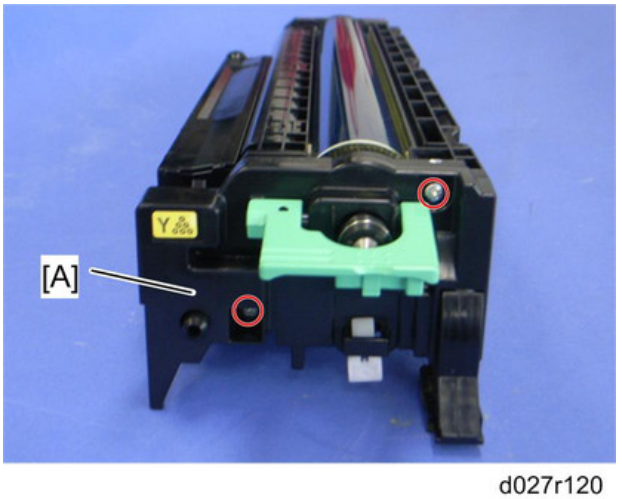
The new drum unit has a front cover and a front joint. When you attach the new drum unit to the development unit, remove a front cover and a front joint at first.

And use them for reassembling the new drum unit and development unit.

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

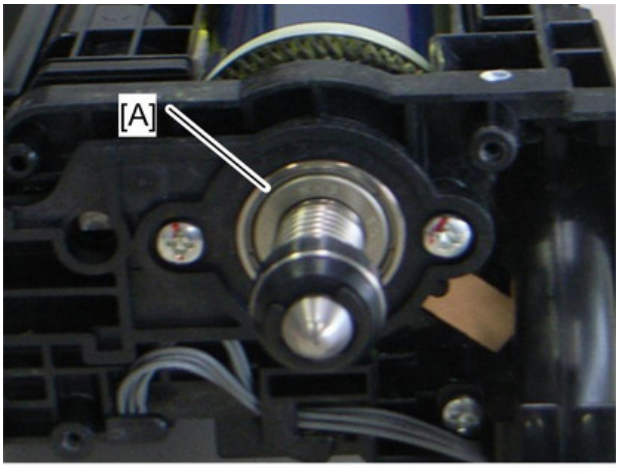
   Note

   - If you do this, then the machine will reset the PM counter for the drum unit automatically, after you turn the power on again.
2. Turn the machine power off.
3. PCDU (p.137)



d027r120

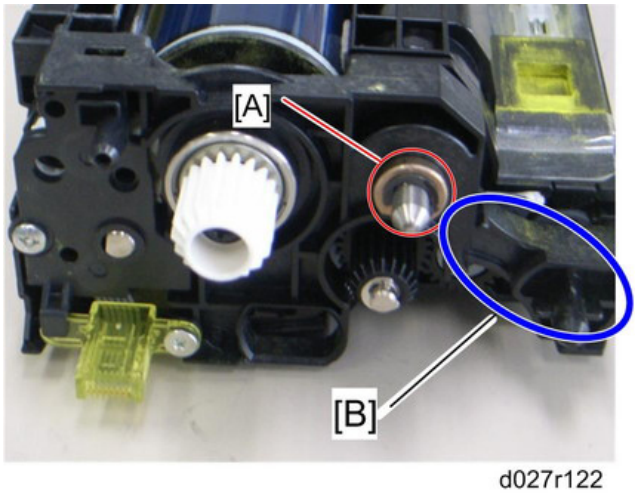
4. Front cover [A] (x 2)



d027r121

Note

- Do not touch the bearing [A] after removing the front cover. The bearing is properly applied with lubricant.

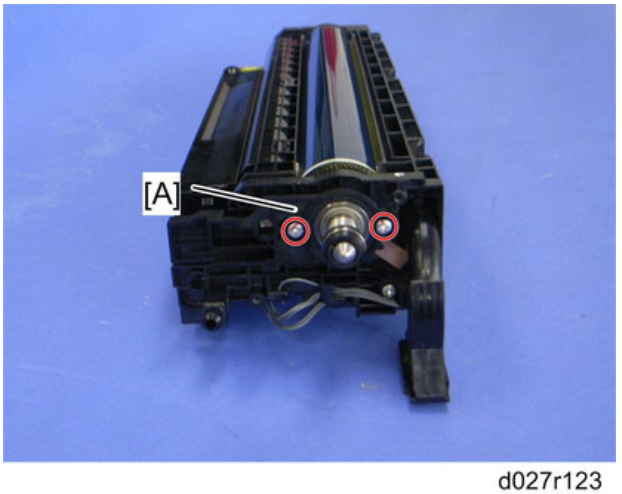


d027r122

5. Remove the bushing [A] of the development roller at the rear of the PCDU (ℂ x 1).

Important

- **Do not put too much weight on the PCDU. Otherwise, the plastic frame [B] of the development unit may be damaged.**

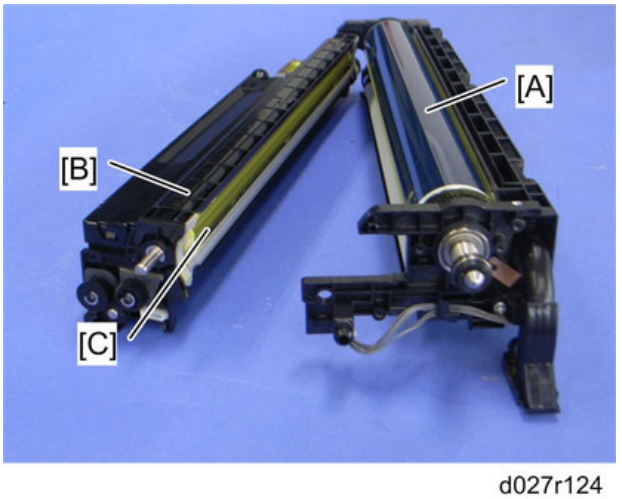


d027r123

6. Remove the front joint [A] (x 2, x 1).

Note

- The front joint [A] is firmly set. Remove it with a flat screwdriver.

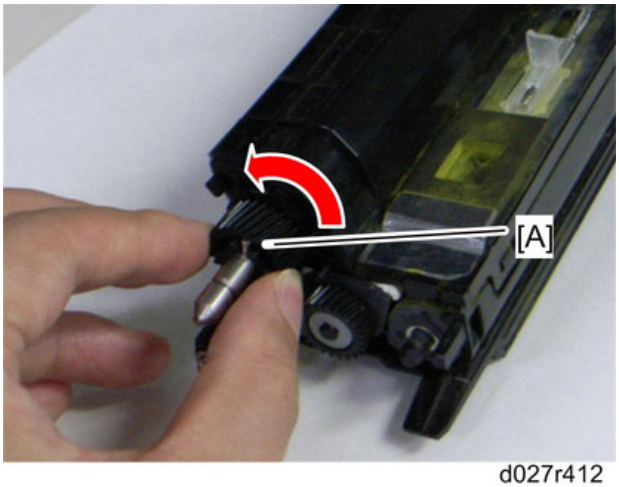


d027r124

7. Drum unit [A] and Development Unit [B]

Note

- When the development unit is removed from the drum unit, clean the entrance mylar [C] with a vacuum.



d027r412

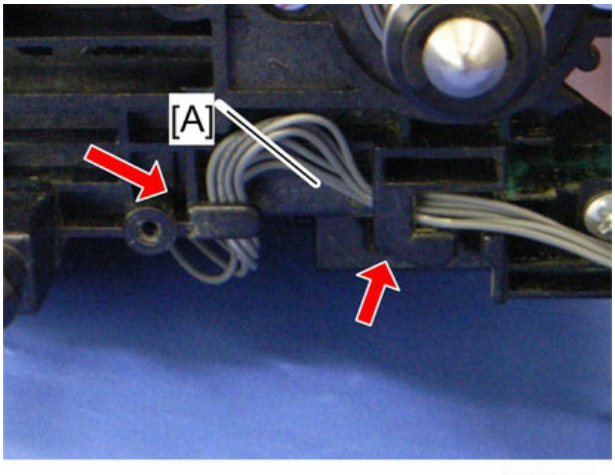
8. Rotate the development roller [A] five or six times in the counterclockwise direction.

Note

- This step removes developer that has stuck to the development roller, which would cause color unevenness.

9. If you change the development unit, do the ACC procedure.
10. Execute the drum phase adjustment with SP1902-001 twice.

When reassembling the PCDU:



d027r681

- Make sure that the harness [A] is hooked as shown.

Developer

1. Set SP 3902-xxx to "1".

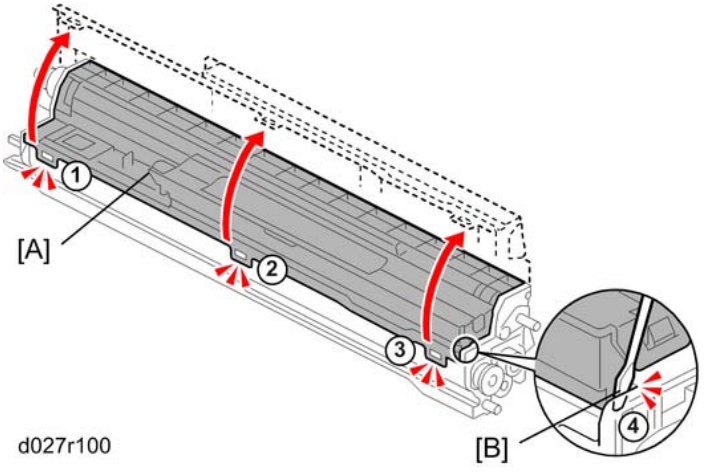
Black: 3902-005

Yellow: 3902-006

Cyan: 3902-007

Magenta: 3902-008

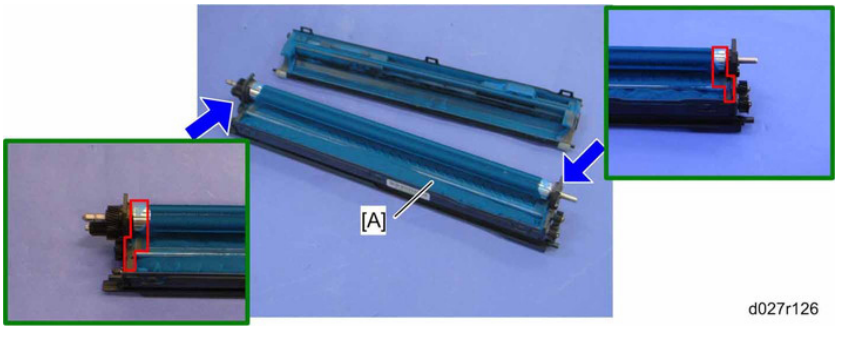
2. Turn the machine power off.
3. Development unit (p.138)



4. Hopper cover [A] (4 hooks)
   - Release the three hooks first in the correct order (from ① to ③).
   - Put the head of a screwdriver in the groove gap [B] as shown, and then release the hook ④.

CAUTION

- Follow the correct order ① to ④. Otherwise, the hopper cover may be damaged. The hook ④ breaks easily.



5. Shake a bag of developer and pour it into the development hopper [A].
6. Reattach the hopper cover (hook x 3).

⚠CAUTION

- Keep the developer off at both ends of the development unit enclosed in red lines in the diagram.

7. Turn the machine power on. The machine initializes the developer and resets the PM counter for the developer. (For details of the developer initialization result, see p.577 "Developer Initialization Result".
8. Do the ACC procedure.

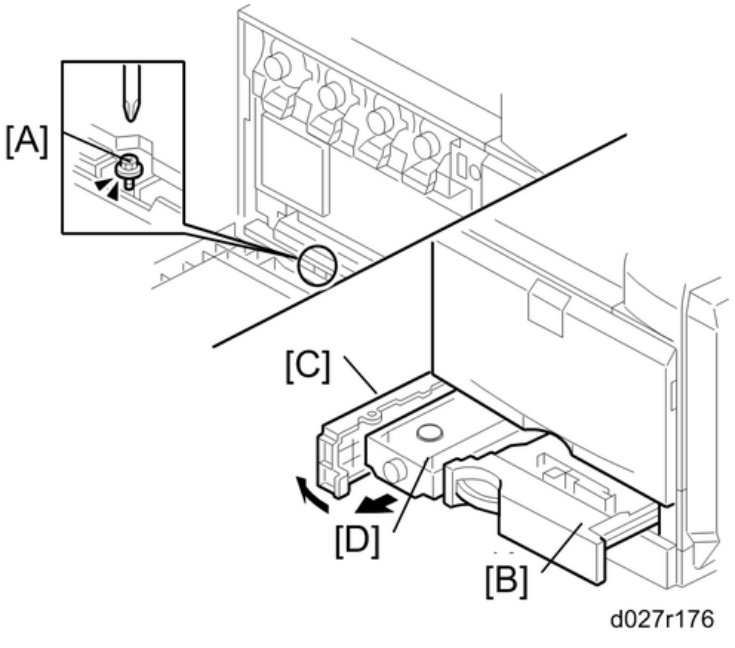
Toner Collection Bottle

If you will install a new bottle, and the old bottle is not in a full or near-full condition, then set SP 3902-017 to 1.

Note

- If you do this, then the machine will reset the PM counter for the bottle automatically, after you turn the power on again.
- If the bottle is in a full or near-full condition, it is not necessary to do this.

1. Turn off the main power switch.

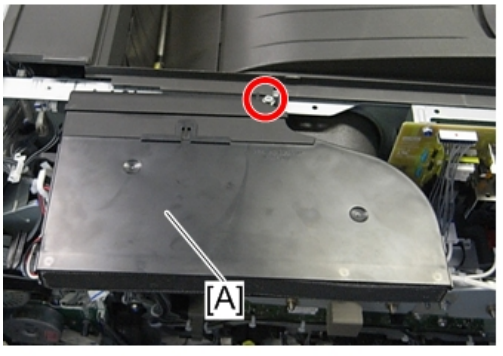


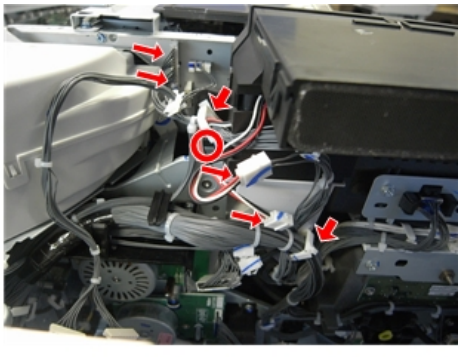
2. Open the front door and remove the screw [A].
3. Close the front door.
4. Pull out tray 1 [B].

5. Open the toner collection bottle door [C].
6. Pull out the toner collection bottle [D].

Second Duct Fans

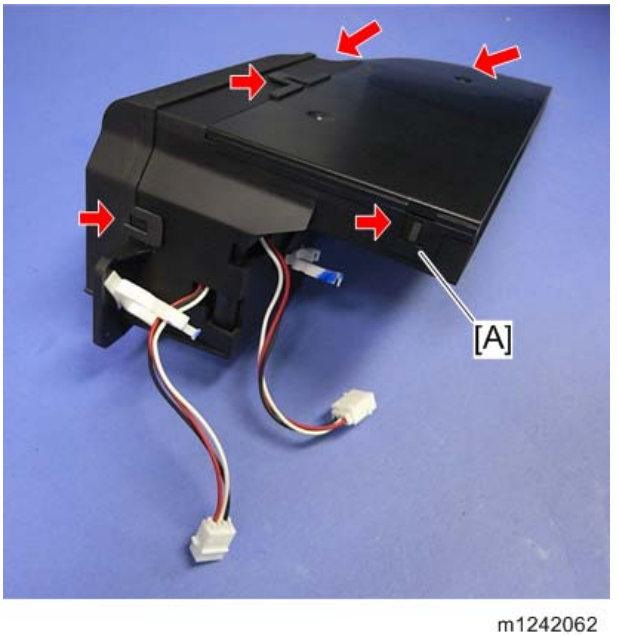
1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Open the controller box (☛ p.243)





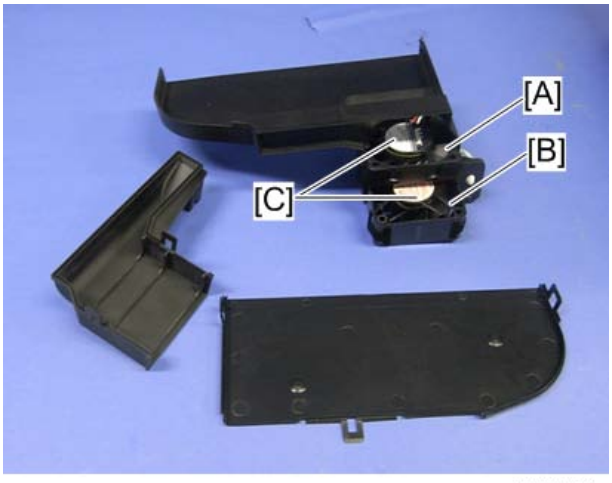
m1242027

4. Second duct [A] (x 2, x 4, x 2)



m1242062

5. Split the second duct [A] (Hooks x 5).



m1242063

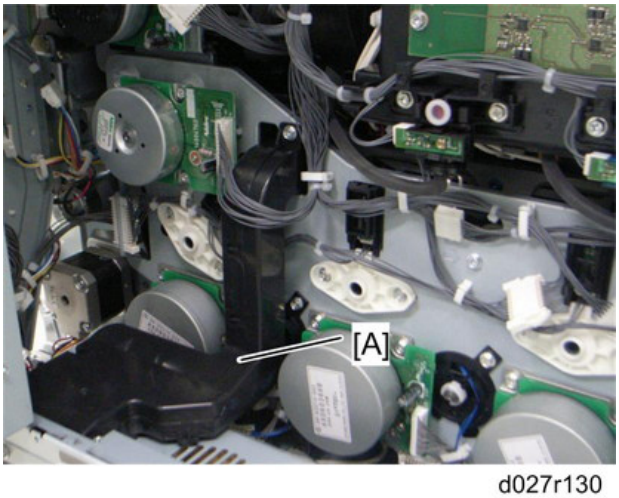
6. Second duct fans [A] [B]

When reinstalling the second duct fans

Make sure that the second duct fans are installed with these decals [C] facing to the front of the machine.

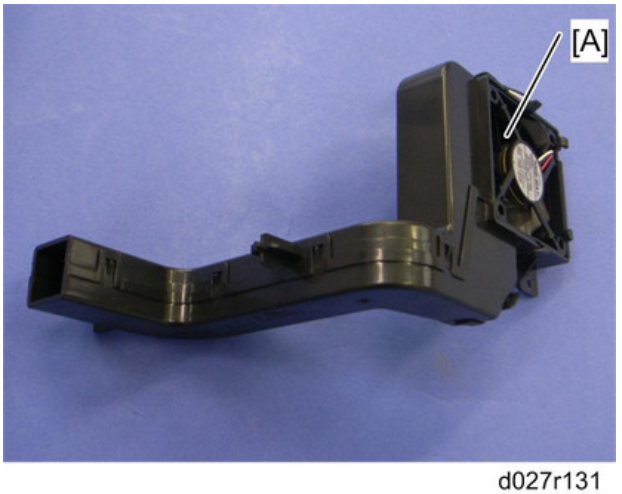
Third Duct Fan

1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Open the controller box (☛ p.243)



d027r130

4. Third duct [A] (x 2, x 1)



d027r131

5. Third duct fan [A] (3 hooks)

When reinstalling the third duct fan

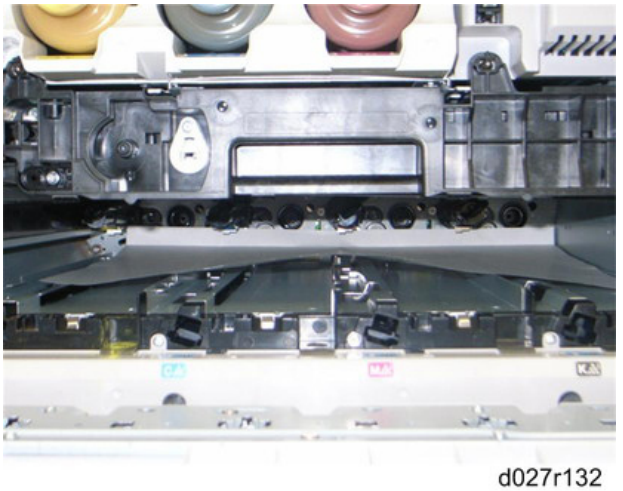
Make sure that the third duct fan is installed with its decal facing to the upper side of the machine.

Toner Pump Unit

There are four pump units inside the machine. This procedure describes the replacement procedure only for one unit. If you need to replace another unit, do the same as this procedure.

Note

- Put some sheets of paper on the floor before doing this procedure. Toner may fall on the floor.

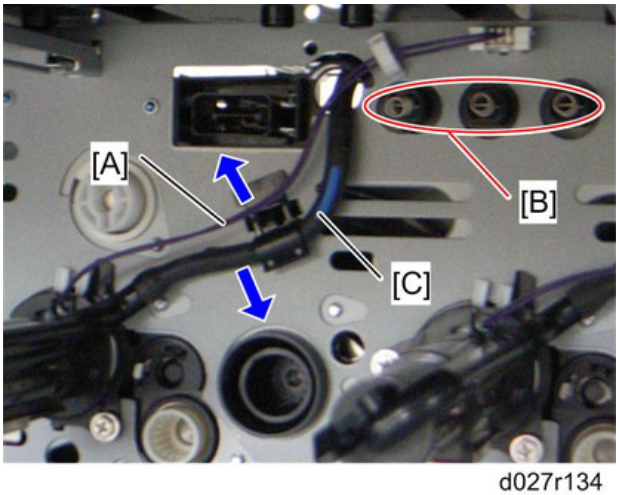


d027r132

1. Rear cover (☛ p.118)
2. Image transfer belt unit (☛ p.153)
3. All PCDUs (☛ p.137)
4. Put a sheet of paper (A3/DLT) inside the machine as shown and on the floor.

Note

- The sheet of paper on the floor is used in a later step.



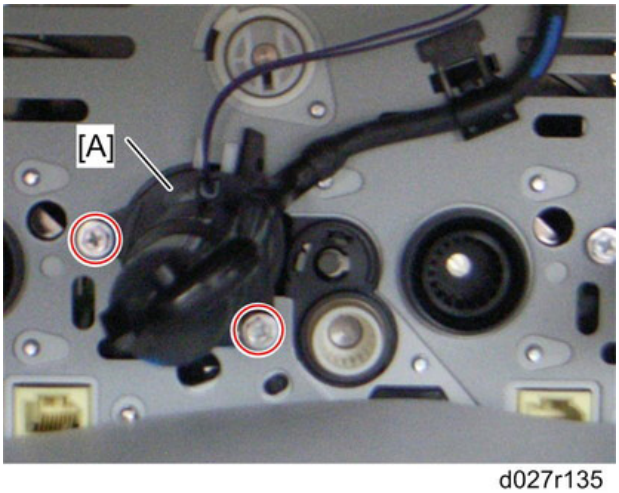
d027r134

5. Release the harness [A] from the clamp (x 1 for YCM, x 2 for K) and hook, and then disconnect the harness.

Note

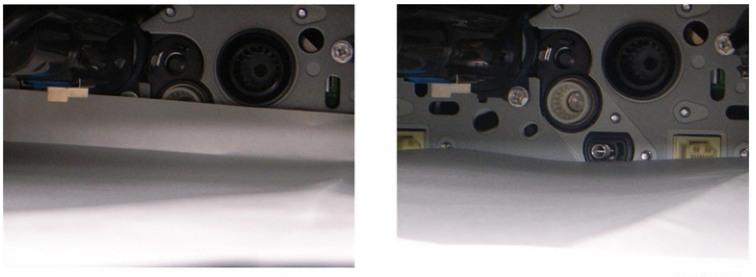
- Avoid touching these spring terminals [B].

6. Release the toner supply tube [C].



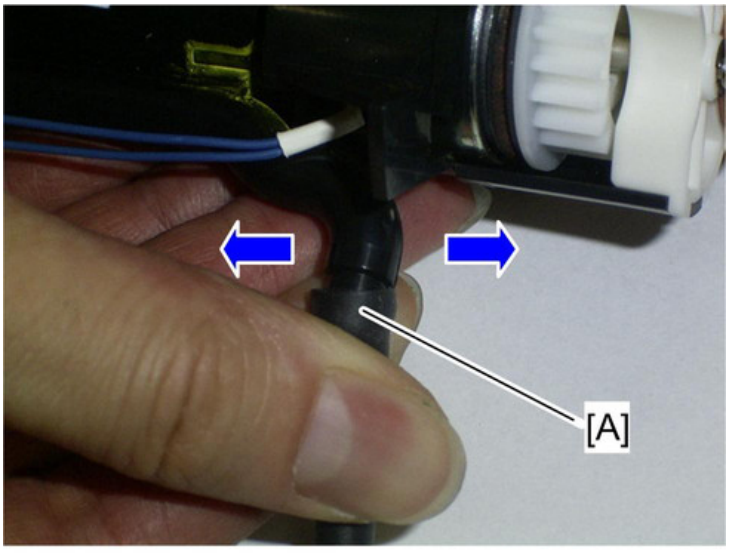
d027r135

7. Remove the toner pump unit [A] (x 2)



d027r136

- Make sure that a sheet of paper is attached to the frame of the rear side. The picture on the left shows a sheet of paper that is correctly set, but the picture on the right shows a sheet of paper that is not correctly set. This sheet of paper prevents toner and screws from falling into the laser optics housing unit through cutouts.

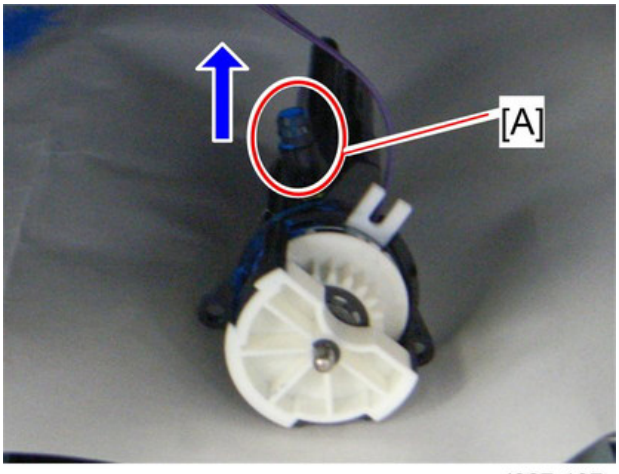


d027r705

8. Slowly remove the toner supply tube [A] from the toner pump unit by pulling the tube right and left.
9. Turn up the openings of the toner pump unit and toner supply tube just after removing the tube.

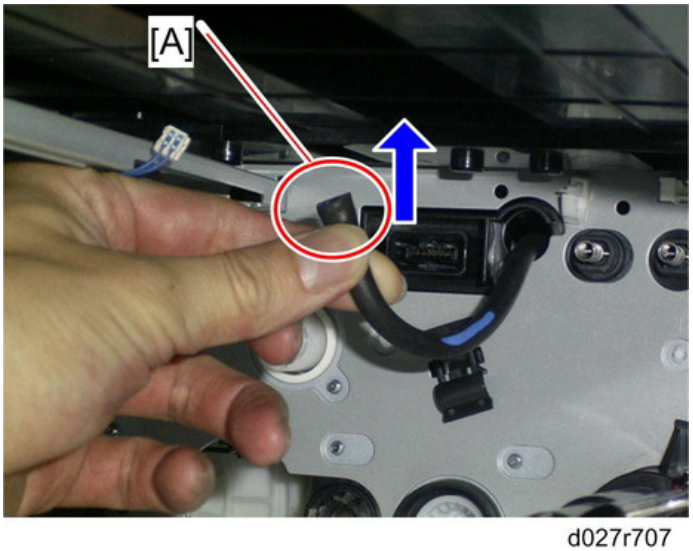
Note

- If not, the toner may scatter away and fall down.



d027r137

10. Put the toner pump unit on the sheet of paper, which has been put in step 4, with its opening [A] up.

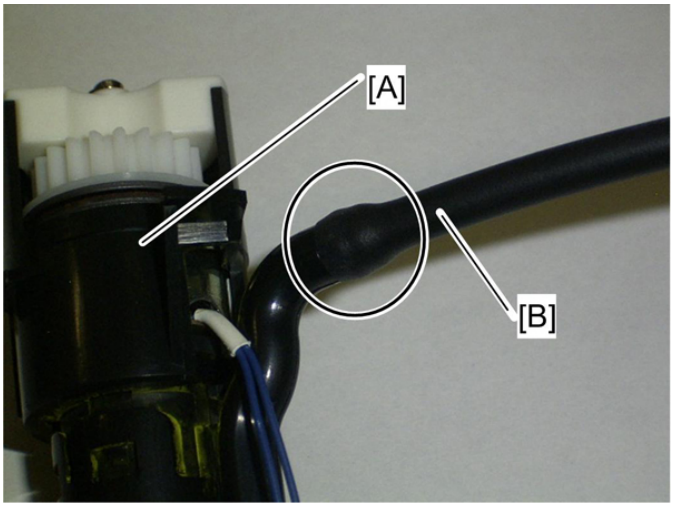


d027r707

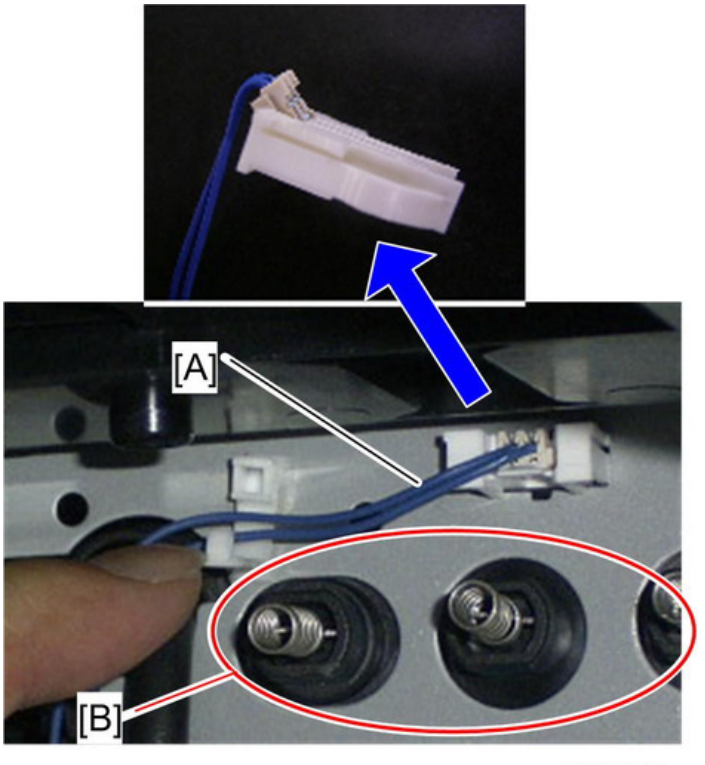
11. Keep the opening [A] of the toner supply tube up, and then clip the opening of the toner supply.

When installing the new toner pump unit

Before installing the new toner pump unit, mask the opening of the old toner pump unit with tape.
Dispose of it following local rules.



1. Put a sheet of paper (A3/DLT) inside the machine.
2. Turn up the opening of the toner supply tube, and then remove the object that was used to clip the opening of the toner supply tube.
3. Insert the opening of the toner pump unit [A] into the opening of the toner supply tube [B] as far as possible.



d027r709

4. Connect the harness [A] to the connector of the machine.

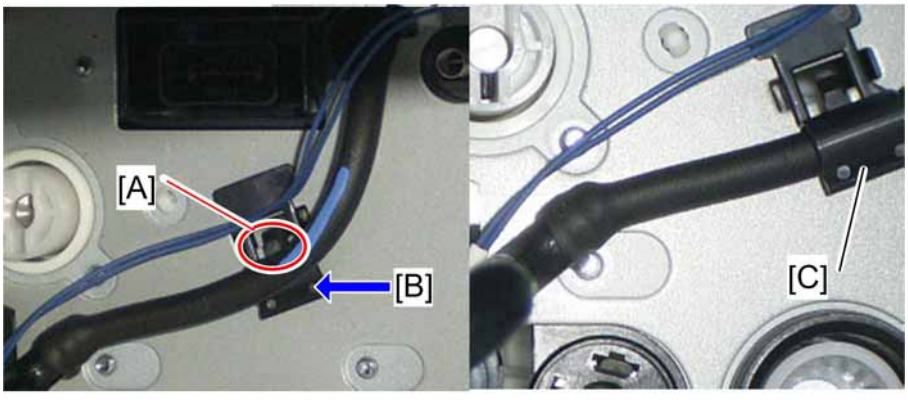
Note

- On the above picture, the magnified picture of the connector shows the easiest way to connect it.

5. Clamp the harness [A] (x 1 for YCM, x 2 for K).

Note

- Avoid touching these spring terminals [B].

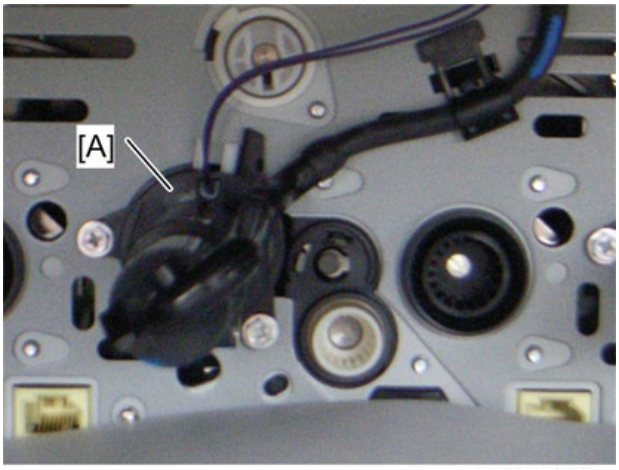


d027r710

6. Pass the harness of the toner pump unit behind the hook [A], while pressing at [B].
7. Secure the toner supply tube with the holder [C], lifting up the edge of the holder "very gently".

Note

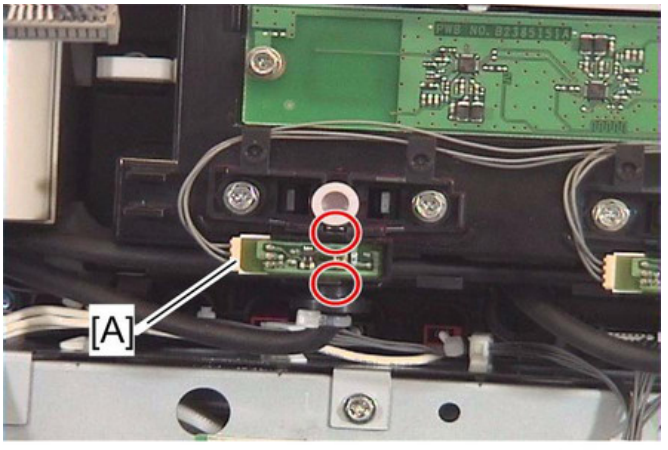
- Be careful when you lift the edge of the holder, because the holder is easily broken.



d027r135a

8. Insert the toner pump unit [A] into the rear frame of the machine (x 2).

Toner End Sensor



d027r042

1. Rear cover (☛ p.118)
2. Open the controller box (☛ p.243)
3. Toner end sensor [A] (🔧 x 1, 2 hooks each)

Note

- A toner end sensor is not installed in the entrance of the toner supply tube for black.

Image Transfer

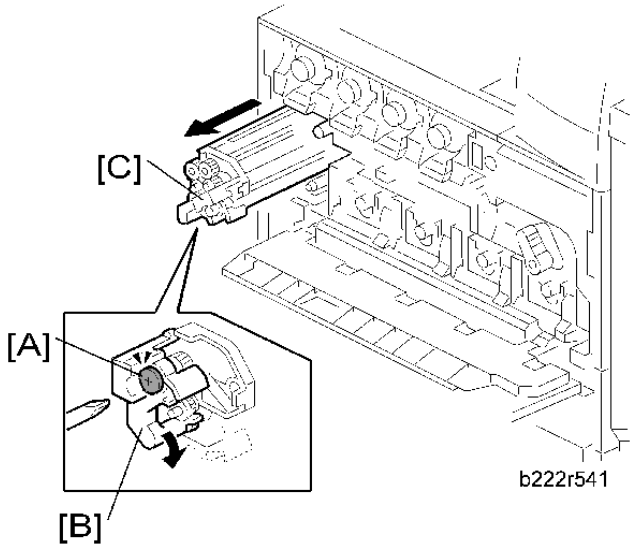
Image Transfer Belt Cleaning Unit

1. If you will install a new belt cleaning unit, then set SP 3902-015 to 1.

   Note

   - If you do this, then the machine will reset the PM counter for the belt cleaning unit automatically, after you turn the power on again.
   - Do not use SP3902-015 or 013 if you replace the complete ITB unit.

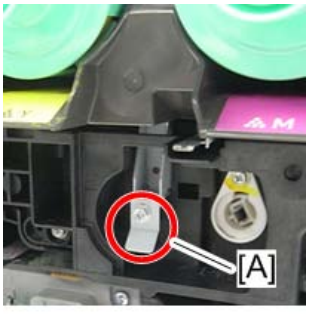
2. Turn off the main power switch.
3. Open the front door.
4. Open the drum positioning plate. (☛ p.137)



5. Loosen the screw [A].
6. Turn the lock lever [B] clockwise
7. Pull out the image transfer belt cleaning unit [C].

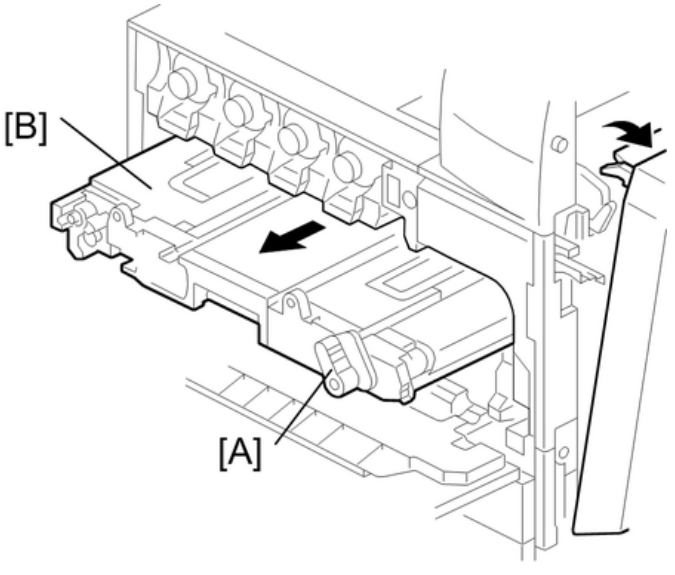
Image Transfer Belt Unit

1. Open the front door.
2. Open the drum positioning plate. (☛ p.137)



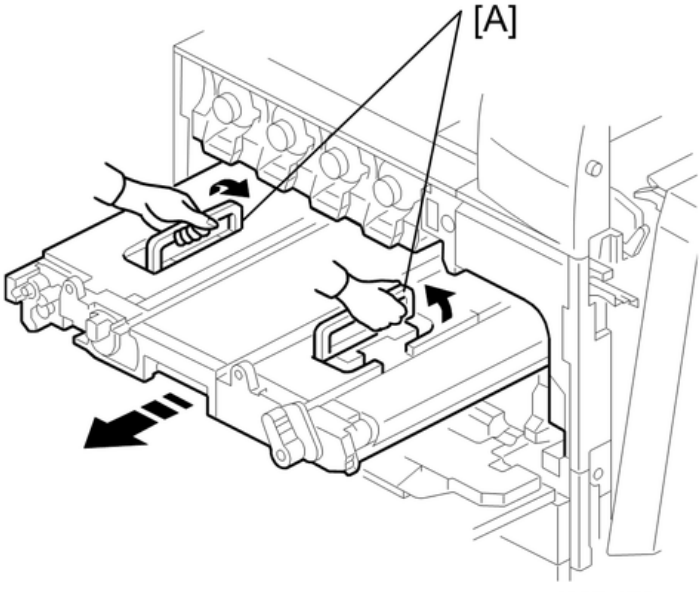
m1242061

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



d027r171

4. Turn the image transfer belt unit lock lever [A] counterclockwise.
5. Image transfer belt cleaning unit (p.153)
6. Pull out the image transfer belt unit [B] halfway.

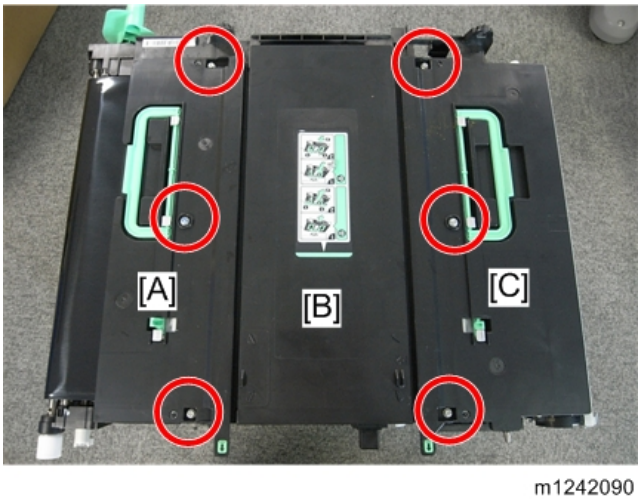


d027r172

7. Grasp the handles [A], and then pull out the image transfer belt unit fully.

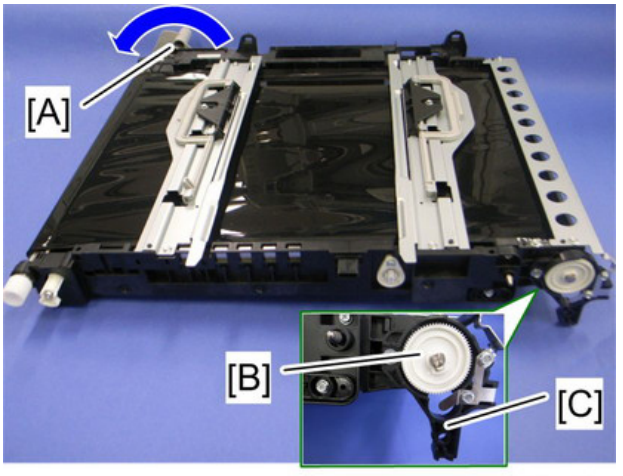
Image Transfer Belt

1. Image transfer belt cleaning unit (☛ p.153)
2. Image transfer belt unit (☛ p.153)



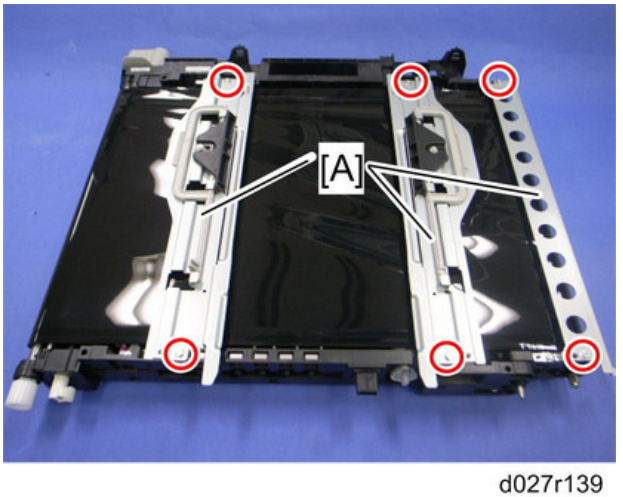
m1242090

3. Protective covers [A], [B], [C] (x 6)



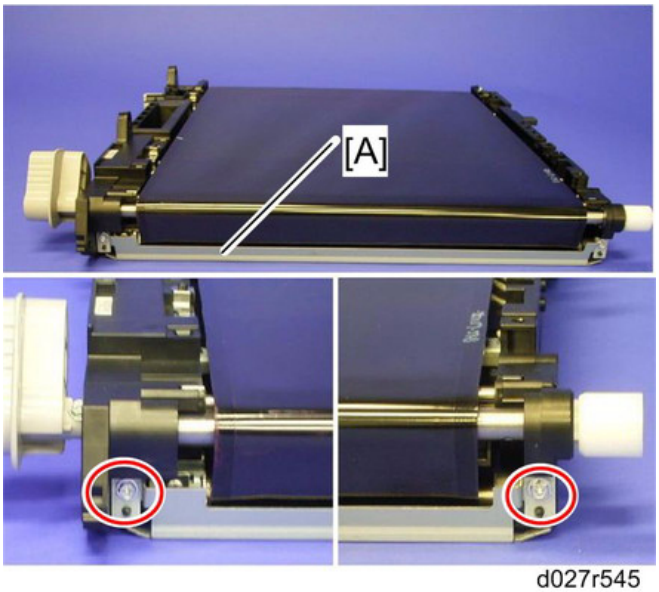
d027r138

4. Turn the image transfer unit contact lever [A] counterclockwise (as seen from the rear).
5. Gear [B] (hook x 1)
6. Turn the gear cover [C] clockwise (as seen from the rear) (x 1).



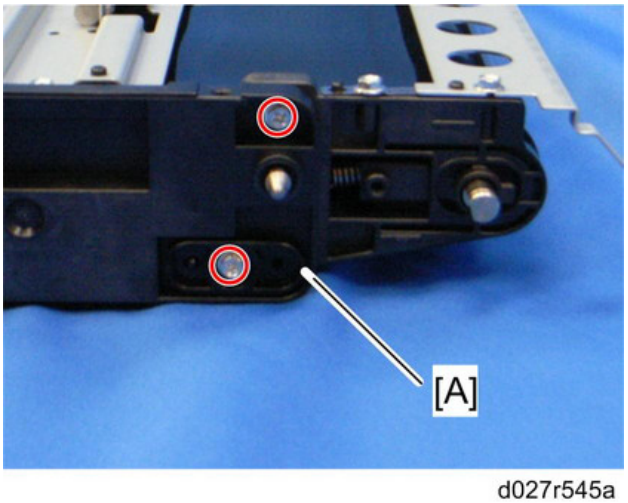
d027r139

7. Three stays [A] (x 6)



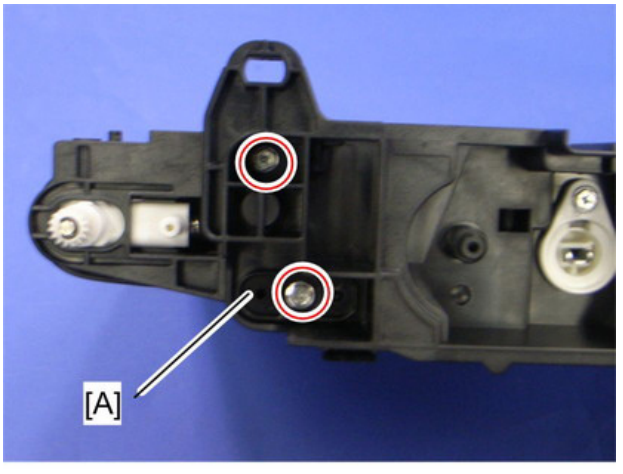
d027r545

8. Guide plate [A] (as seen from the right side of the machine) (x 2)



d027r545a

9. Remove the two screws and then the rear holder bracket [A] (as seen from the rear).



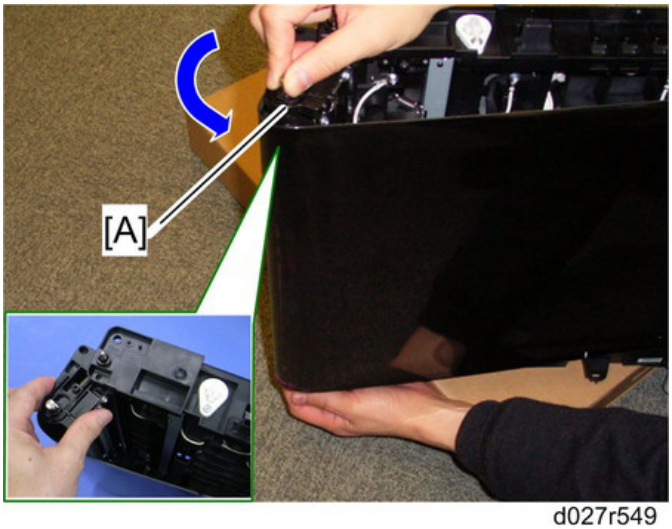
d027r140

10. Remove the two screws and then the front holder bracket [A] (as seen from the front).



b222r548

11. Put the front side of the image transfer belt unit on a corner of the table or a box as shown.



d027r549

12. Pull the tension roller [A] as shown.

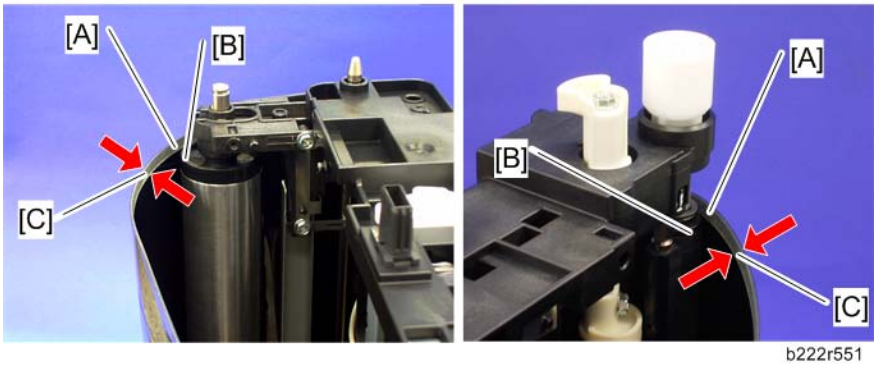


d027r550

13. Image transfer belt [A]

When reinstalling the image transfer belt

- Clean all rollers with dry cloth before installing the image transfer belt.

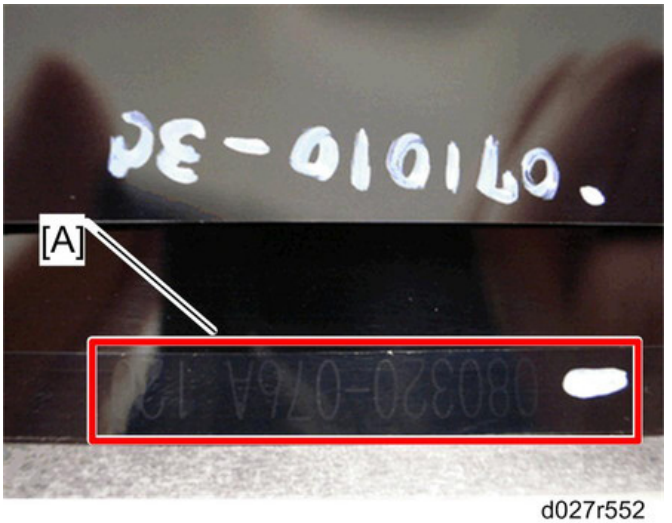


b222r551

- There is a rim [A] at each edge of the transfer belt. The ends of all the rollers ([B] for example) in the transfer belt unit must be between the two rims.

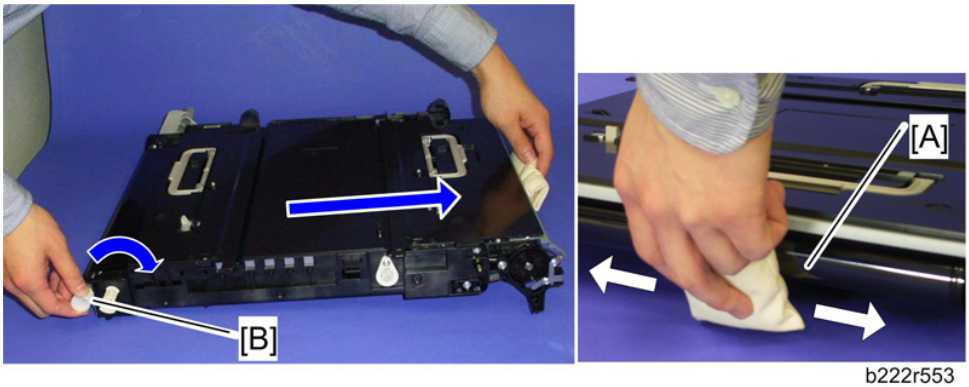
Note

- There are two rims (width [C]: about 5 mm) on the underside of the front and rear edges of the image transfer belt.



d027r552

- This belt must be installed the correct way around. When you reinstall the image transfer belt unit, install it with the number [A] on the belt at the rear side of the unit.



b222r553

- Put "Lubricant Powder" (B132 9700) on the surface of the image transfer belt [A], while you turn the drive gear [B] at a constant speed, as shown. (The straight arrow in the picture shows belt movement direction.) Lubricant powder prevents the image transfer cleaning blade from turning up.

Note

  - Do not put the lubricant powder at the right side of the image transfer belt unit (the above picture is taken from the rear). Otherwise, lubricant powder may damage the encoder sensor.

Paper Transfer

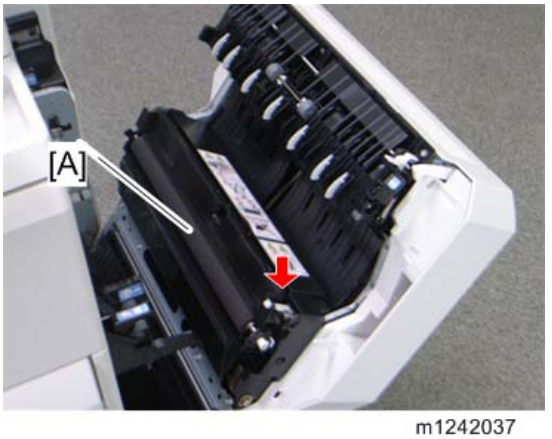
Paper Transfer Roller Unit

If you will install a new paper transfer unit, then set SP 3902-016 to 1.

Note

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

1. Open the right door.



m1242037

2. Release the white hook.
3. Paper transfer roller unit [A]

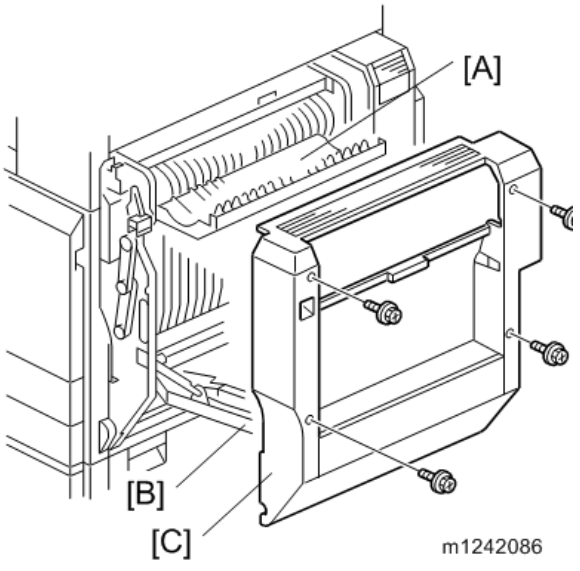
Paper Transfer Unit

If you will install a new paper transfer unit, then set SP3-902-016 to 1.

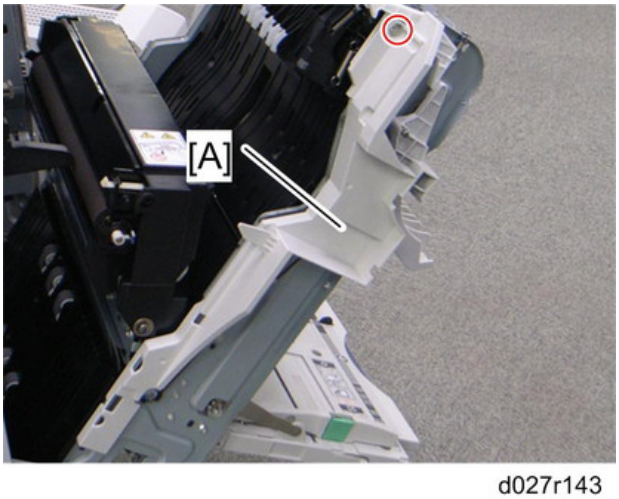
Note

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

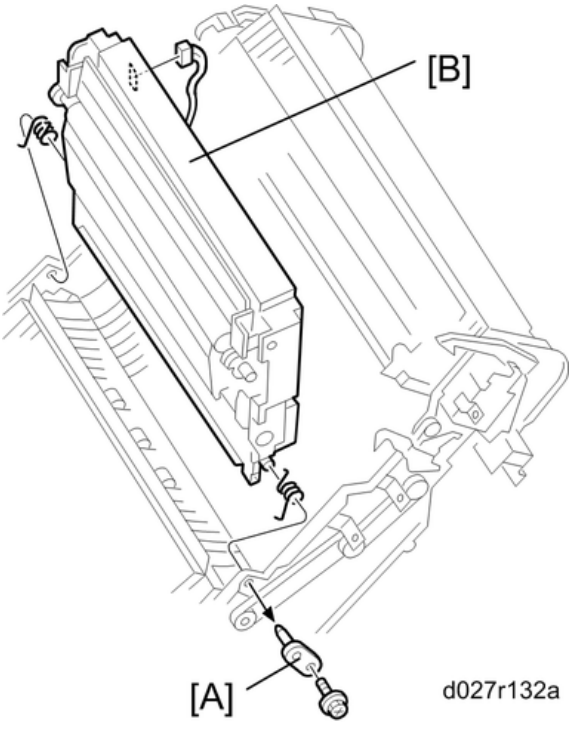
1. Turn off the main power switch.



2. Open the duplex door [A].
3. Open the by-pass tray [B]
4. Right door cover [C] (x 4)
5. Open the right door.



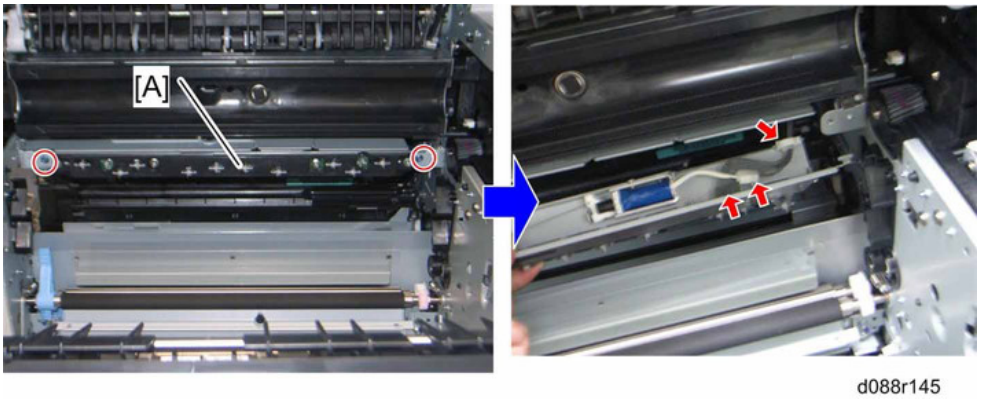
6. Right door inner cover [A] (x 1)



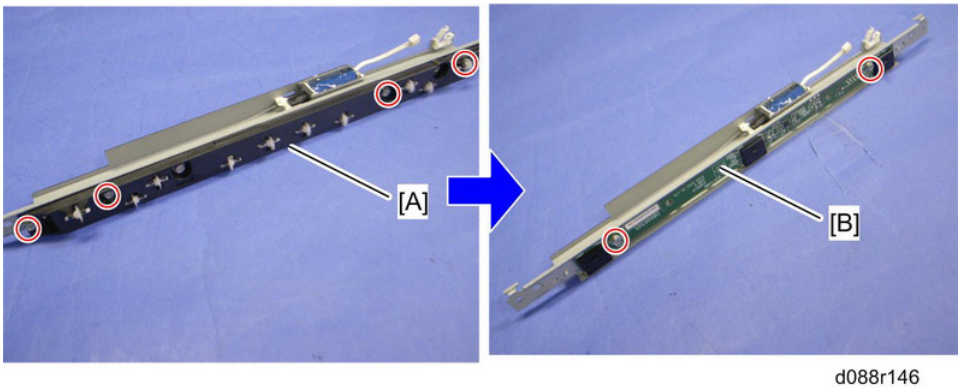
7. Pivot bracket [A] (x 1)
8. Paper transfer unit [B] (x 1, 2 springs)

ID Sensor Board

1. K PCDU (☛ p.137)
2. Open the right door.
3. Fusing unit (☛ p.195)
4. Image transfer belt unit (☛ p.153)



5. ID sensor unit [A] (x 2, x 2, x 1)

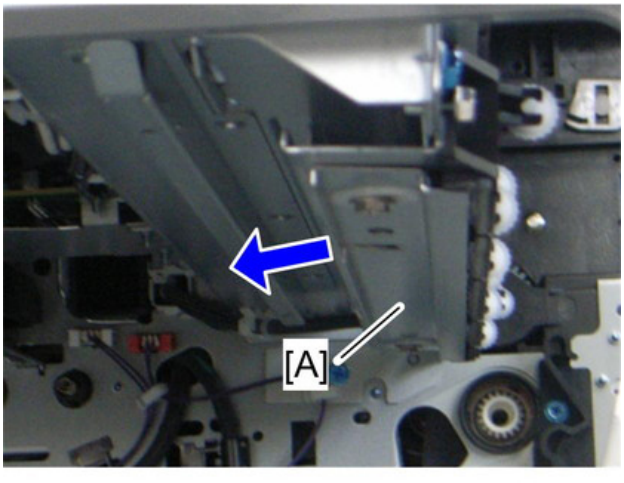


d088r146

6. ID sensor cover [A] (x 4)
7. ID sensor board [B] (x 2)

Cleaning for ID sensors

ID sensors require a cleaning procedure every EM. Do the following steps for ID sensor cleaning.



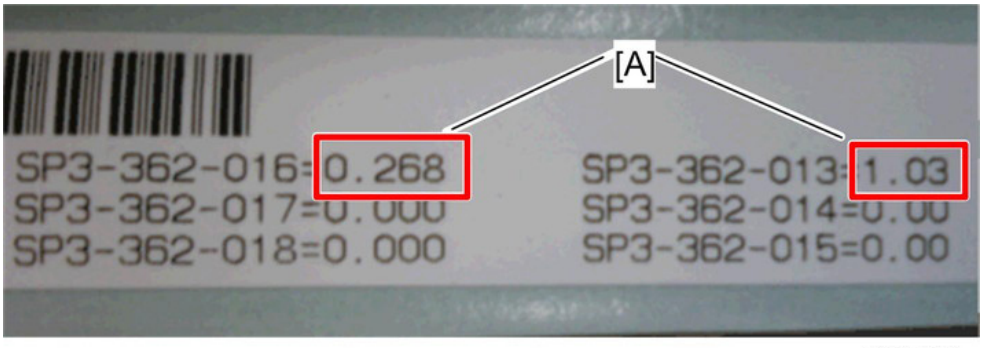
d027r147

1. K PCDU (☛ p.137)
2. Fusing unit (☛ p.195)
3. Image transfer belt unit (☛ p.153)
4. Slide the ID sensor shutter [A] to the left side.
5. Clean the ID sensors keeping the ID sensor shutter to the left.

After installing a new ID sensor unit/board

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

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



d088r502

3. Input two correction coefficients [A] for the ID sensor with SP3-362-013 and SP3-362-016 on the barcode sheet provided with the new ID sensor unit/board.

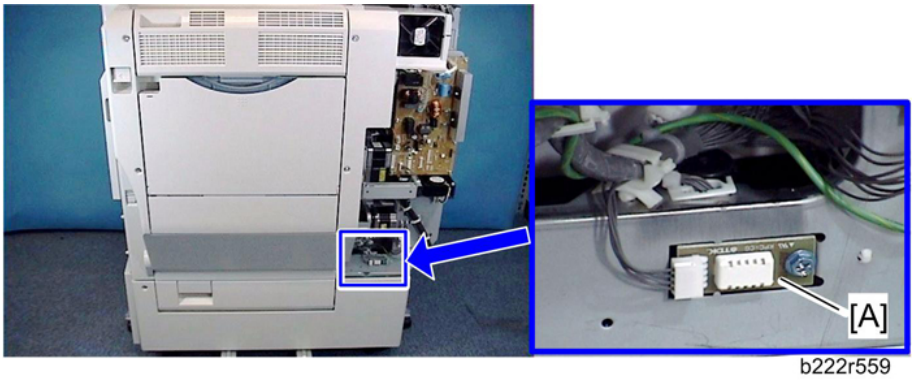
Note

- For example, input "**1.03**" with SP3-362-013.
- SP numbers other than SP3-362-013 and -016 are not required for this procedure.

4. Exit the SP mode.

Temperature and Humidity Sensor

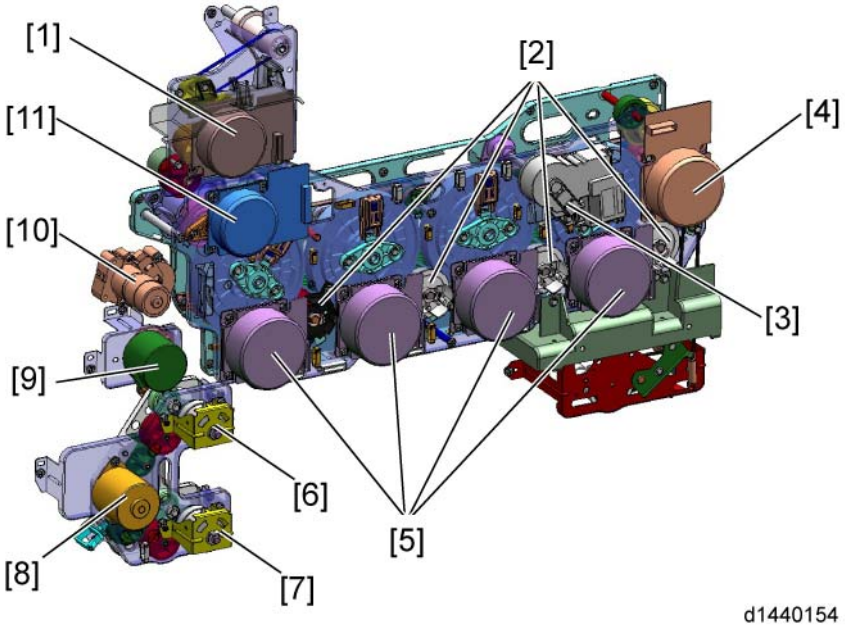
1. Rear cover (p.118)
2. Right rear cover (p.119)



b222r559

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

Drive Unit



The drawing above shows the drive unit layout.

1. Fusing/paper exit motor 2. Development clutches 3. Image transfer belt contact motor 4. Toner transport motor 5. Drum/Development drive motors 6. Paper feed clutch – Tray 1	7. Paper feed clutch – Tray 2 8. Paper feed motor 9. Registration motor 10. Paper transfer contact motor 11. ITB drive motor

There are some motors and clutches that are not shown in the above drawing:

• Tray lift motor 1 and 2 • Duplex inverter motor • Duplex/By-pass Motor	• Junction gate 1 motor • Shutter motor • By-pass clutch

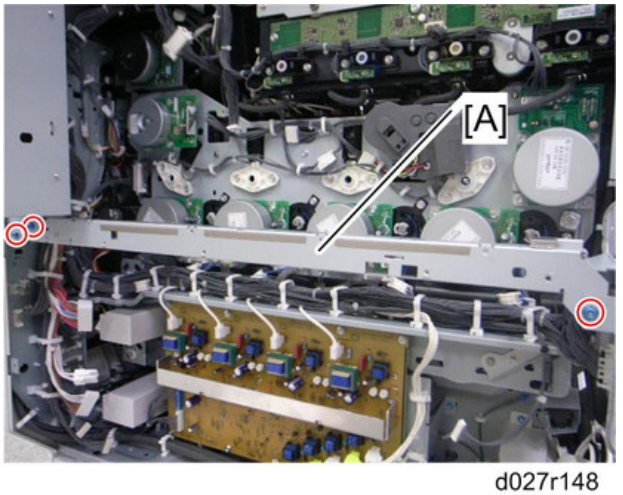
Gear Unit

1. All PCDU's (☛ p.137)

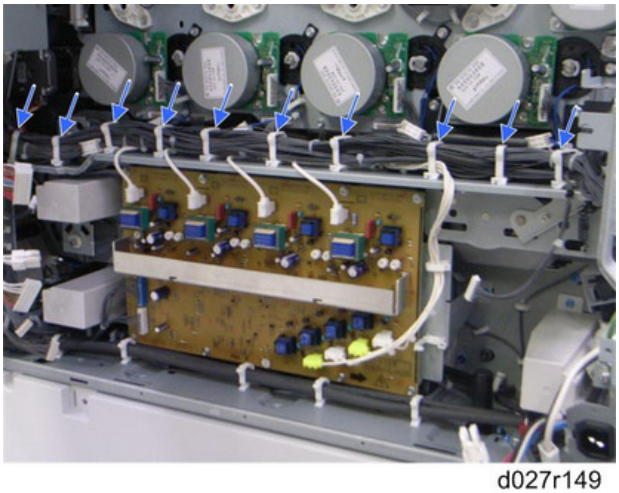
2. Image transfer belt unit (☛ p.153)
3. Rear cover (☛ p.118)
4. Controller box (☛ p.243)



5. Toner sump cover [A] (x 2)
6. Third duct (☛ p.145)
7. Left cover (☛ p.118)
8. PSU bracket (☛ p.250)

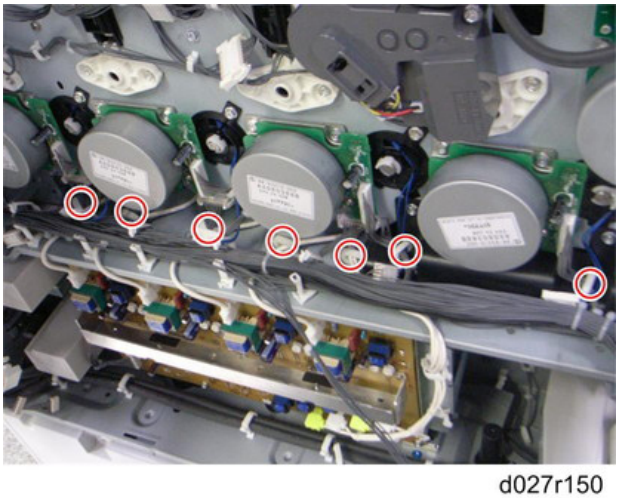


9. Remove the rear stay [A] (x 3).



d027r149

10. Remove ten clamps (blue arrows).



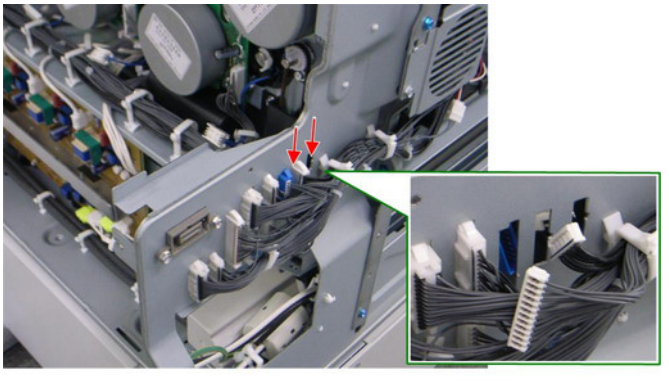
d027r150

11. Release seven clamps and turn each harness aside.



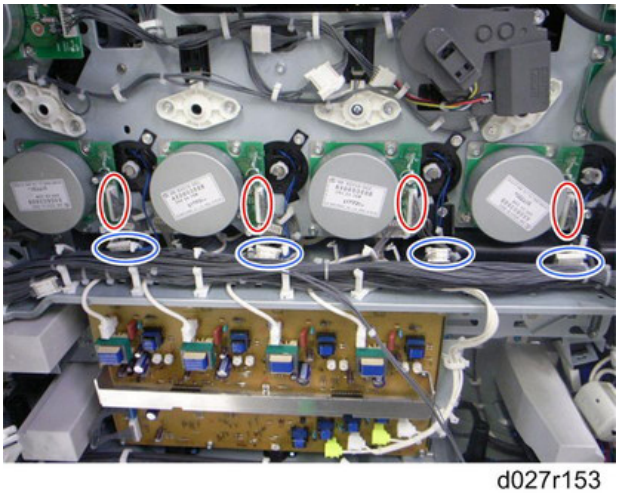
d027r151

12. Disconnect four connectors (red arrows).



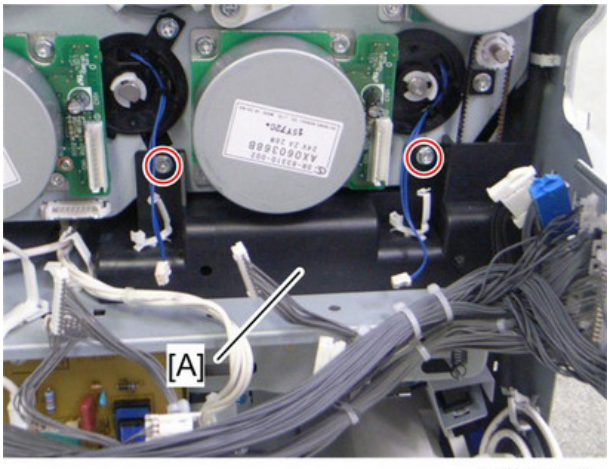
d027r152

13. Disconnect two connectors (red arrows) and put these harnesses inside the machine.



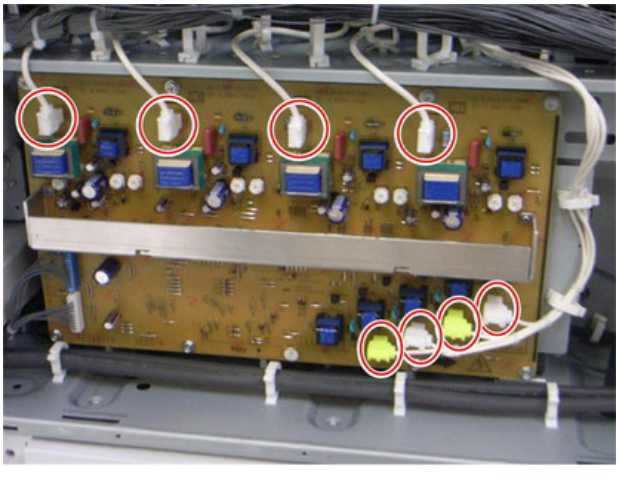
d027r153

14. Disconnect each connector (red circles) from the drum/development drive motors (x 1, x 1 each).
15. Disconnect each connector (blue circles) from the development clutches (x 1 each).



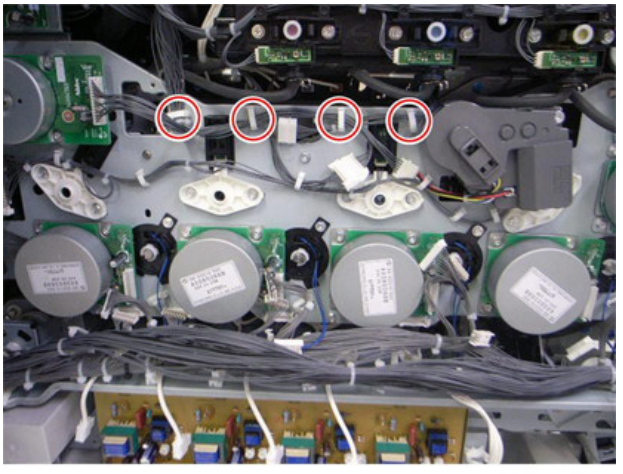
d027r155

16. Cover [A] (x 2)



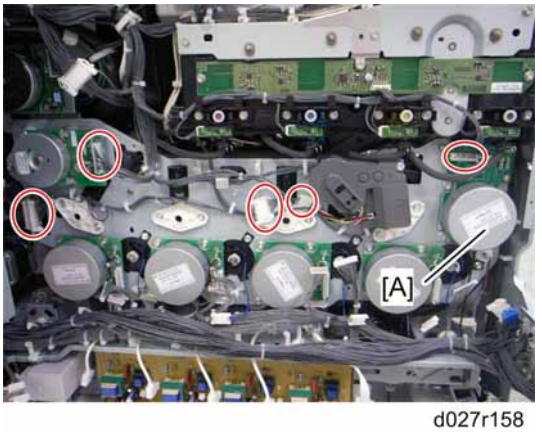
d027r156

17. Disconnect eight connectors from the high voltage supply board (x 8, x 2).



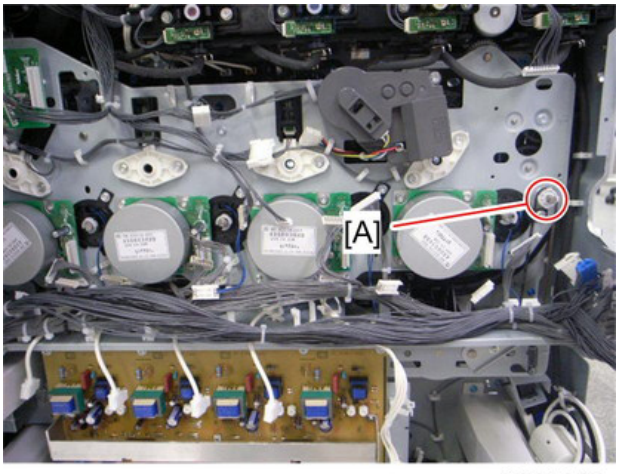
d027r157b

18. Release four clamps (red circles) and turn the harnesses aside.



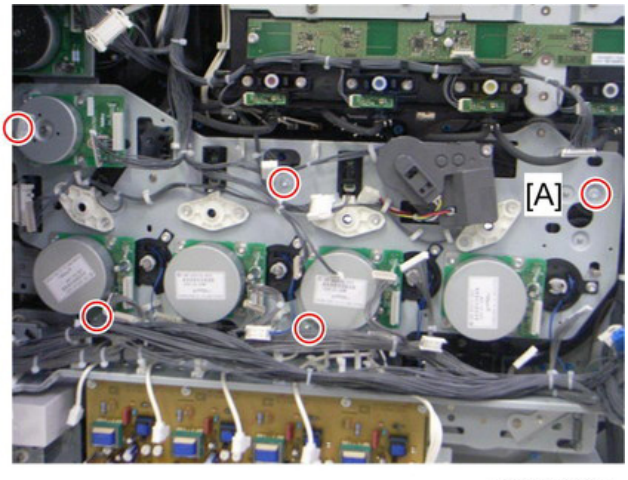
d027r158

19. Disconnect five connectors (red circles) (x 5).
20. Toner transport motor [A] (x 3)



d027r159

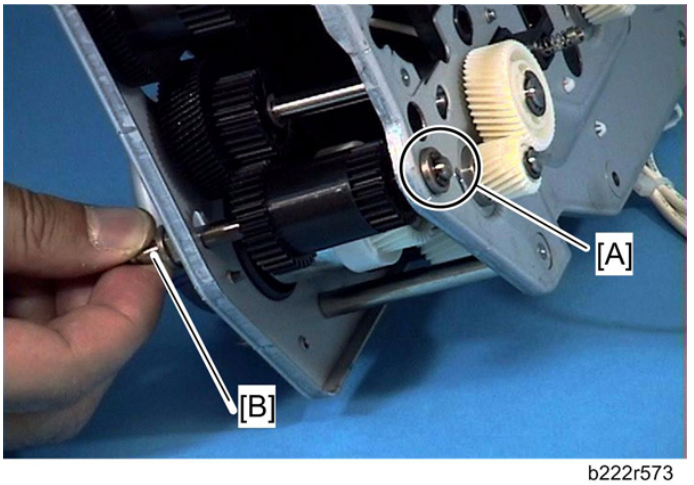
21. Pulley [A] (timing belt)



d027r160a

22. Gear unit [A] (x 8)

When installing the drive unit



b222r573

Make sure that the bushing [A] is fully set in the frame of the gear unit before installing the timing belt and pulley to the shaft [B].

Adjustment after replacing the gear unit

Do the following procedures after replacing the gear unit.

1. Turn on the main power switch.
2. Enter the SP mode.
3. Press "Engine".
4. Do “Amplitude Control" with SP1-902-001.
5. Check the result of the Amplitude Control with SP1-902-002.

   0: Success, 2: Failure due to no sampling data,

   3: Failure due to insufficient number of pattern detections

   When the result of this adjustment is "2" or "3":

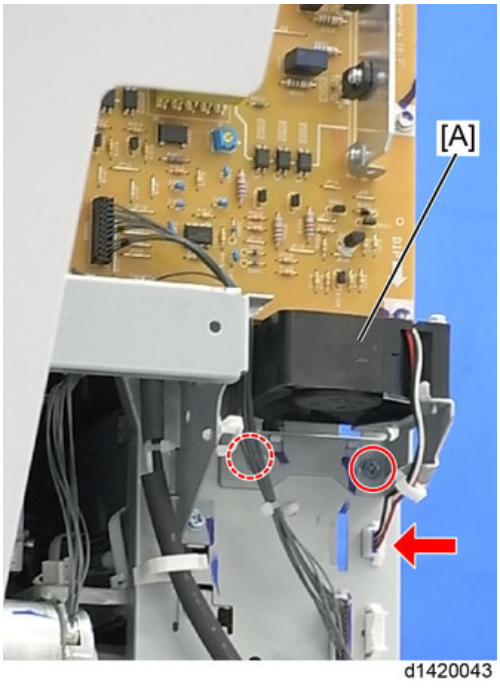
   - Check that all the PCDUs are correctly set and that the image transfer belt unit is correctly set.
   - Do "Amplitude Control " again after checking the PCDUs and image transfer belt unit.

   When the result is still "2" or "3" after checking the PCDUs and image transfer belt unit:

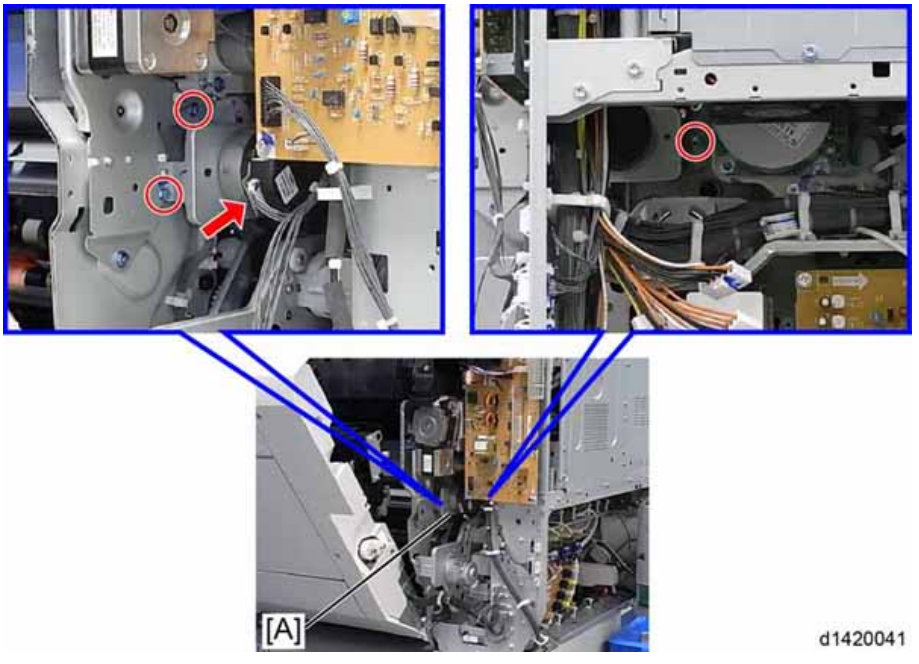
   - Check that the gear unit is installed correctly.
6. Exit the SP mode.

Registration Motor

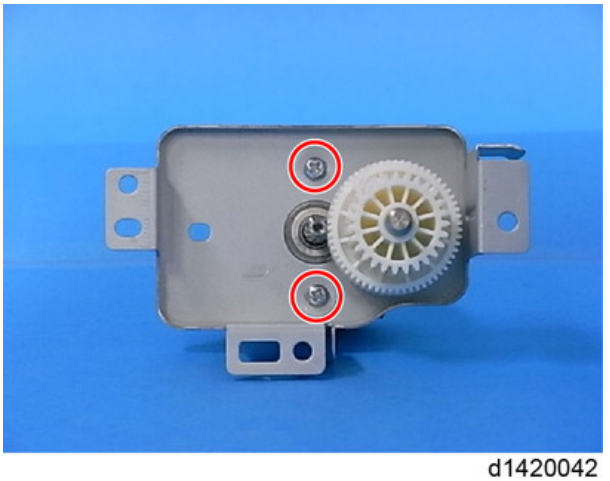
1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Ventilation duct (☛ p.250)
4. PSU bracket (☛ p.250)



5. Fusing power supply board fan bracket [A] (x 2, x 1)



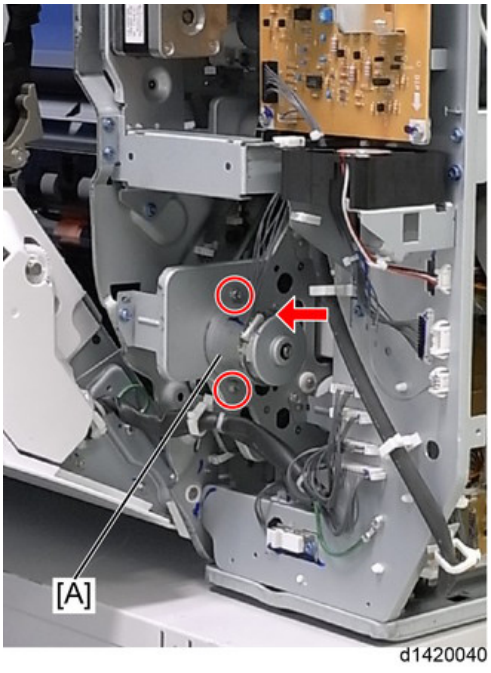
6. Registration motor assembly [A] (x 3, x 1)



7. Registration motor (x 2)

Paper Feed Motor

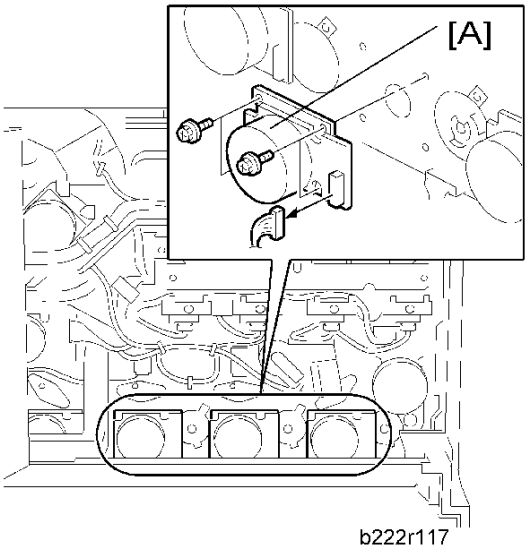
1. Right rear cover (p.119)



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

Drum/Development Motors for M, C, and Y

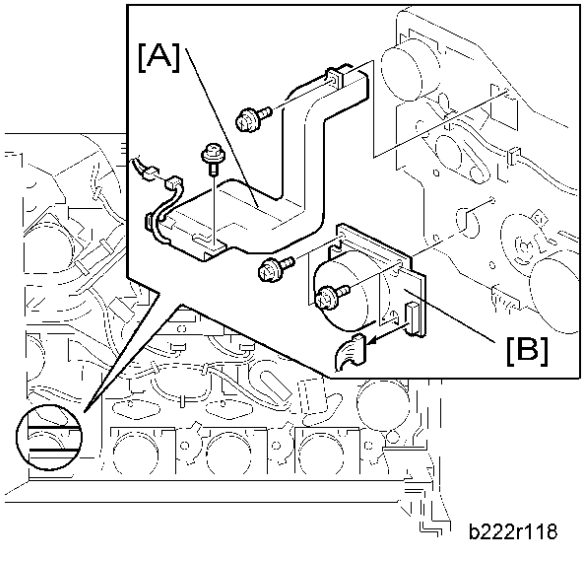
1. Rear cover (☛ p.118)
2. PSU bracket (☛ p.250)
3. Open the controller box (☛ p.243).



4. Drum/Development motors (three motors, one each for MCY) [A] (x 4, x 1 each)

Drum/Development Motor-K

1. Rear cover (☛ p.118)
2. PSU bracket (☛ p.250)
3. Controller box (☛ p.243)

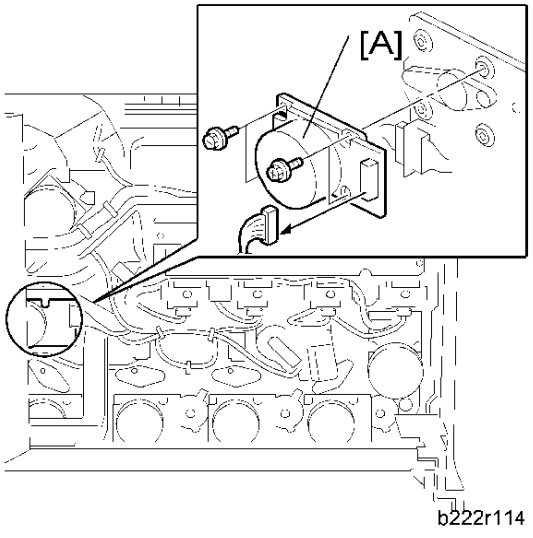


4. Third duct [A] (x 2, x 1)

5. Drum/Development motor-K [B] (x 4, x 1)

ITB Drive Motor

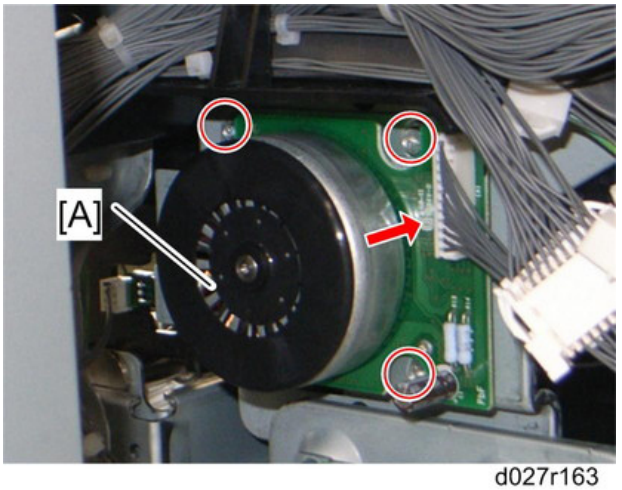
1. Rear cover (p.118)
2. Controller box (p.243)



3. ITB drive motor [A] (x 4, x 1)

Fusing/Paper Exit Motor

1. Rear cover (p.118)
2. Controller box (p.243)

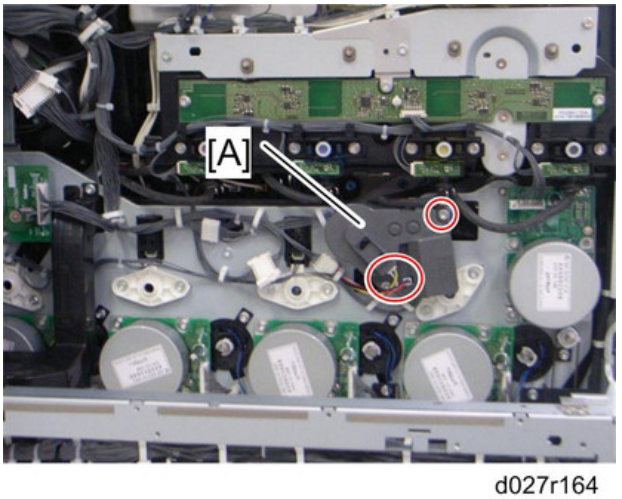


d027r163

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

Image Transfer Belt Contact Motor

1. Rear cover (p.118)
2. Controller box (p.243)

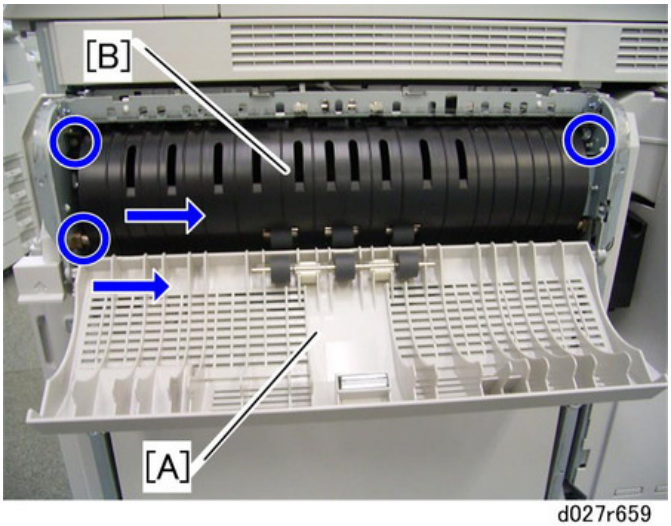


d027r164

3. Transfer belt contact motor [A] (x 2, x 2)

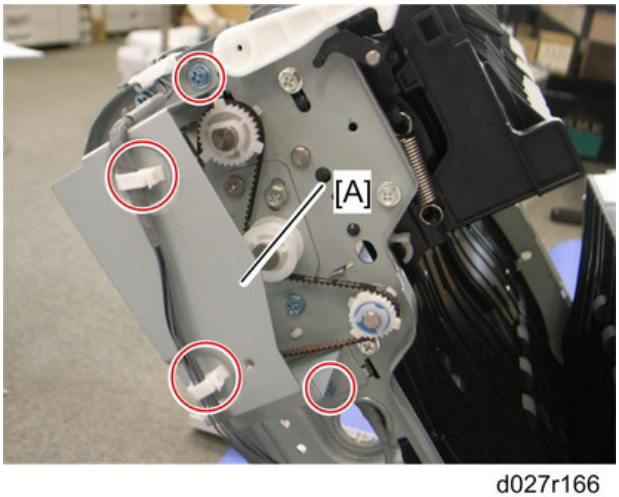
Duplex Inverter Motor

1. Open the right door.
2. Right door cover (p.228 "By-pass Bottom Tray")



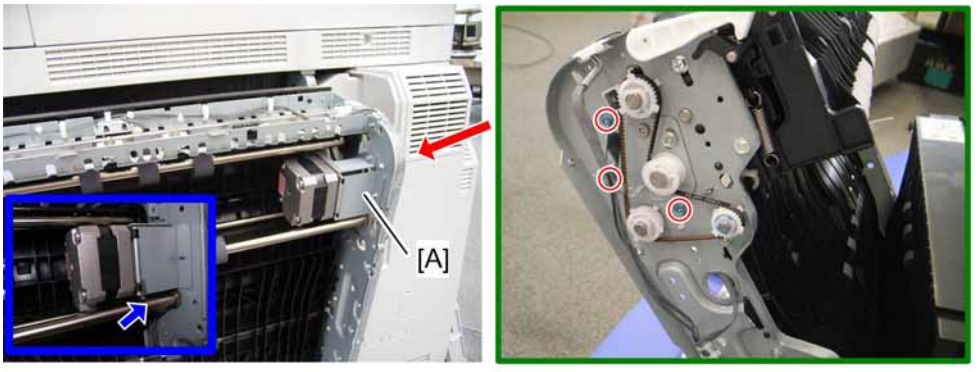
d027r659

3. Duplex door [A] (2 hooks)
4. Duplex guide plate [B] (x 3, 2 hooks)



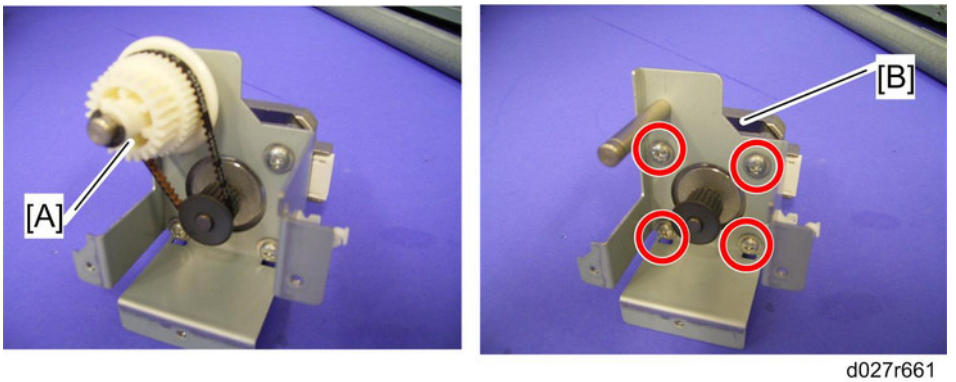
d027r166

5. Duplex inverter motor bracket cover [A] (x 2, x 2)



d027r660b

6. Duplex inverter motor bracket [A] (x 3, x 1, x 1)

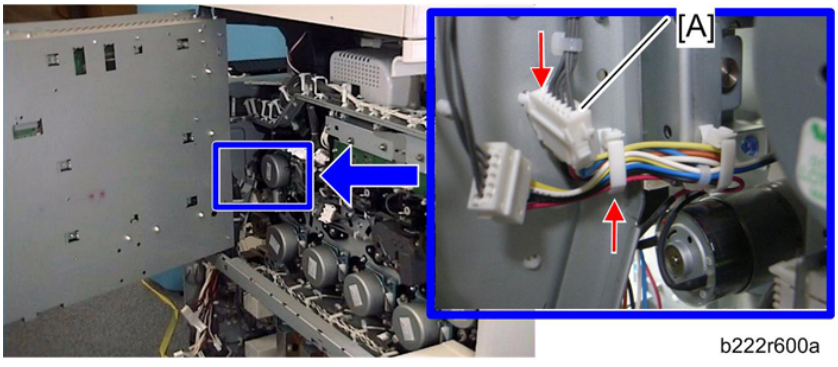


d027r661

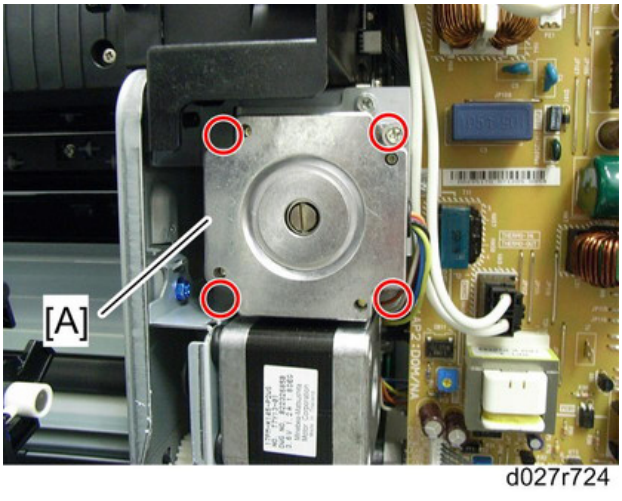
7. Gear [A] (x 1, belt x 1)
8. Duplex inverter motor [B] (x 4)

Pressure Roller Contact Motor

1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Open the controller box (☛ p.243)



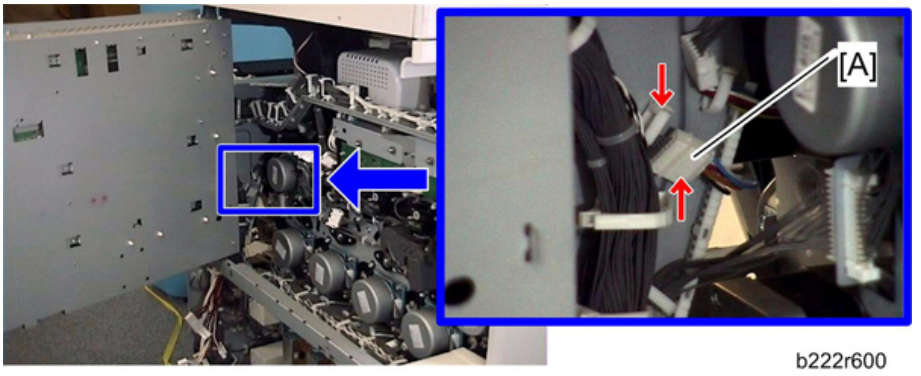
4. Disconnect the connector [A] (x 1).



5. Pressure roller contact motor [A] (x 4)

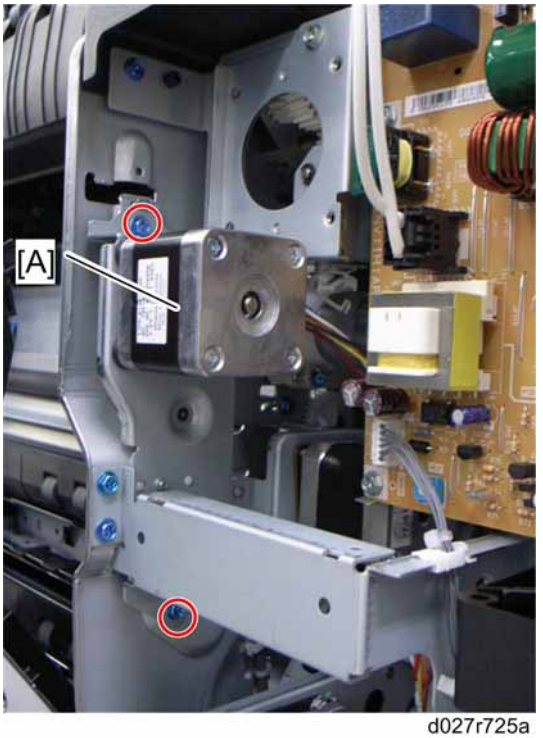
Duplex/By-pass Motor

1. Rear cover (p.118)
2. Right rear cover (p.119)
3. Open the controller box (p.243).
4. Pressure roller contact motor (p.182)



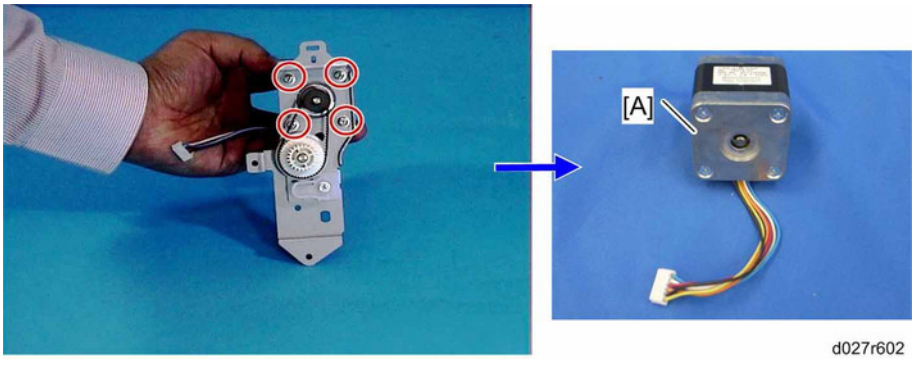
b222r600

5. Disconnect the connector [A] (x 1, x 1)



d027r725a

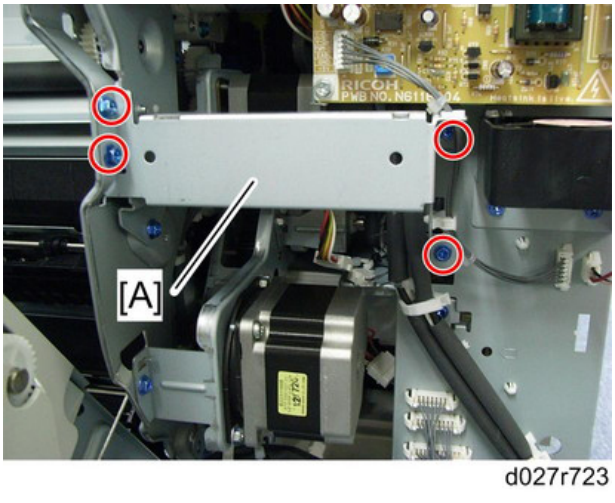
6. Duplex/by-pass motor bracket [A] (x 2)



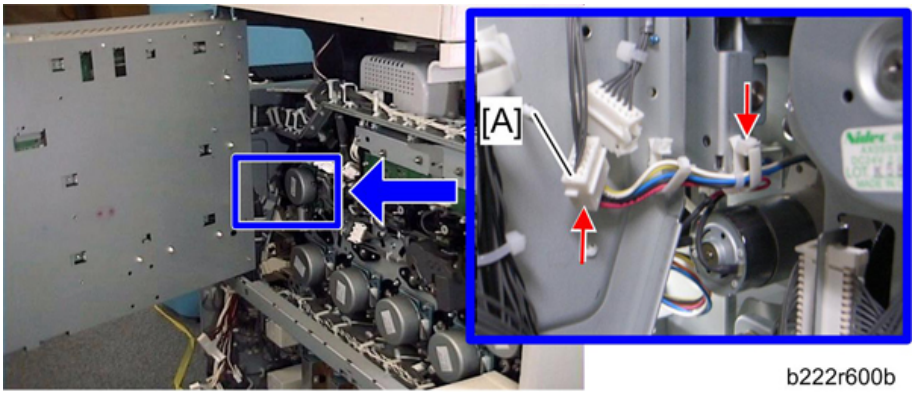
7. Duplex/by-pass motor [A] (x 4, belt x 1)

Paper Transfer Contact Motor

1. Rear cover (p.118)
2. Right rear cover (p.119)
3. Open the controller box (p.243).

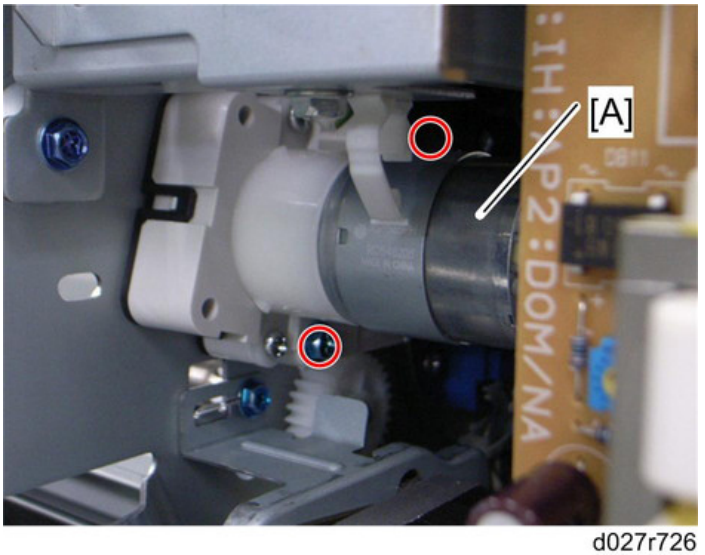


4. Stay [A] (x 4)
5. Pressure roller contact motor (p.182)
6. Duplex/by-pass motor bracket (p.183)



b222r600b

7. Disconnect the connector [A] (x 1).

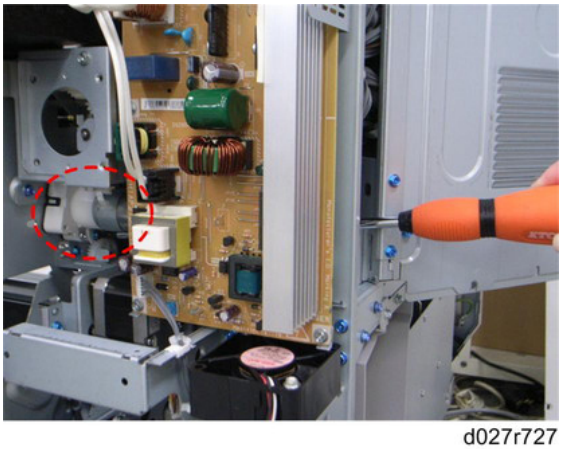


d027r726

8. Paper transfer contact motor [A] (x 2)

NOTE:

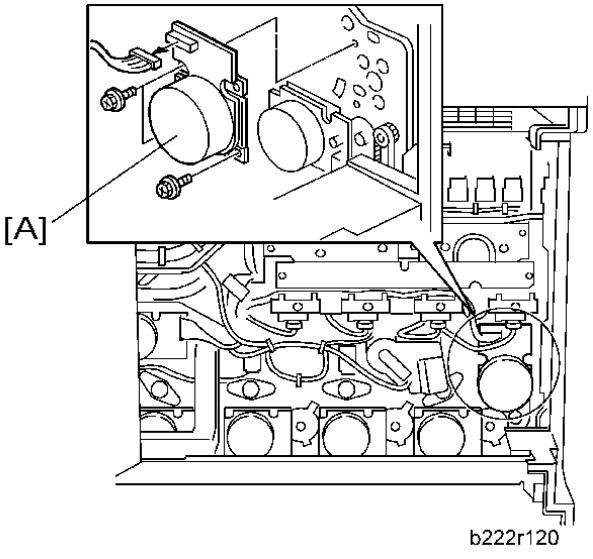
The picture below shows how to use the screwdriver to remove the screws of the paper transfer contact motor.



d027r727

Toner Transport Motor

1. Rear cover(☛ p.118)
2. Open the controller box (☛ p.243).

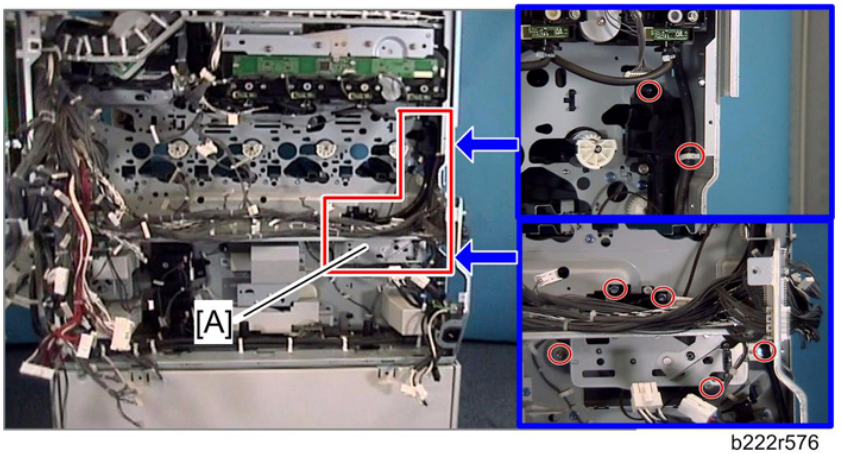


b222r120

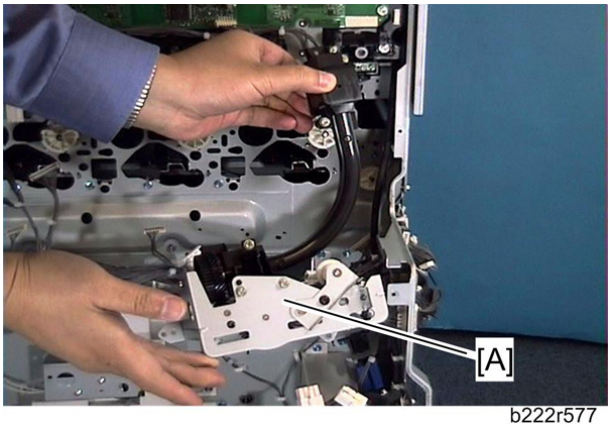
3. Toner transport motor [A] (x 3, x 1)

Toner Collection Unit

1. Gear Unit (☛ p.167)



b222r576

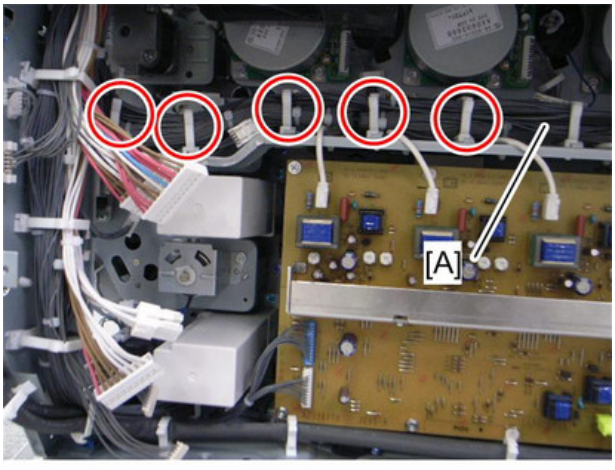


b222r577

2. Toner collection unit [A] (x 6, x 1)

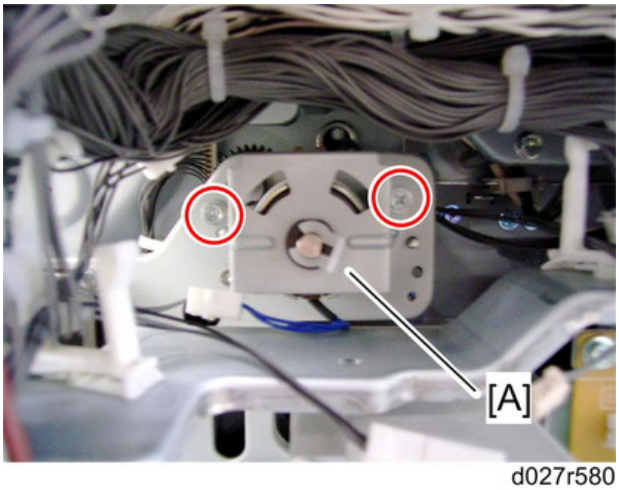
Paper Feed Clutches

1. Rear cover (☛ p.118)
2. PSU bracket (☛ p.250)



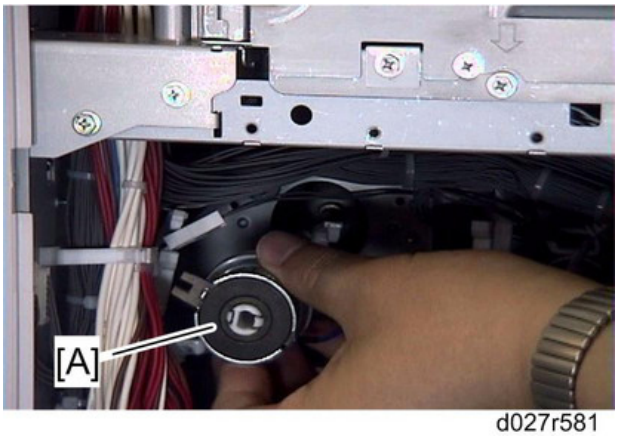
d027r578

3. Release five clamps, and then turn the harness [A] aside.



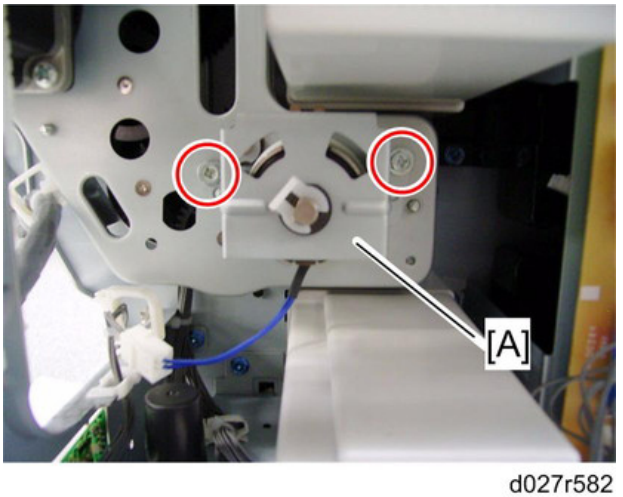
d027r580

4. Paper feed clutch 1 bracket [A] (x 2, x 1, x 1, x 1)



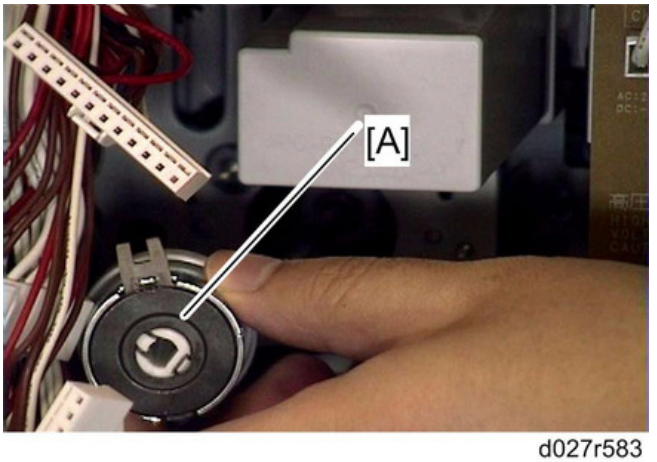
d027r581

5. Paper feed clutch 1 [A]



d027r582

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

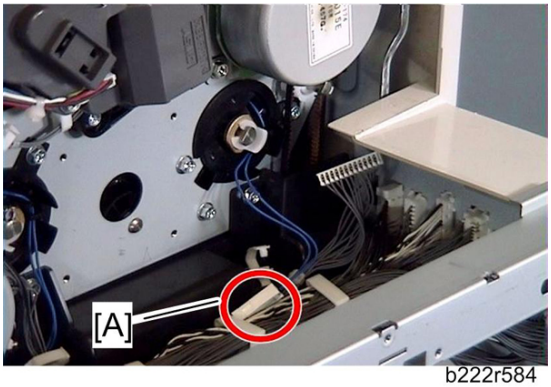


d027r583

7. Paper feed clutch 2 [A]

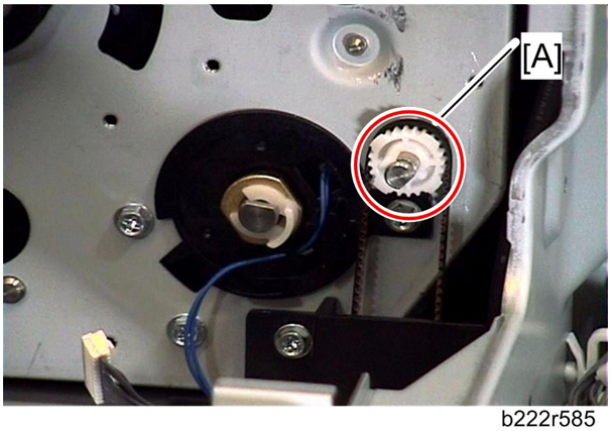
Development Clutch-Y

1. Rear cover (☛ p.118)
2. PSU bracket (☛ p.250)
3. Open the controller box (☛ p.243).
4. Toner sump cover (☛ p.167 "Gear Unit")
5. Drum/development motor-Y (☛ p.177)



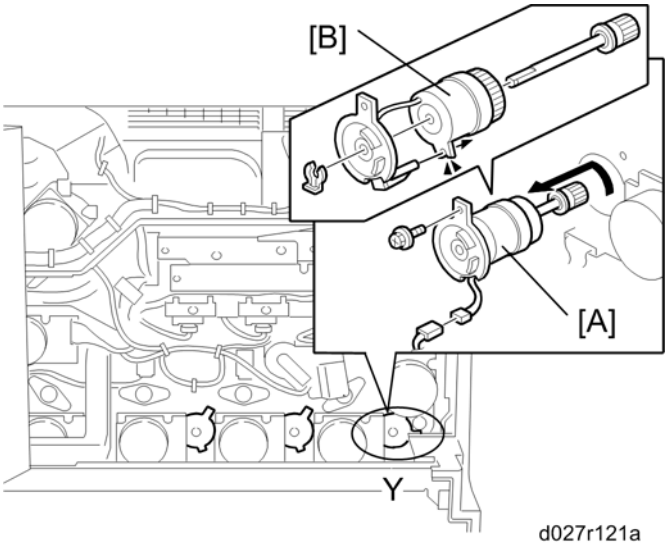
b222r584

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



b222r585

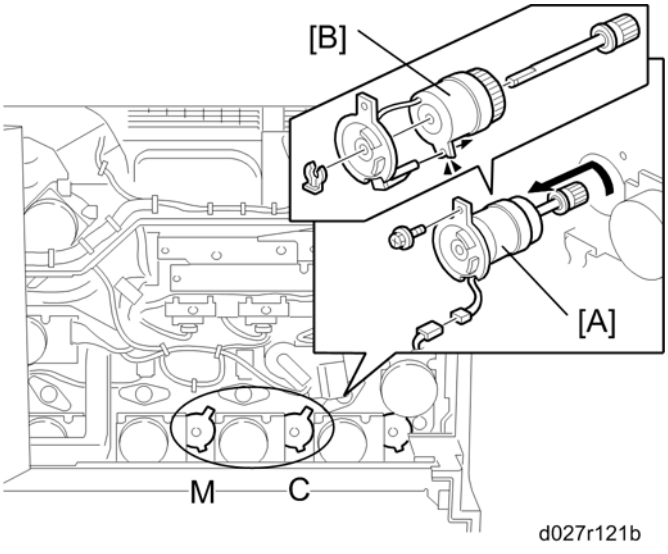
7. Remove the pulley and bushing [A].



8. Turn the development clutch unit [A] counter-clockwise and then pull it out (x 1).
9. Development clutch-Y [B] (x 1)

Development Clutches for M and C

1. Rear cover (p.118)
2. PSU bracket (p.250)
3. Open the controller box (p.243).
4. Toner sump cover (p.167 "Gear Unit")
5. Drum/development motors for M and C (p.177)
6. Disconnect the connector for each development clutch (x 1).

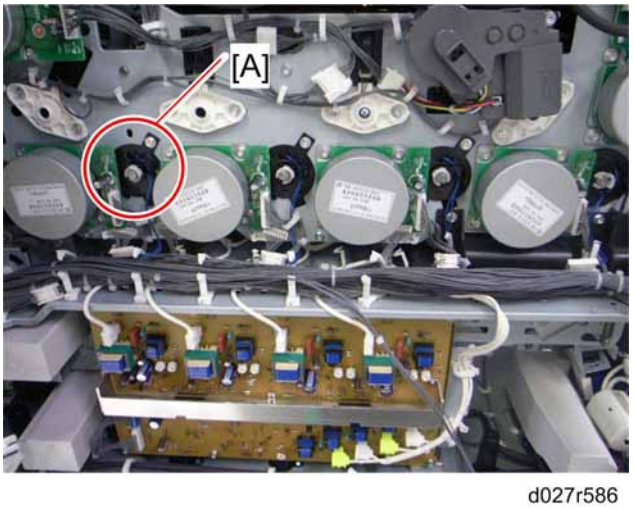


d027r121b

7. Turn the development clutch unit [A] counter-clockwise and then pull it out (x 1).
8. Development clutches for M and C [B] (x 1)

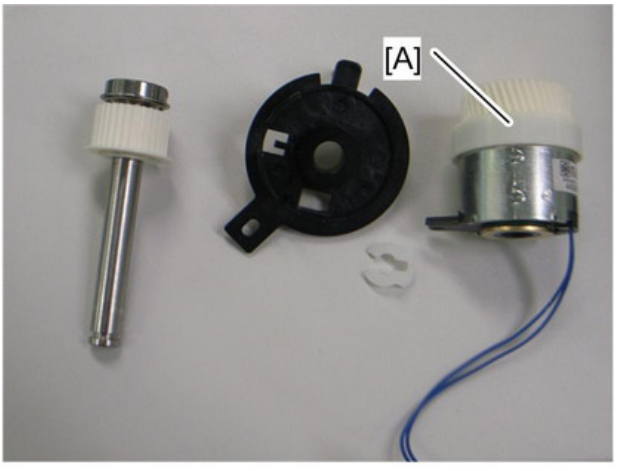
Development Clutch-K

1. Rear cover (☛ p.118)
2. PSU bracket (☛ p.250)
3. Controller box (☛ p.243)
4. Third duct (☛ p.145)
5. Drum/development motor-K (☛ p.178)



d027r586

6. Turn the development clutch unit [A] counter-clockwise and then pull it out (x 1).



d027r167

7. Development clutch-K [A] (x 1)

Fusing

Fusing Unit

⚠CAUTION

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

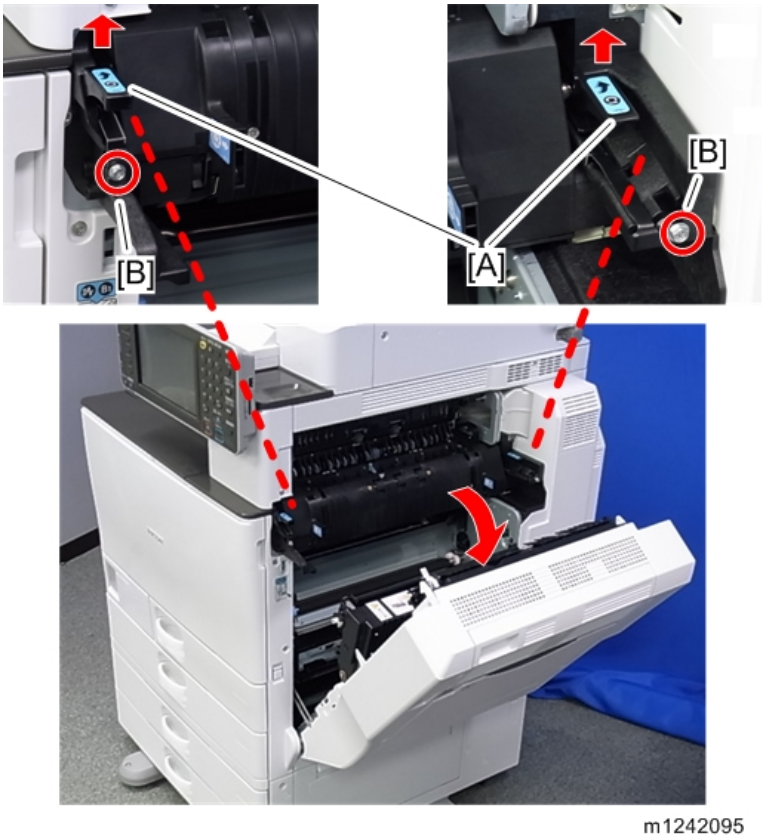
Important

- **After the PM counter for the fusing sleeve belt has reached its PM life (300K pages), the machine stops the operation automatically. Replace the fusing sleeve belt before the machine stops its operation (stop warning: 315K pages, stop: 330K pages).**
- **Change the setting of SP3-902-018 from "0" to "1" before replacing the fusing sleeve belt. Otherwise, the machine will not recover.**

1. If you will replace the fusing sleeve belt or pressure roller in the fusing unit (at PM for example), then reset each counter.
   - Set SP 3902-018 to "1" for the fusing sleeve belt unit replacement.
   - Set SP 3902-019 to "1" for the pressure roller replacement.

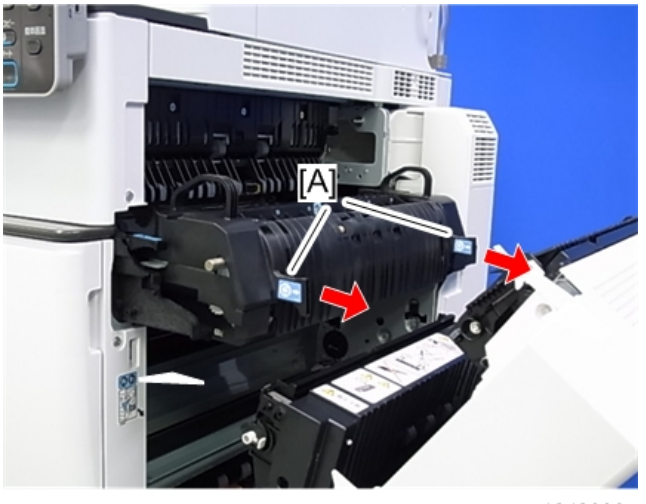
   Note

   - If you do this, then the machine will reset the PM counter for the fusing sleeve belt unit or pressure roller automatically, after you turn the power on again.
   - It is not necessary to clear the PM counter for the fusing unit with SP mode when you replace the fusing unit. This is because the fusing unit has a new unit detection mechanism.
2. Turn off the main power switch.
3. Open the right door.



m1242095

4. Release the lock levers [A].
5. Remove two transport brackets [B] if installed (x 1 each).

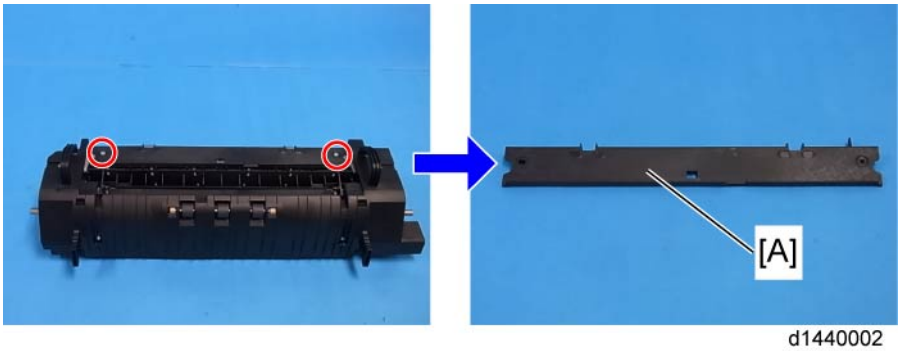


m1242096

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

Fusing Exit Shutter Plate

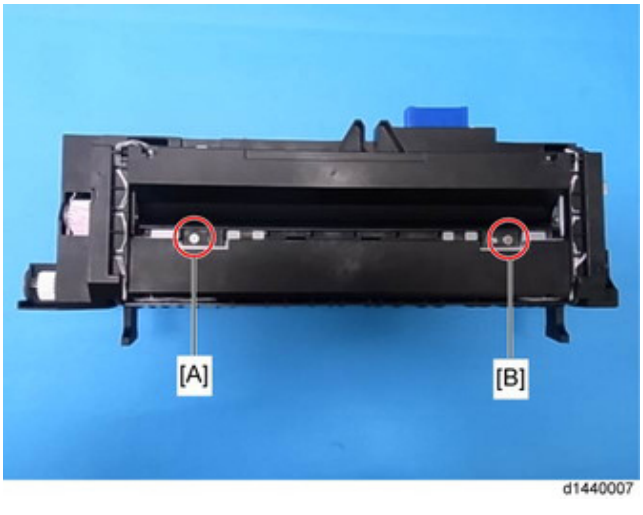
1. Fusing unit (☛ p.195)



2. Fusing exit shutter plate [A] (x 2)

Fusing Entrance Guide Plate

1. Fusing unit (☛ p.195)
2. Turn over the fusing unit.

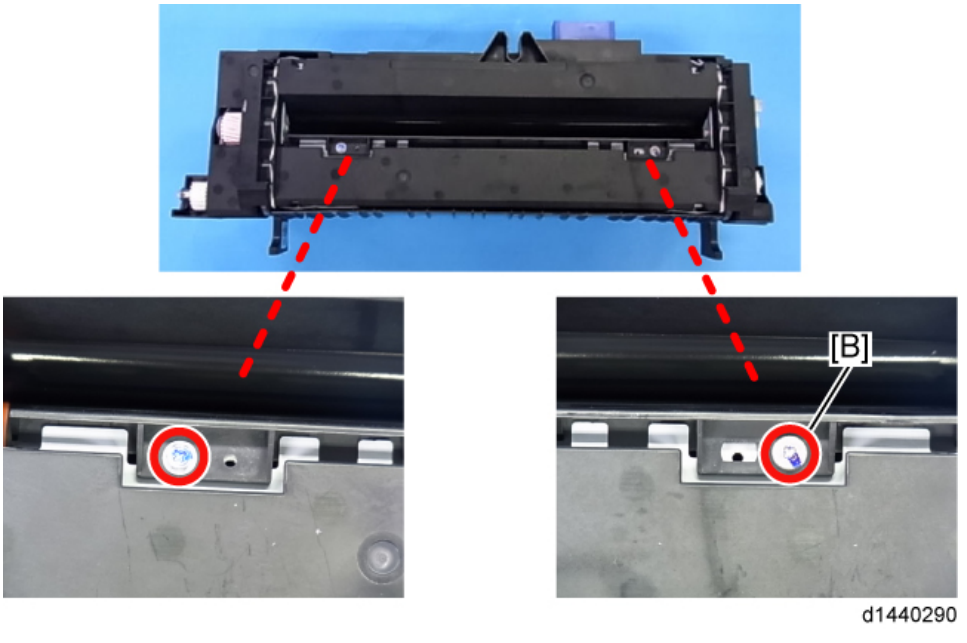




3. Fusing entrance guide plate [C] (x 2)

Note

- Screw [A] and screw [B] (stud screw) are different from each other.
- Secure the fusing entrance guide plate, using the outer screw holes (x2).



Cleaning Requirement



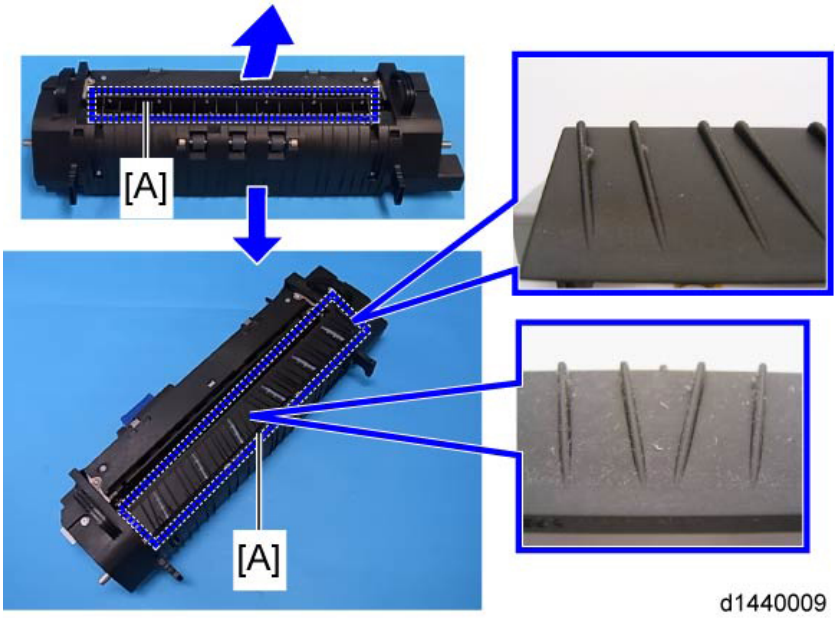
d088r374

The fusing entrance guide plate requires cleaning maintenance every fusing unit maintenance interval. Clean the fusing entrance guide plate at the place shown above with a dry cloth, and then clean the fusing entrance guide plate again with a cloth moistened with alcohol.

Fusing Exit Guide Plate Cleaning Procedure

The fusing exit guide plate requires cleaning maintenance every fusing unit maintenance interval.

1. Fusing unit (☛ p.195)



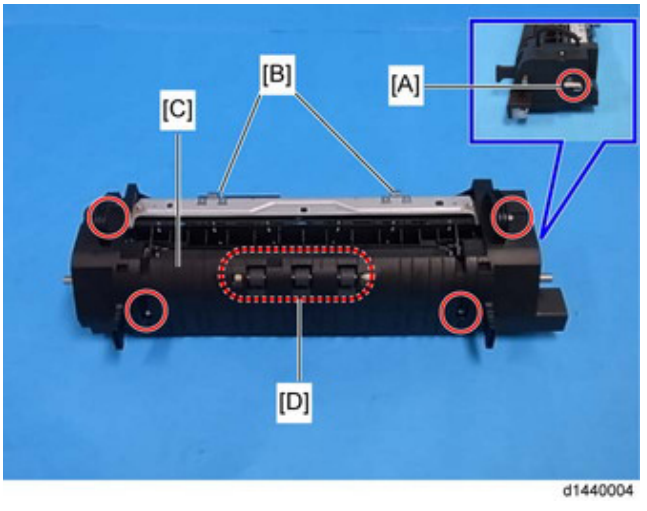
d1440009

2. Open the exit guide plate [A].

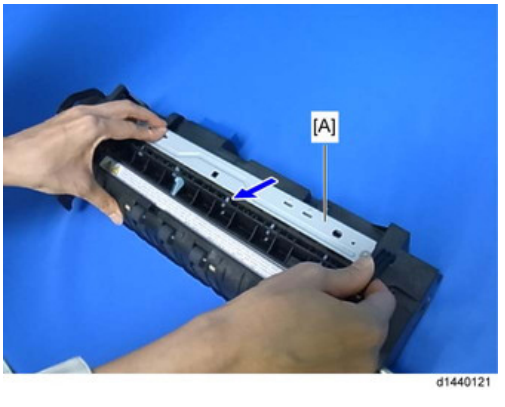
3. Clean the exit guide plate with a dry cloth, and then clean the exit guide plate again with a cloth moistened with alcohol at the points shown above.

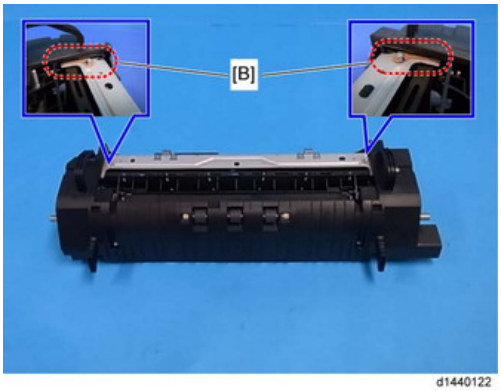
Fusing Unit Upper Cover

1. Fusing unit (☛ p.195)
2. Fusing exit shutter plate (☛ p.197)



3. Right guide bracket [A] (x 1)
4. Springs [B]
5. Remove the fusing unit upper cover [C] while pressing down the rollers [D] (x 4).



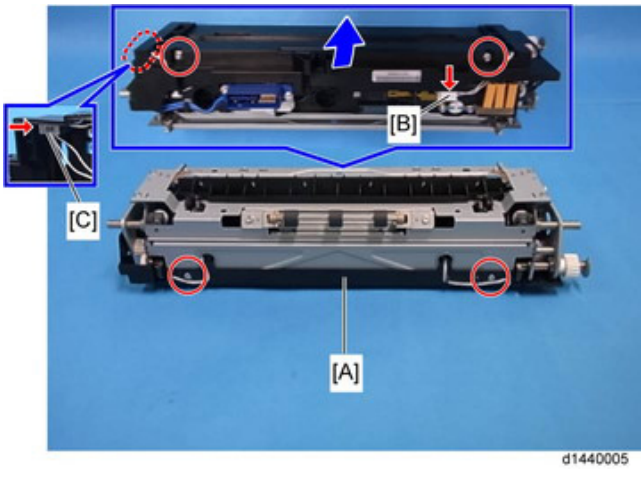


Important

- When reinstalling the fusing unit upper cover:
- The shutter plate [A] should be closed whenever the fusing unit upper cover is reinstalled. Otherwise, the ends of the shutter plate [B] may be damaged and this will result in a problem when opening and closing the shutter.

Fusing Unit Lower Cover

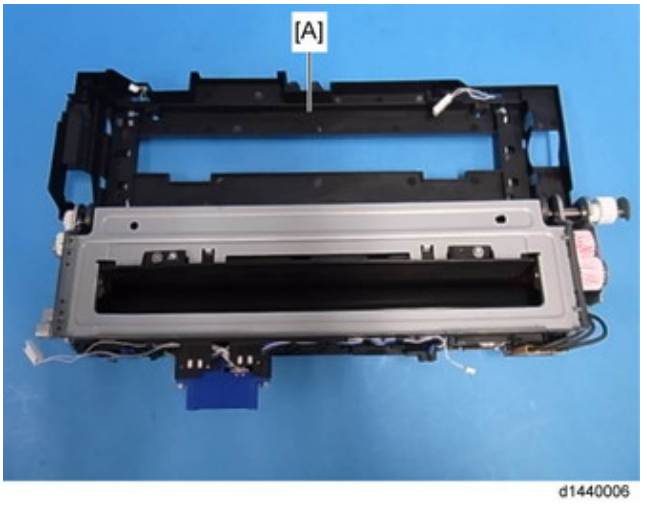
1. Fusing unit (☛ p.195)
2. Fusing unit upper cover (☛ p.200)



3. Place the fusing unit upside down.
4. Lift up the fusing unit lower cover [A] half way (x 4).
5. Disconnect two connectors [B], [C] and remove the wire harnesses from their harness guides (x 2).

Note

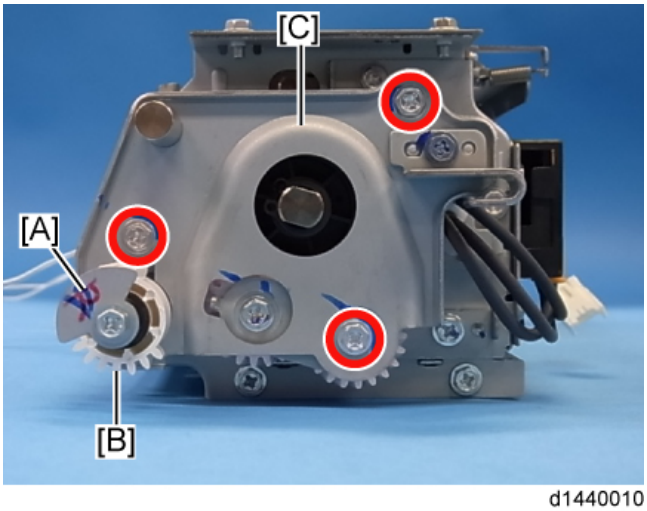
- The fusing lower cover cannot be removed from the fusing main body completely before removing the thermistors. Therefore, pay extra attention to handling the fusing lower cover when disassembling the fusing unit.



6. Fusing unit lower cover [A]

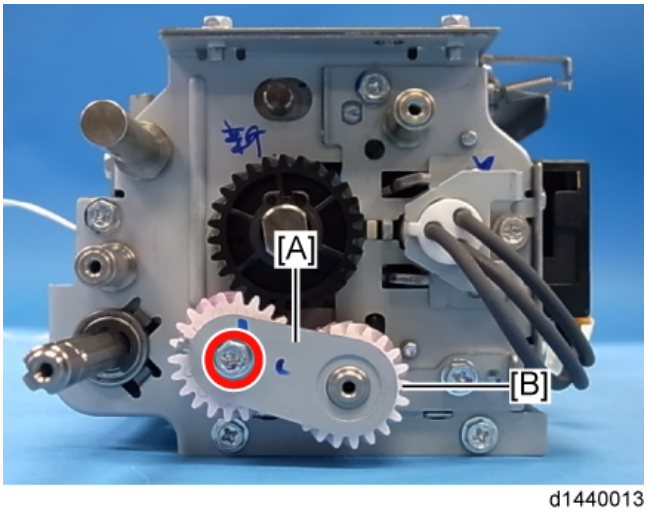
Fusing Sleeve Belt Unit

1. Fusing unit (p.195)
2. Fusing unit upper cover (p.200)
3. Fusing unit lower cover (p.201)
4. Fusing entrance guide plate (p.197)



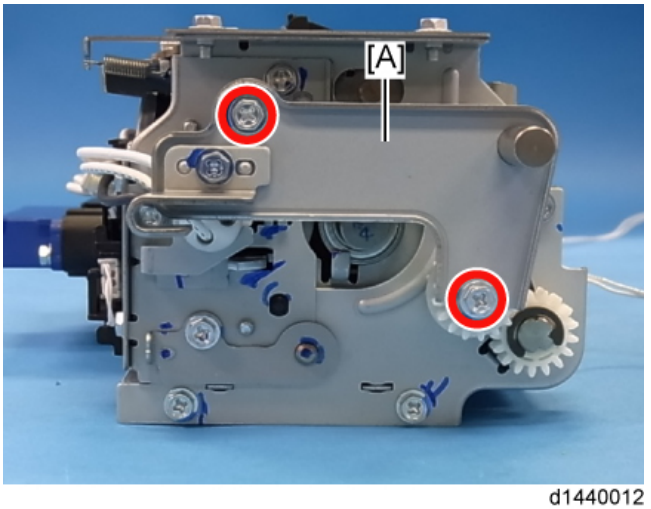
d1440010

5. Pressure roller contact shaft actuator [A] and pressure roller contact shaft gear [B] (x 1, x 1)
6. Rear bracket [C] (x 3, bearing x 1)



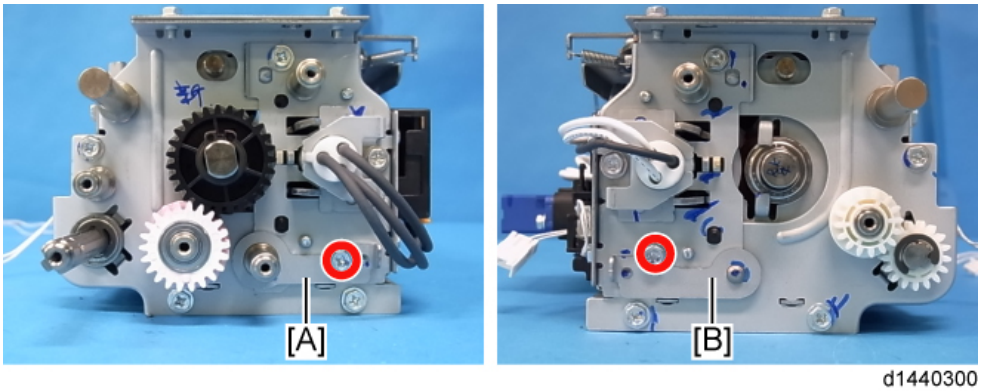
d1440013

7. Remove faceplate [A] and gear [B] (x 1, x 1)



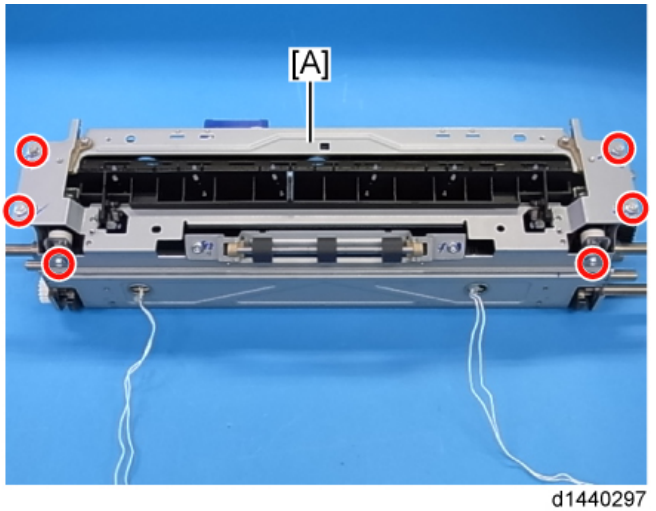
d1440012

8. Front bracket [A] (x 2)



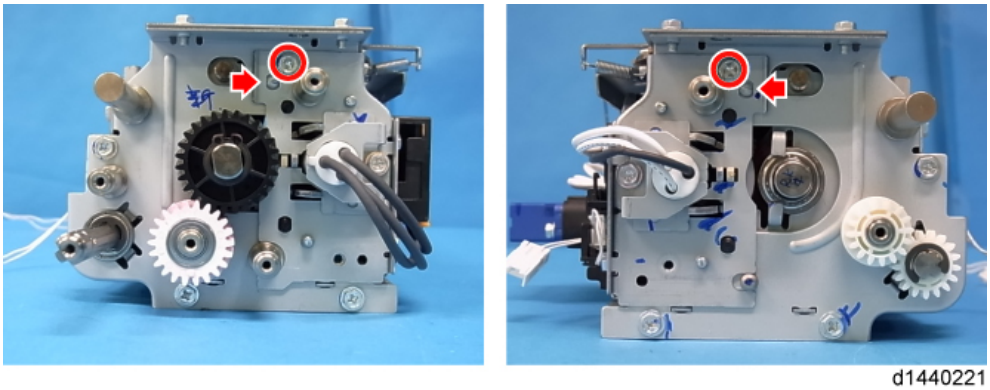
d1440300

9. Detach the positioning plates [A] and [B] at the front and back (x 2).



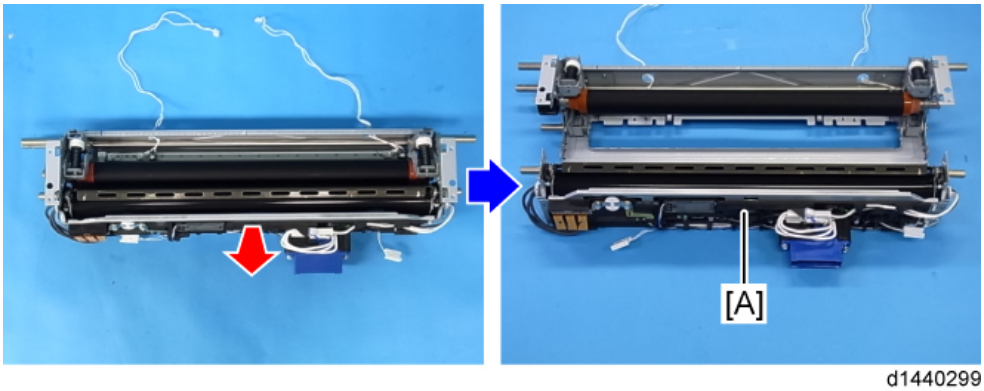
d1440297

10. Top frame [A] (x 6)



d1440221

11. Remove the fusing sleeve belt's screws at the front and back (x 1).
12. Release the positioning bosses on the frames at the front and back (two bosses on each side).



d1440299

13. Fusing sleeve belt [A]

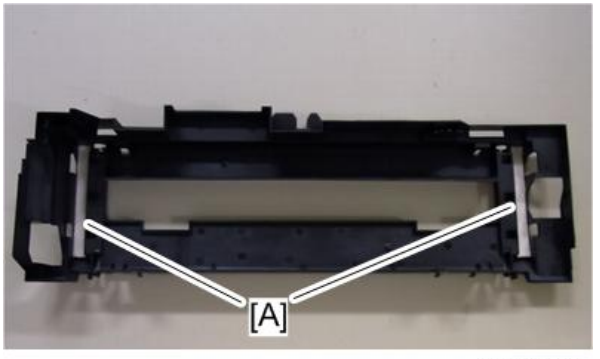
Note

- The surface of the fusing sleeve belt is delicate. Never touch the surface. Do not wipe the surface with anything.
- If the surface of the fusing sleeve belt must be cleaned because of offset image for example, feed some sheets of white paper through the fusing unit instead.

Oil Absorber Felt

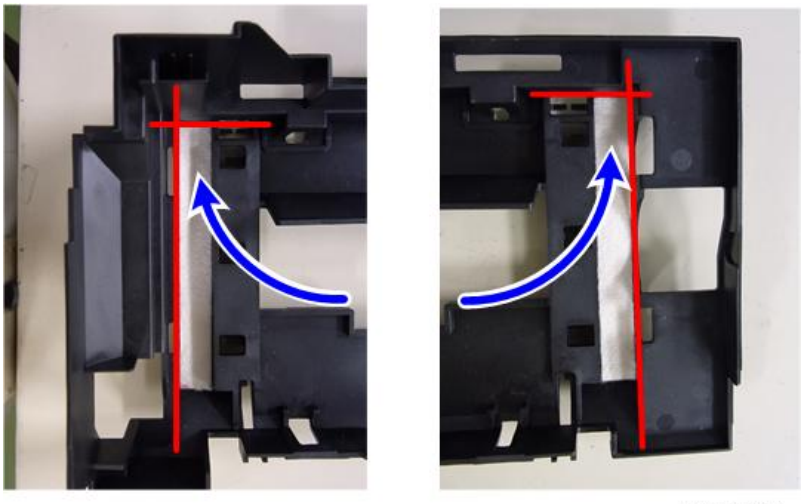
The oil leak in the fusing sleeve belt might occur when replacing the fusing sleeve belt. When you replace only the fusing sleeve belt, replace the oil absorber felt also.

1. Clean the pasting positions for the oil absorber felt on fusing unit lower cover with alcohol.



m1242097

2. Peel off the release paper from the oil absorber felts [A] and stick them on the fusing unit lower cover.

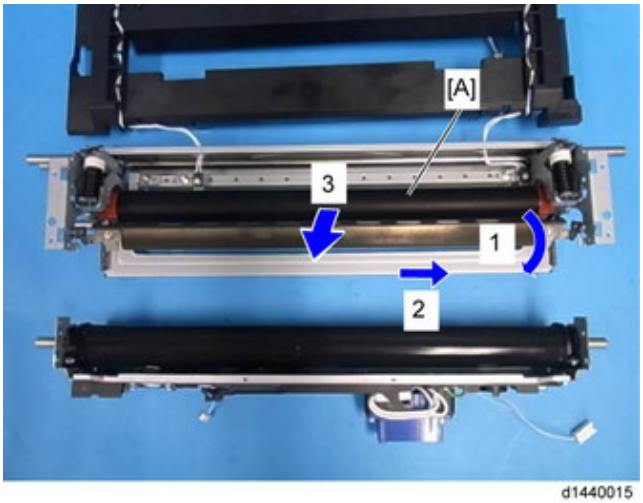


m1242098

3. Push the oil absorber felts along the wall and paste as shown above. Make sure they are not pasted over the wall.

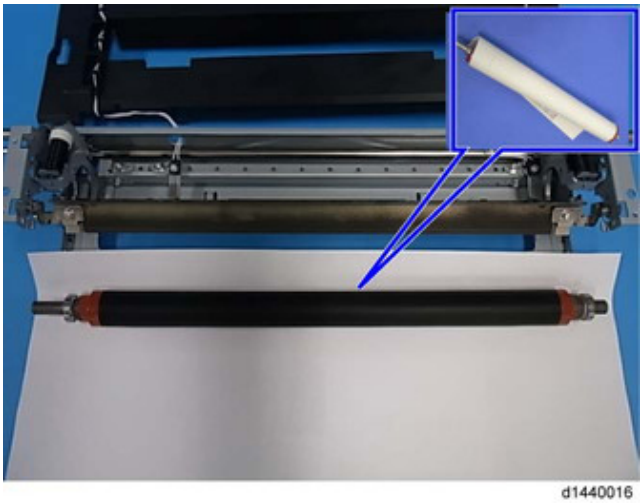
Pressure Roller

1. Fusing sleeve belt unit (☛ p.202)



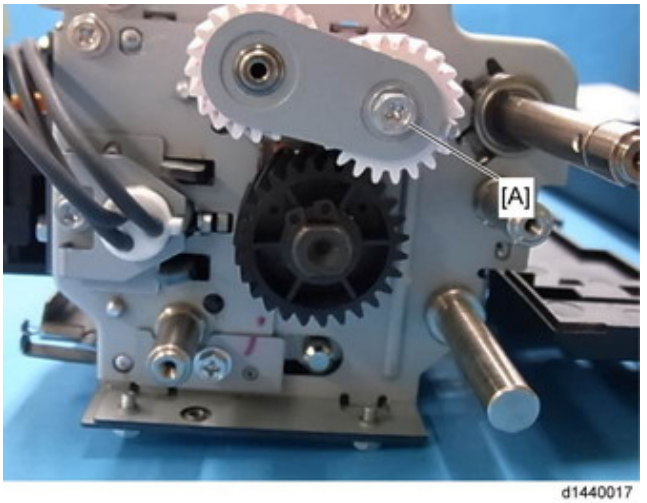
d1440015

2. Remove the pressure roller with bearings [A].


d1440016

Note

- The surface of the pressure roller is fragile, so the pressure roller must be covered with a sheet of paper when it is placed on a table or floor.



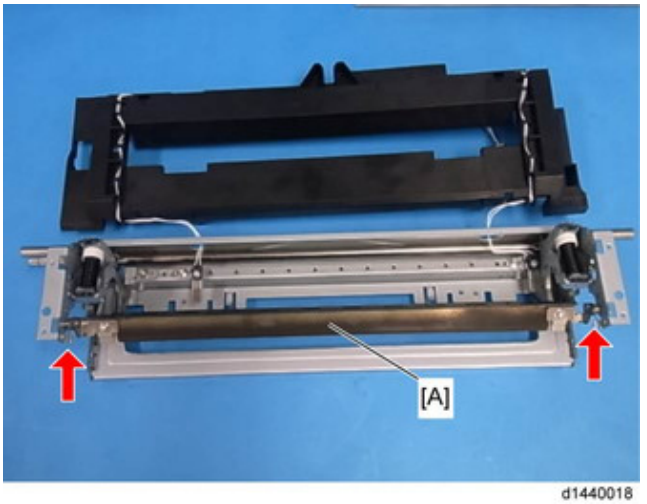
d1440017

Note

- Do not wipe off the grease of the new fusing drive gear when replacing the fusing drive gear [A].

Stripper Plate

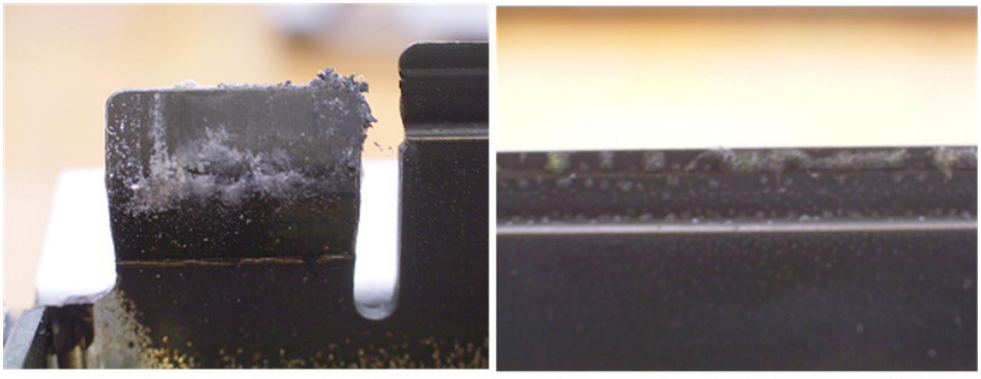
1. Fusing unit (☛ p.195)
2. Fusing sleeve belt unit (☛ p.202)
3. Pressure roller (☛ p.206)



d1440018

4. Pressure roller stripper plate [A] (springs x 2)

Cleaning Requirement

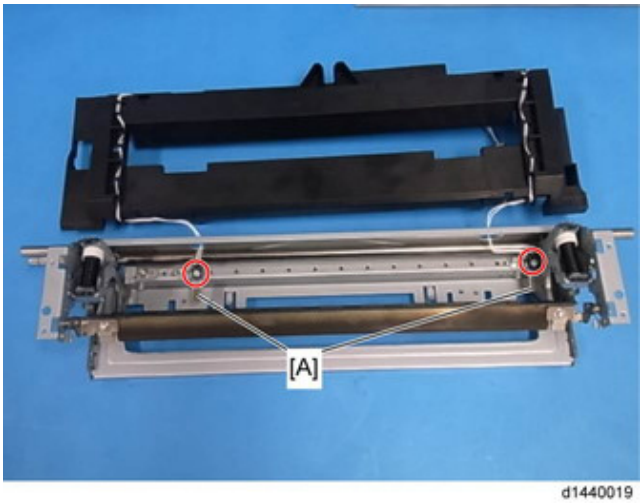


d037r377

The stripper plates require cleaning maintenance every fusing unit maintenance interval. Clean the stripper plates with a dry cloth, and then clean the stripper plates again with a cloth moistened with alcohol at the points shown above.

Pressure Roller Thermistors

1. Fusing unit (☛ p.195)
2. Fusing sleeve belt unit (☛ p.202)
3. Pressure roller (☛ p.206)

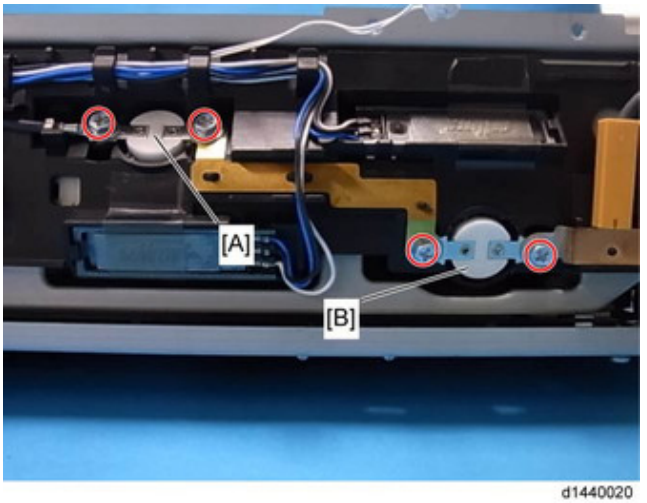


d1440019

4. Pressure roller thermistors [A] (x 1 each)

Pressure Roller Thermostats

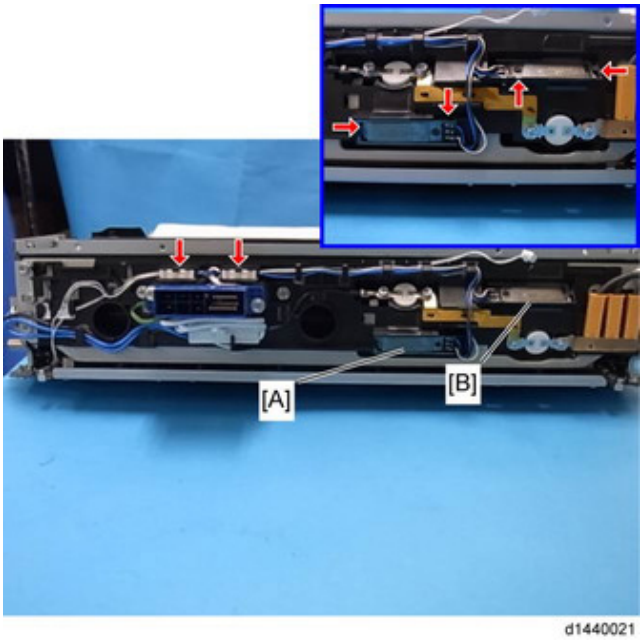
1. Fusing unit (☛ p.195)
2. Fusing unit upper cover (☛ p.200)
3. Fusing unit lower cover (☛ p.201)



4. Pressure roller thermostat (center) [A] and pressure roller thermostat (end) [B] (x 2 each)

NC Sensors

1. Fusing unit (☛ p.195)
2. Fusing unit upper cover (☛ p.200)
3. Fusing unit lower cover (☛ p.201)

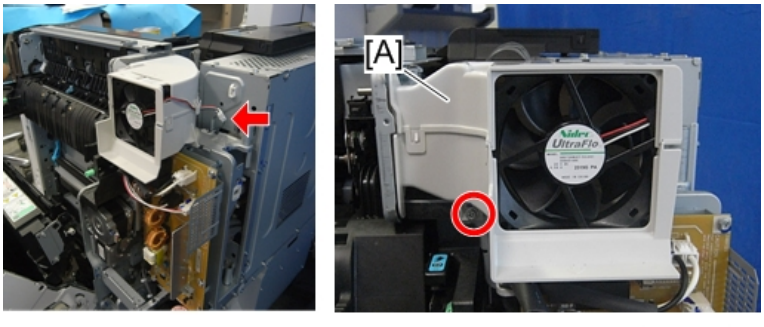


d1440021

4. NC sensor (center) [A] and NC sensor (end) [B] (Hooks x 2 each, x 1 each)

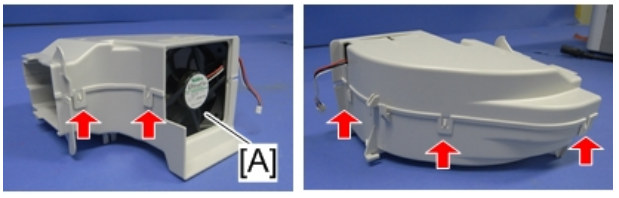
Fusing Fan

1. Rear cover (p.118)
2. Right rear cover (p.119)



m1242087

3. Fusing duct [A] (x 1, x 1)



m1242088

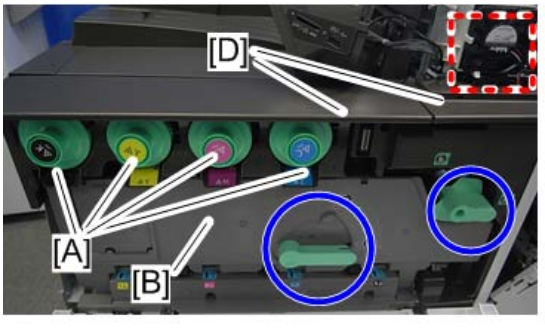
4. Fusing fan [A] (hook x 5)

When installing the fusing fan

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

Paper Exit Fan

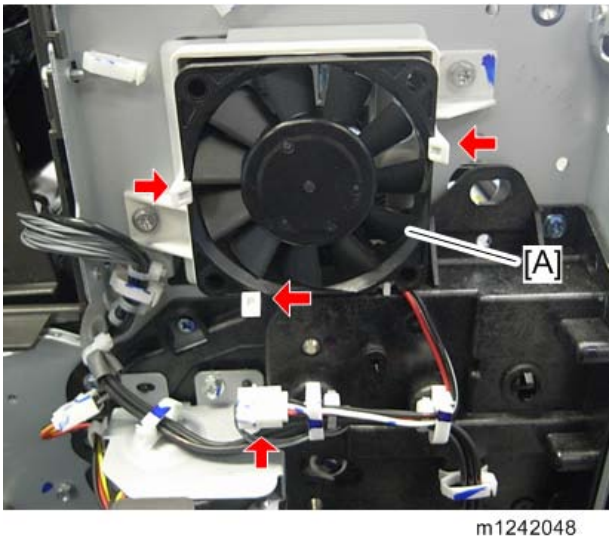
1. Operation panel (☛ p.120)
2. Open the front door.





m1242047

3. Remove all the toner bottles [A].
4. Turn the two green levers counterclockwise.
5. Open the drum positioning plate [B].
6. Remove the bracket [C] (x 2).
7. Remove the top front cover [D].



m1242048

8. Paper exit fan [A] (x 1, hook x 3)

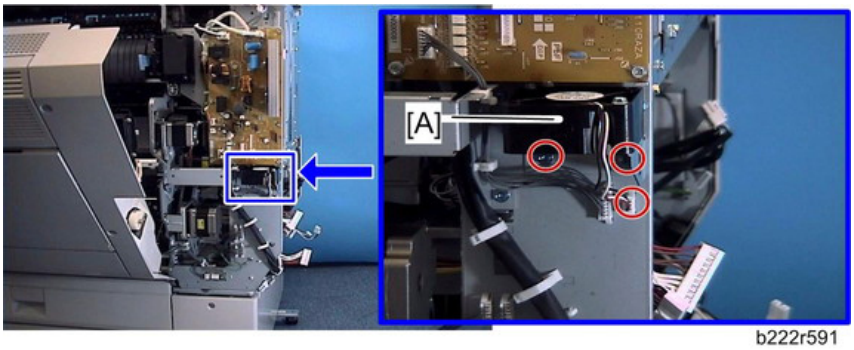
When installing the paper exit fan

Note

- Make sure that the paper exit fan is installed with its decal facing the rear of the machine.

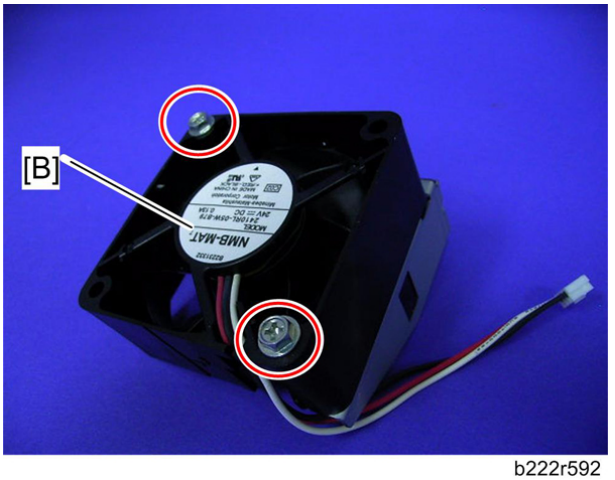
AC Controller Board Fan

1. Rear cover (p.118)
2. Right rear cover (p.119)



b222r591

3. AC controller fan bracket [A] (x 2, x 1)



b222r592

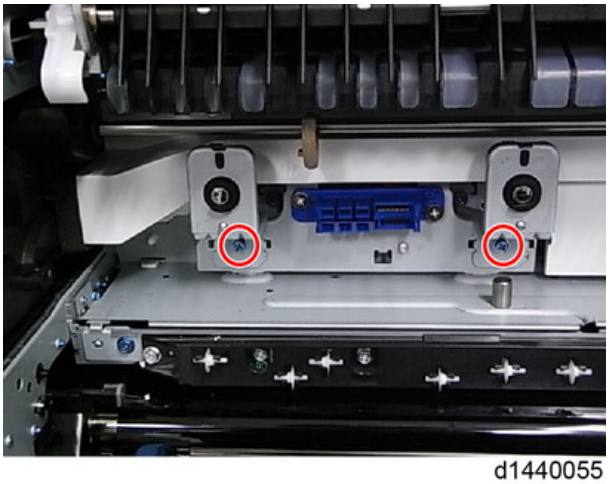
4. AC controller fan [B] (x 2)

When installing the AC controller fan

Make sure that the AC controller fan is installed with its decal facing the upper side of the machine.

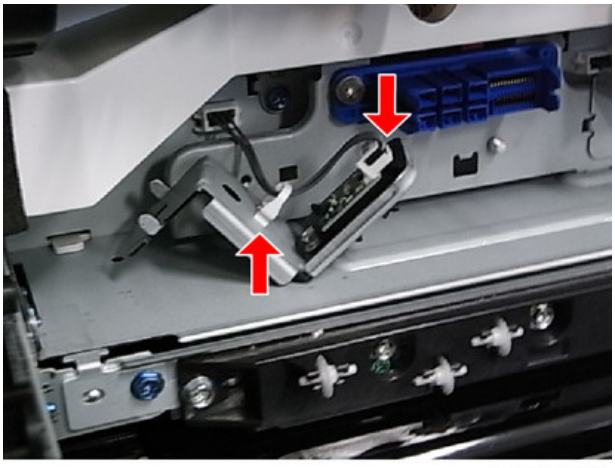
Fusing Entrance Thermopiles

1. Open the right door.
2. Fusing unit (p.195)



d1440055

3. Fusing entrance thermopile brackets (x 1 each)



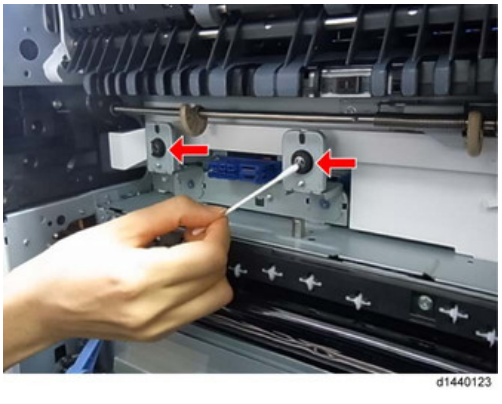
4. Fusing entrance thermopiles (x 1 each, x 1 each)

When cleaning the lens of the thermopile

⚠CAUTION

- Do this cleaning procedure after the fusing unit has completely cooled down. Otherwise, you may get a serious burn.

1. Fusing unit (☛ p.195)

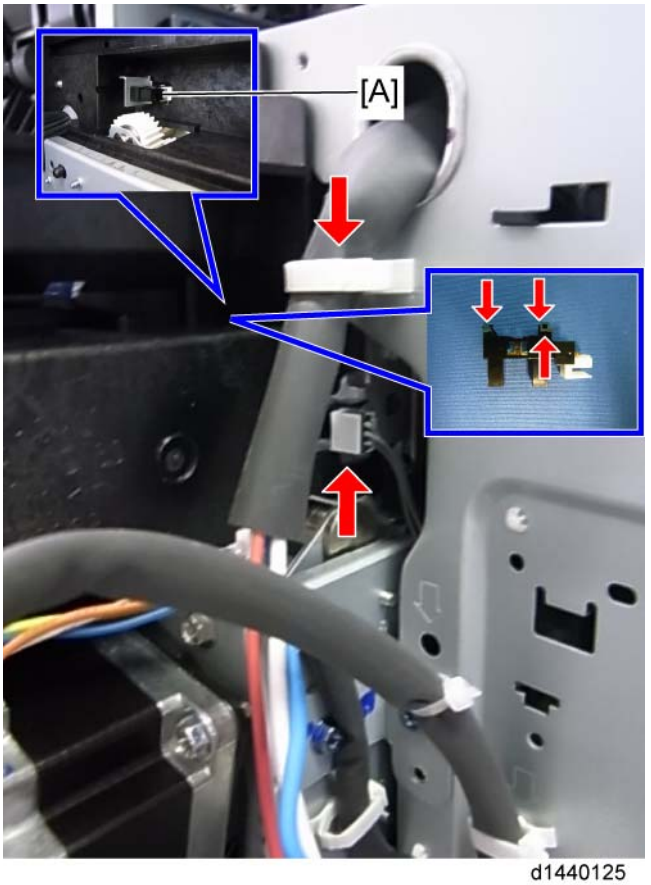


2. Clean with a cotton-swab dipped in alcohol.

Pressure Roller HP Sensor

1. Open the right door.
2. Fusing unit (☛ p.195)

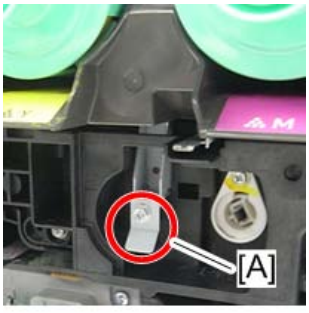
3. AC controller board (☛ p.255)
4. AC controller board bracket (☛ p.255)



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

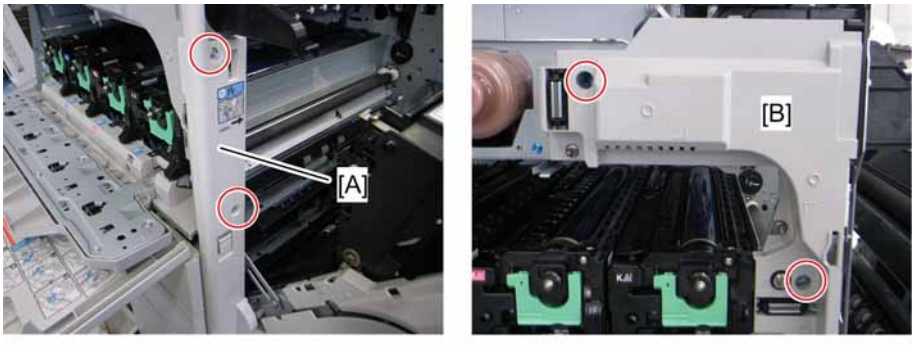
QSU fan

1. Operation panel (☛ p.120)
2. Open the front door.
3. Open the drum position plate (☛ p.137 "PCDU").



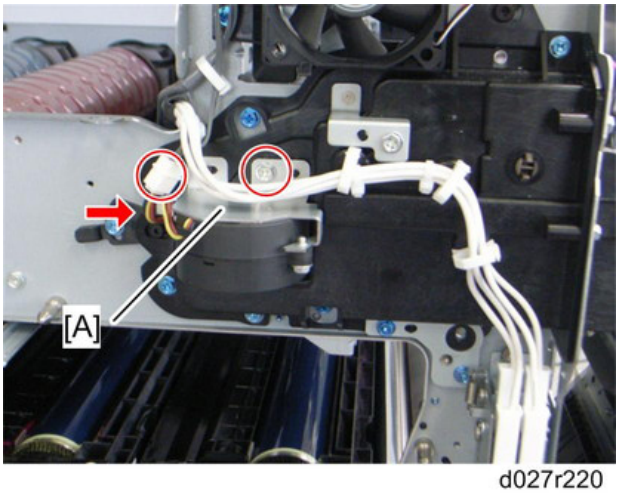
m1242061

4. Remove the bracket [A] (x 1).
5. Pull trays 1 and 2, and the image transfer belt unit half way out.



d027r219

6. Right front cover [A] and front inner cover [B]

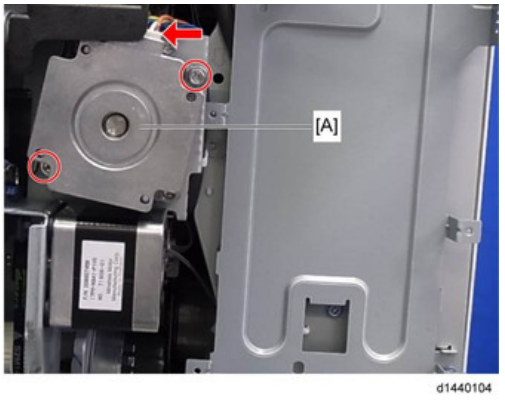


d027r220

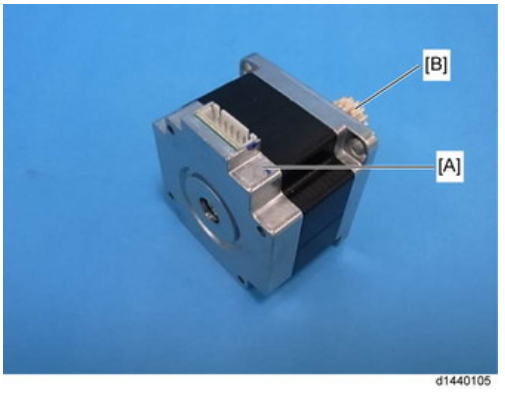
7. QSU fan bracket [A] (x 1, x 1, x 1)
8. QSU fan (x 2)

Fusing Unit Shutter Plate Drive Motor

1. AC controller board (☛ p.255)



2. Fusing shutter plate drive motor [A] (x 2, x 1)

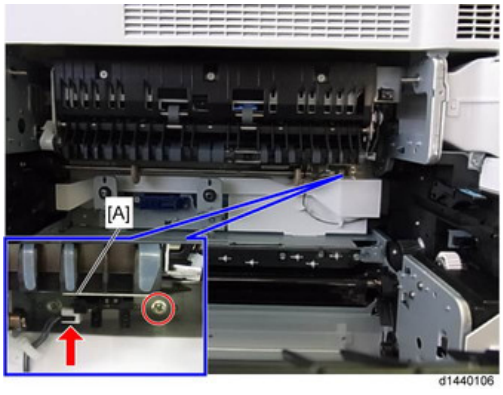


Note

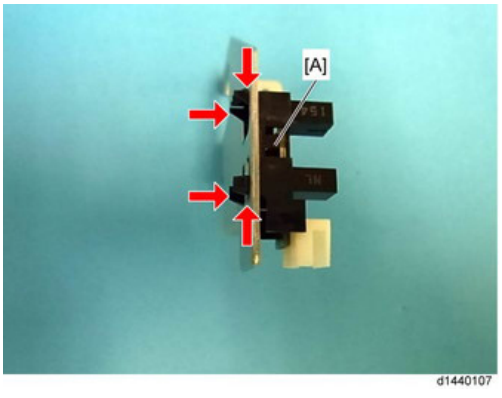
- Do not wipe off the grease of the gear [B] on the new motor [A] when replacing it.

Fusing Unit Shutter Plate Home Position Sensor

1. Open the right door.
2. Fusing unit (☛ p.195)



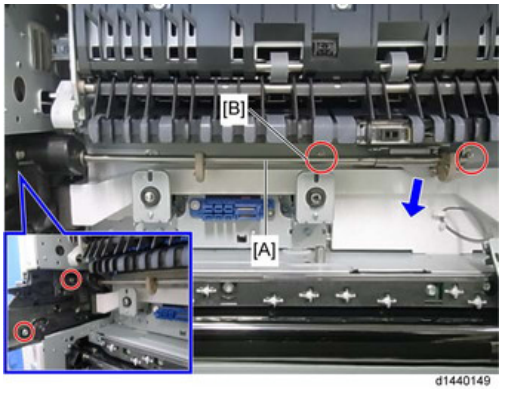
3. Fusing unit shutter plate home position sensor bracket [A] (x 1, x 1)



4. Fusing shutter plate home position sensor [A] (Hooks x 4)

Fusing Unit Shutter Plate Drive Mechanism

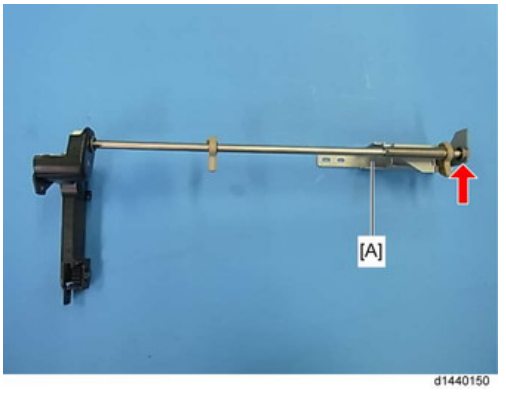
1. Open the right door.
2. Fusing unit (☛ p.195)
3. Fusing unit shutter plate home position sensor bracket (☛ p.218)



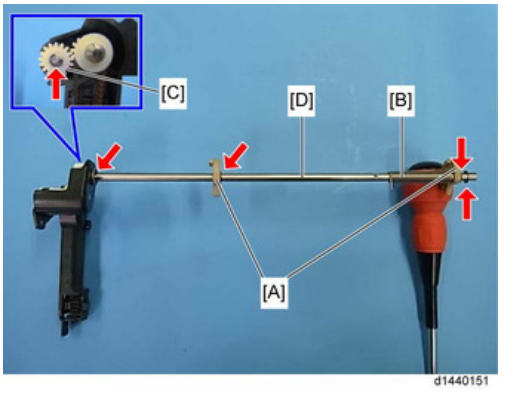
4. Fusing unit shutter plate drive mechanism [A] (x 4)

Note

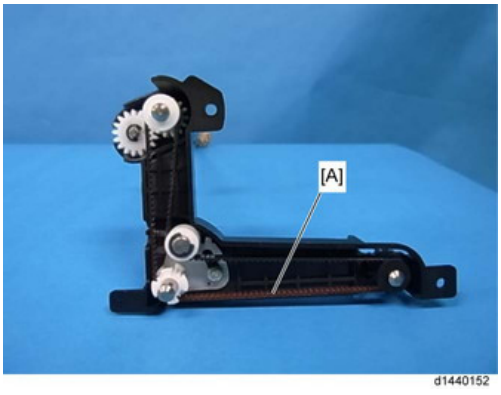
- If the shaft interferes with the movement of the screwdriver, the screw [B] should be removed at very last while pushing the shaft down slightly.



5. Drive shaft stay [A] (Bearing x 1)



6. Drive cams [A] (x 3, [B] x 1)
7. Drive gear [C] and drive shaft [D] (Bearing x 1, x 1)



8. Drive belt [A]

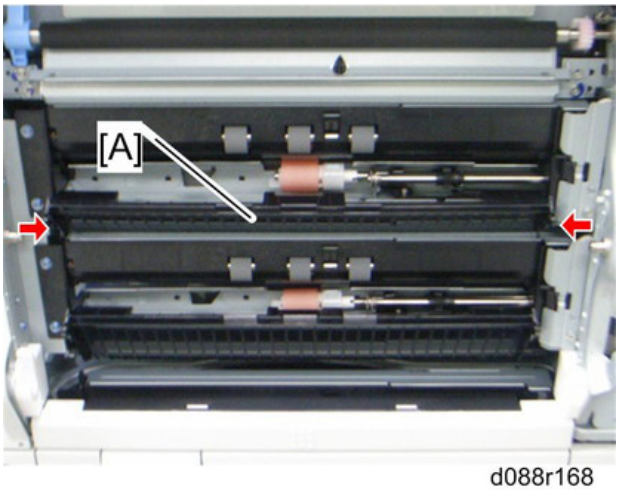
Note

- **When reinstalling the fusing unit shutter plate drive mechanism:**
- Make sure that the tension of the coil spring on the drive shaft is correct before reinstallation. If the tension is weak, rotate the spring for one revolution on the shaft and hook it.

Paper Feed

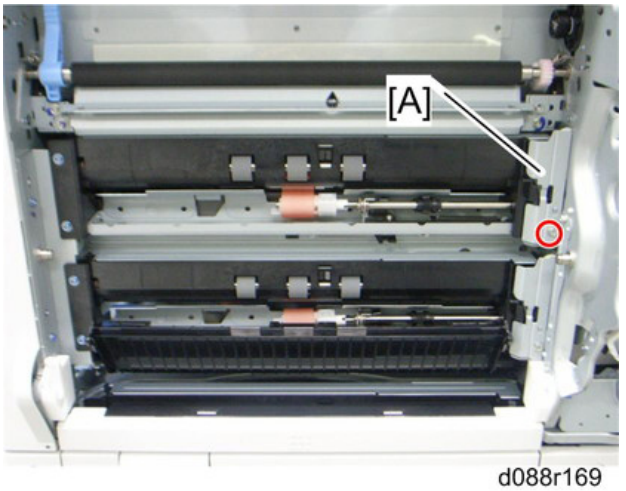
Paper Feed Unit

1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Duplex unit (☛ p.237)
4. Pull out tray 1 and tray 2.



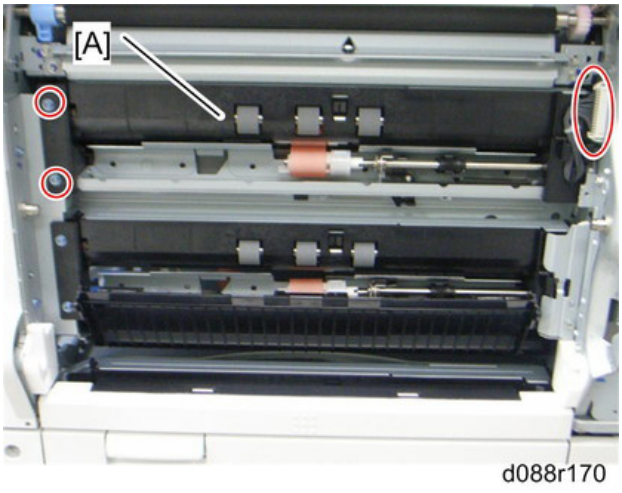
d088r168

5. Paper guide plate [A] (tab x 2)



d088r169

6. Harness cover [A] (x 1)

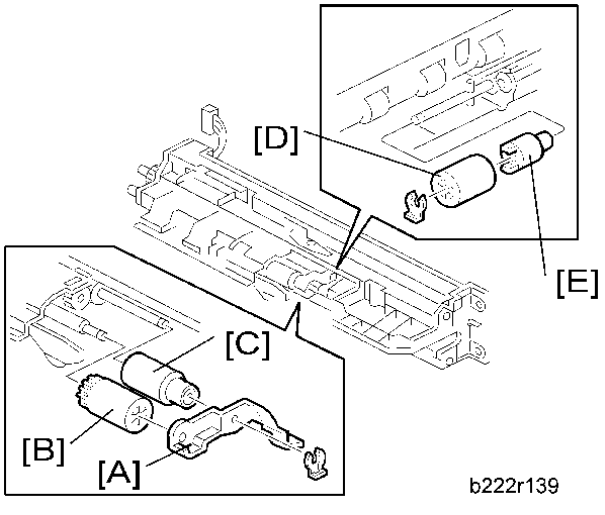


7. Paper feed unit [A] (x 2, x 1)

Pick-Up, Feed and Separation Rollers

Tray 1 and Tray 2

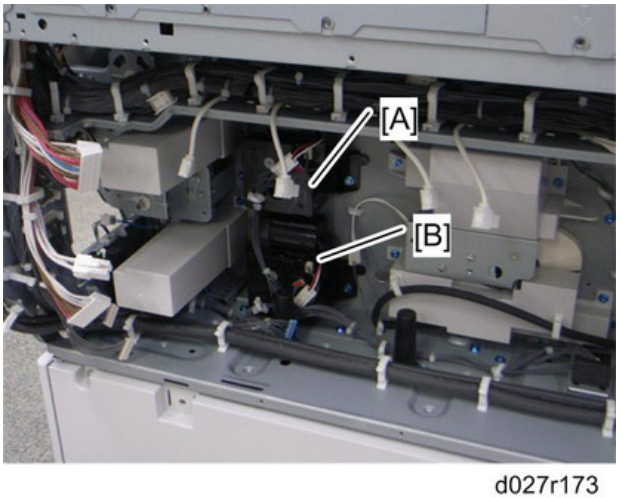
1. Paper feed unit (p.222)



2. Roller holder [A] (x 1)
3. Pick-up roller [B]
4. Feed roller [C]
5. Separation roller [D] and torque limiter [E] (x 1)

Tray Lift Motor

1. Rear cover (☛ p.118)
2. PSU bracket (☛ p.250)
3. High voltage supply board bracket (☛ p.254)

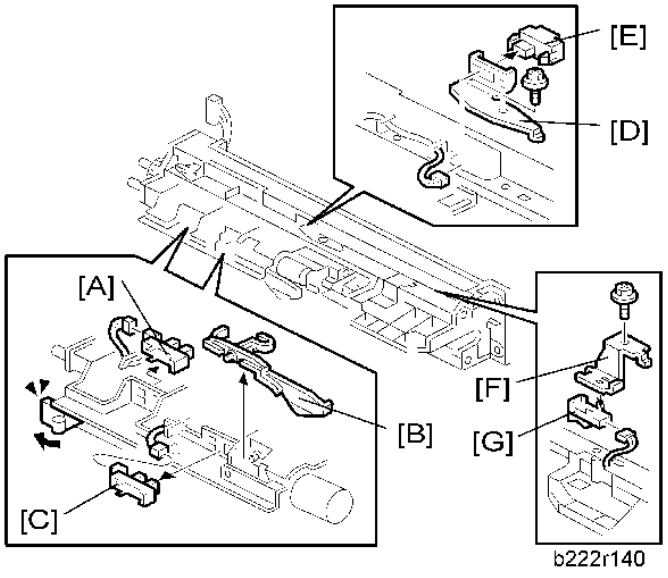


d027r173

4. Tray lift motor 1 [A] or 2 [B] (x 2, x 3, x 1 each)

Vertical Transport, Paper Overflow, Paper End and Paper Feed Sensor

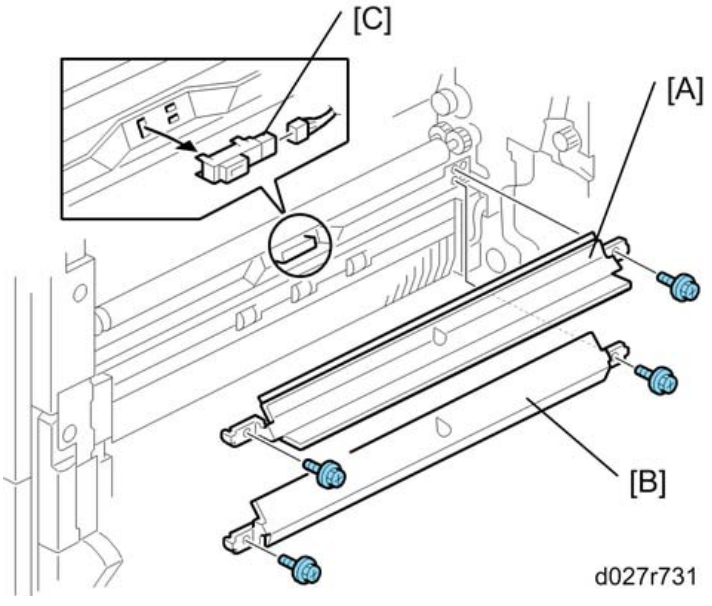
1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Paper feed unit (☛ p.222)



4. Paper overflow sensor [A]
5. Paper end feeler [B] and paper end sensor [C] (hook, x 1 each)
6. Vertical transport sensor bracket [D] (x 1, x 1)
7. Vertical transport sensor [E] (x 1, hook)
8. Paper feed sensor bracket [F] (x 1)
9. Paper feed sensor [G] (x 1, hook)

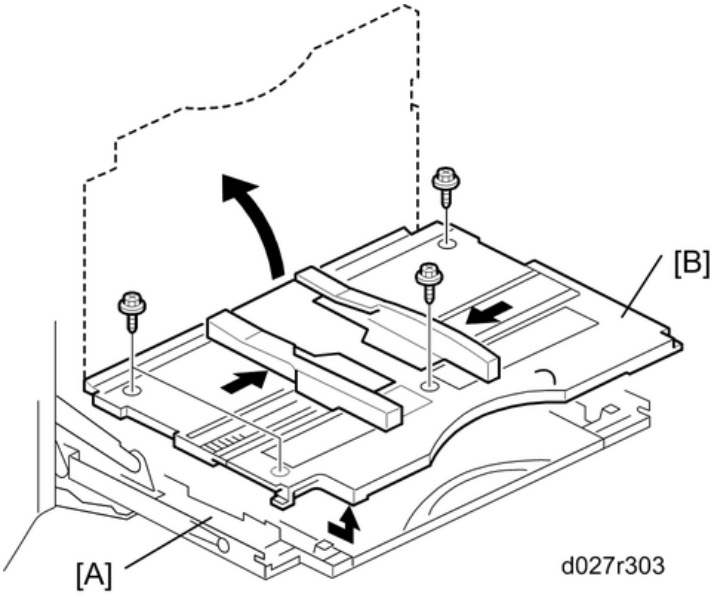
Registration Sensor

1. Rear cover (p.118)
2. Right rear cover (p.119)



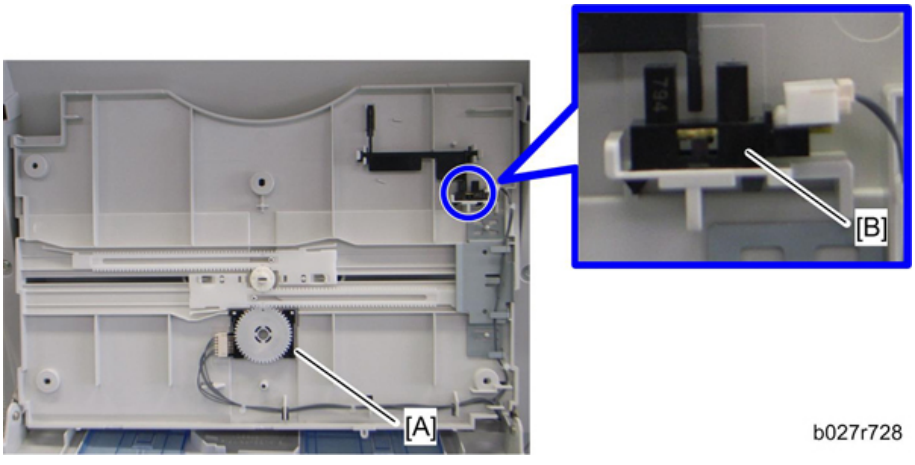
3. Paper guide plate 1 [A] and 2 [B] (x 2 each)
4. Registration sensor [C] (x 1, hook)

By-pass Paper Size Sensor and By-pass Paper Length Sensor



1. Open the by-pass tray [A].
2. Move the side fences to the center.

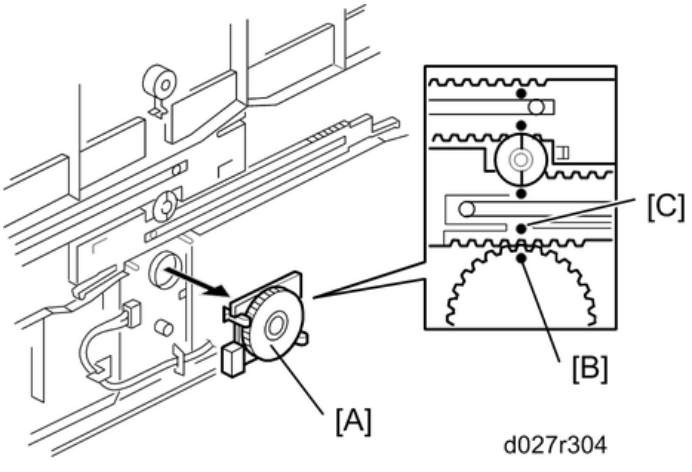
3. By-pass tray cover [B] (x 4)



b027r728

4. By-pass paper size sensor [A] (x 1).
5. By-pass paper length sensor [B] (x 1)

When reinstalling the by-pass paper size sensor



d027r304

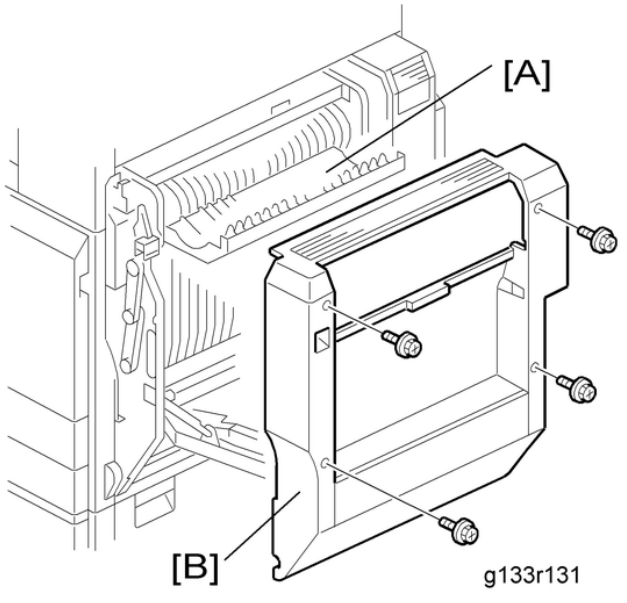
1. Adjust the projection [A] of the left side fence bar (it must be centered).
2. Install the by-pass paper size detection switch so that the hole [B] in this switch faces the projection [C] of the left side fence bar.
3. Reassemble the machine.
4. Plug in and turn on the main power switch.
5. Check this switch operation with SP5803-011 (By-pass paper size < Input Check).

- Display on the Screen -

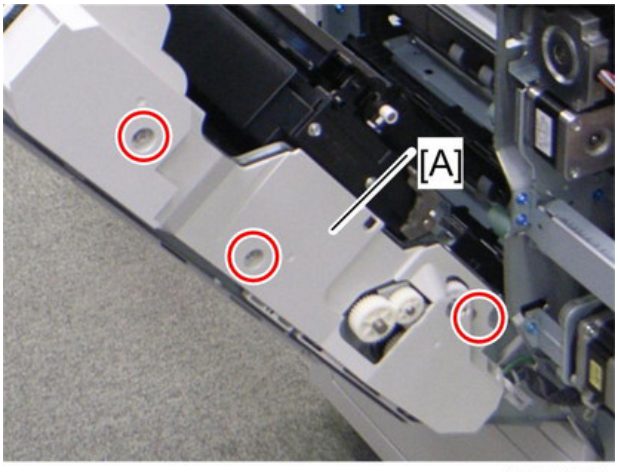
Paper Size	Display	Paper Size	Display
A3 SEF	00001110	A5 SEF	00001011
B4 SEF	00001100	B6 SEF	00000011
A4 SEF	00001101	A6 SEF	00000111
B5 SEF	00001001	Smaller A6 SEF	00001111

By-pass Bottom Tray

1. Open the right door.
2. By-pass tray cover (☛ p.226)

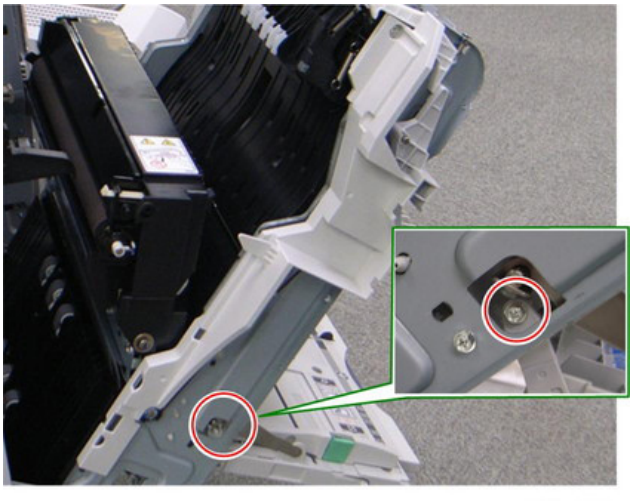


3. Open the duplex door [A].
4. Right door cover [B] (x 4)



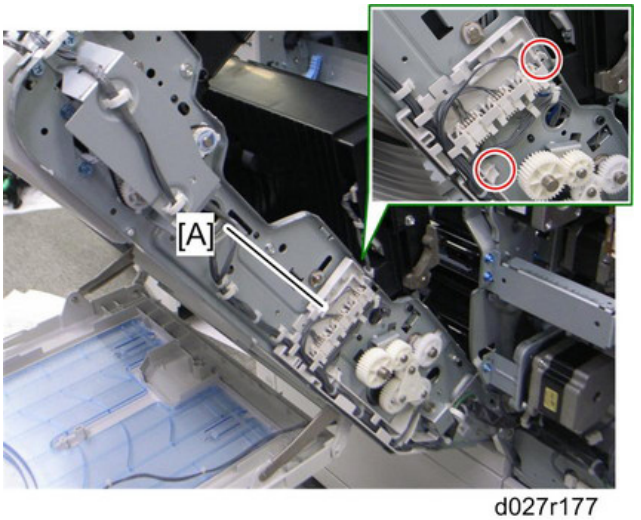
d027r174

5. Right door rear cover [A] (x 3)



d027r175

6. Remove the screw at the front side (x 1).



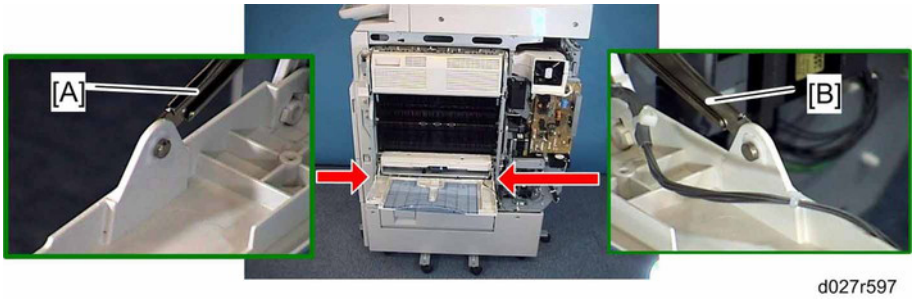
d027r177

7. Remove the cover [A] (2 hooks).



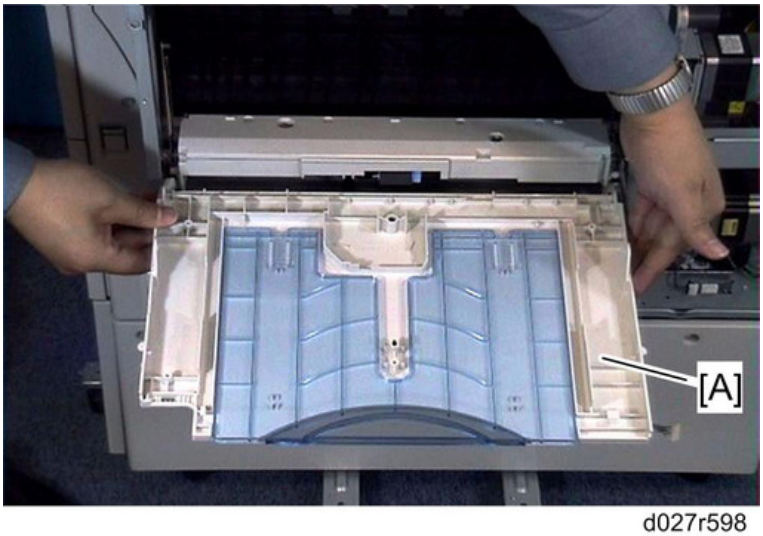
d027r178

8. Remove the screw at the rear side.



d027r597

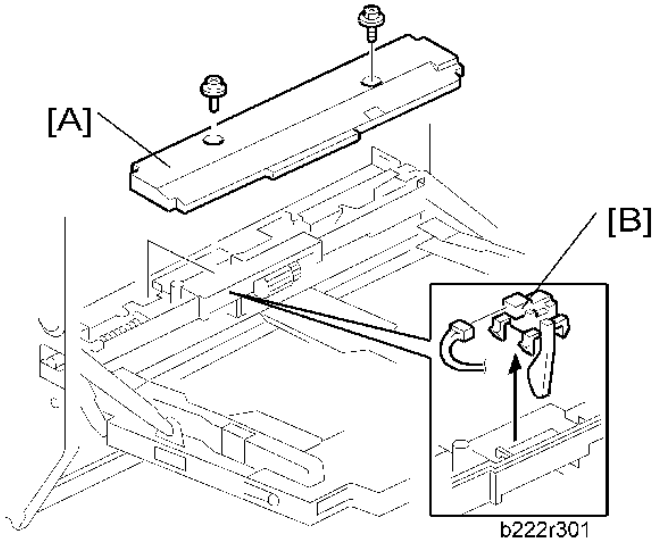
9. Release the front [A] and rear [B] arms (x 1 each).



10. By-pass bottom tray [A]

By-pass Paper End Sensor

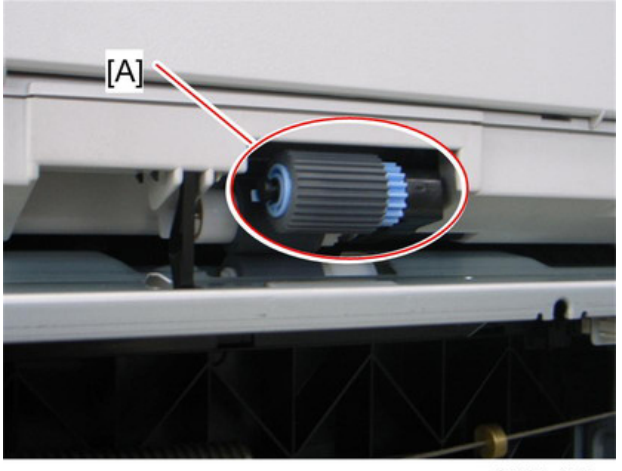
1. Right door cover (p.228)



2. By-pass feed unit cover [A] (x 2).
3. By-pass paper end sensor [B] (x 1, hook)

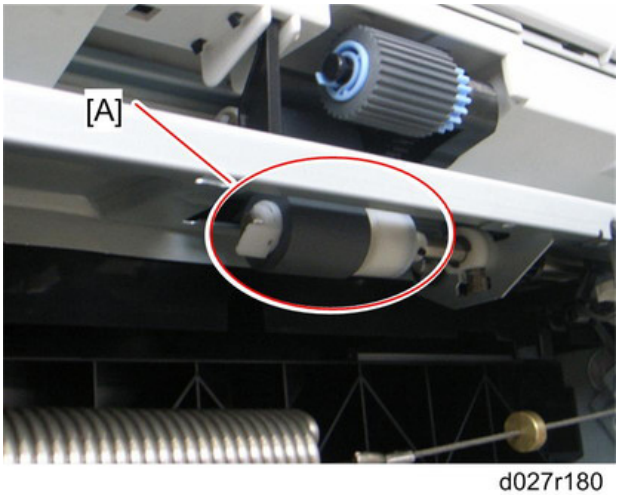
By-pass Pick-up, Feed and Separation Roller, Torque Limiter

1. Right door cover (☛ p.228)



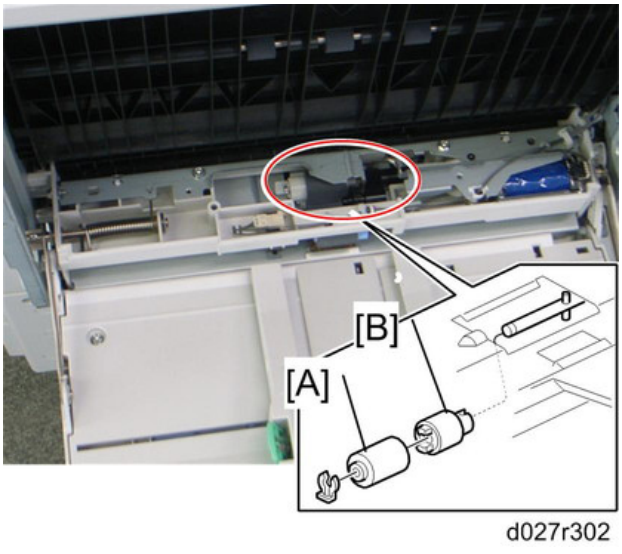
d027r179

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



d027r180

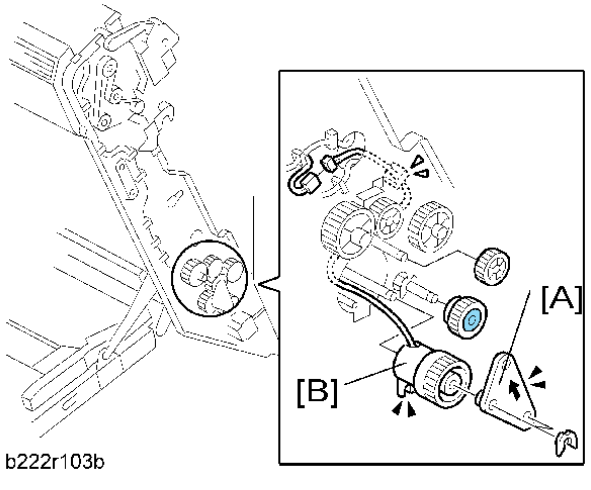
3. By-pass feed roller [A] (⟲ x 1)
4. By-pass feed unit cover (☛ p.231)



5. By-pass separation roller [A] (x 1)
6. Torque limiter [B]

By-pass Feed Clutch

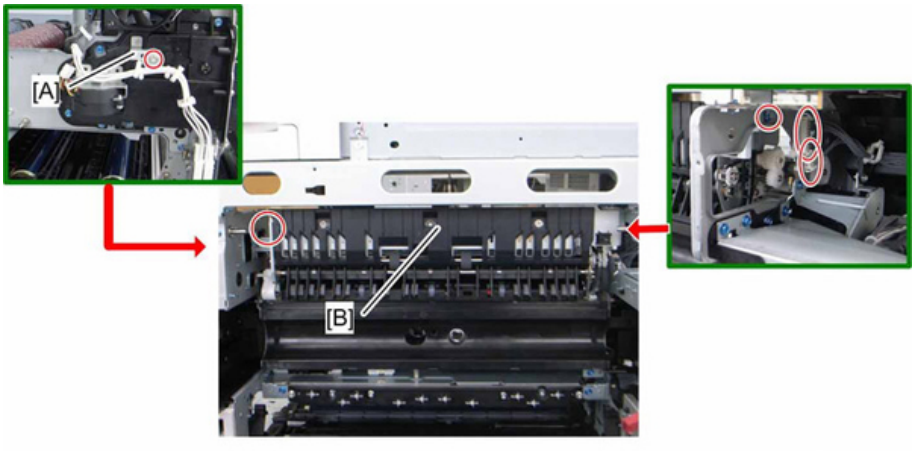
1. Open the right door.
2. Right door rear cover (p.228)



3. By-pass feed clutch holder [A] (x 2)
4. By-pass feed clutch [B] (x 1, x 1)

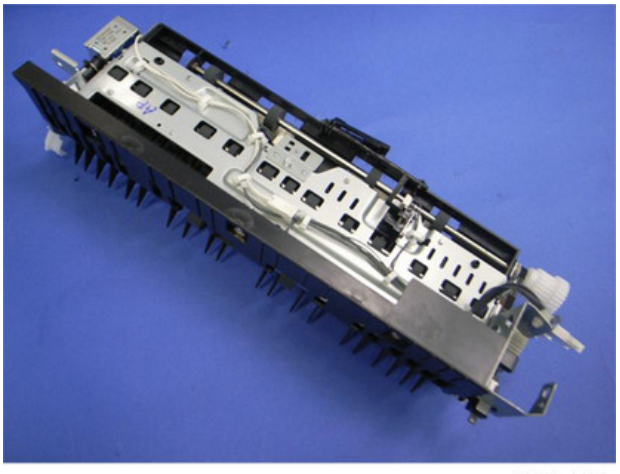
Paper Exit Unit

1. Fusing Unit (☛ p.195)
2. Operation panel (☛ p.120)
3. Image transfer belt unit (☛ p.153)
4. Output Tray (☛ p.123)
5. Rear cover (☛ p.118)
6. Right rear cover (☛ p.119)
7. Fusing entrance thermopiles (☛ p.214)
8. Fusing duct (☛ p.211)
9. Open the controller box (☛ p.243).



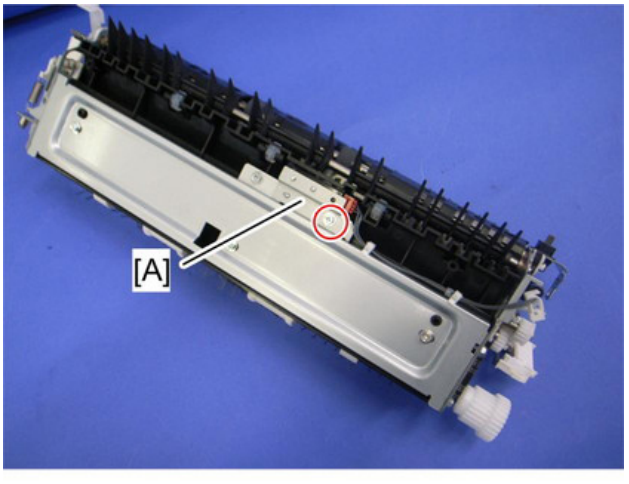
10. Gear cover [A] (x 1)
11. Paper exit unit [B] (x 2, x 2)

Fusing Exit, Paper Overflow, Junction Paper Jam and Paper Exit Sensor



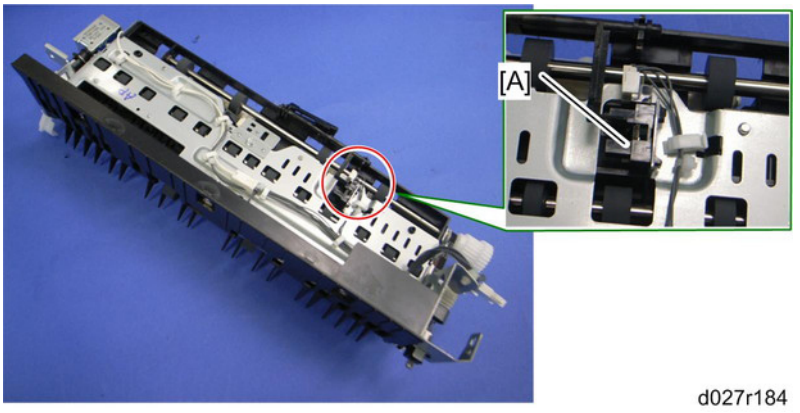
d027r182

1. Paper exit unit (☛ p.222)



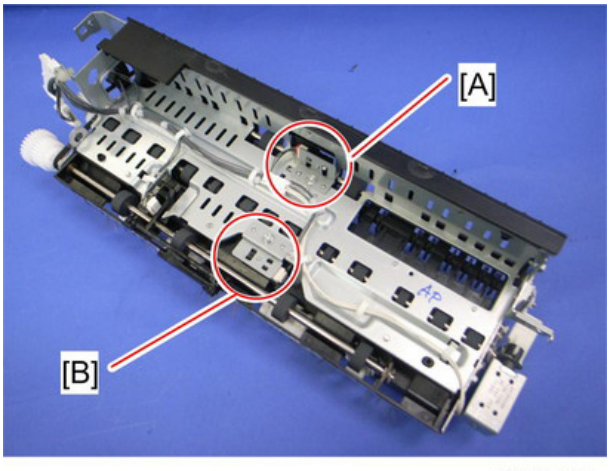
d027r183

2. Fusing exit sensor bracket [A] (x 1, x 1)
3. Remove the fusing exit sensor from the fusing exit sensor bracket (x 1)



d027r184

4. Paper overflow sensor [A] (x 1, hook)



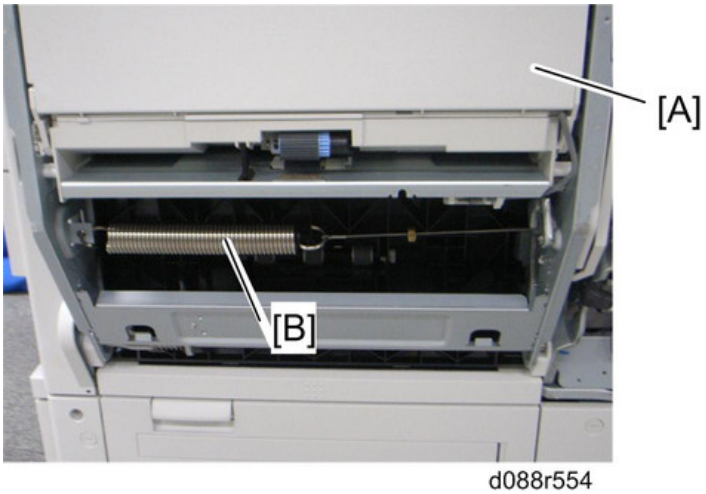
d027r185

5. Junction paper jam sensor bracket [A] (x 1, x 1)
6. Remove the junction paper jam sensor from the junction paper jam sensor bracket (hook)
7. Paper exit sensor bracket [B] (x 1, x 1)
8. Remove the paper exit sensor from the paper exit sensor bracket (hook).

Duplex Unit

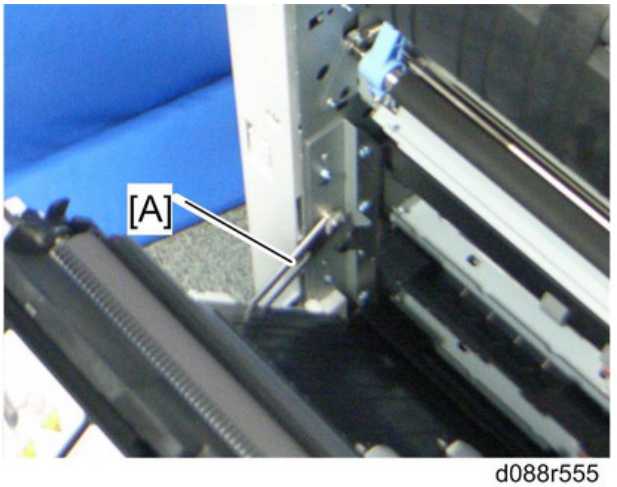
Duplex Unit

1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Right door cover (☛ p.162)



d088r554

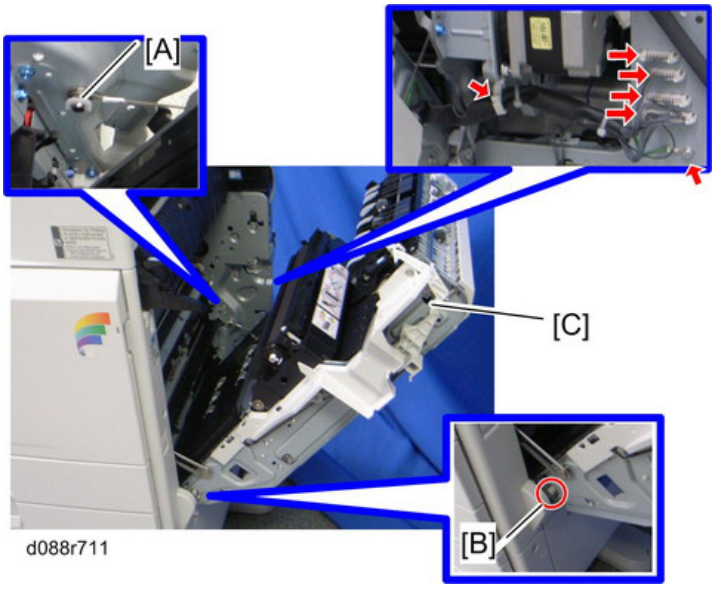
4. Close the right door [A].
5. Remove the spring [B].
6. Open the right door [A].



d088r555

7. Release the front link [A] (x 1).

8. Keep the right door fully open.



9. Hold the right door, and then release the wire [A] (x 1).

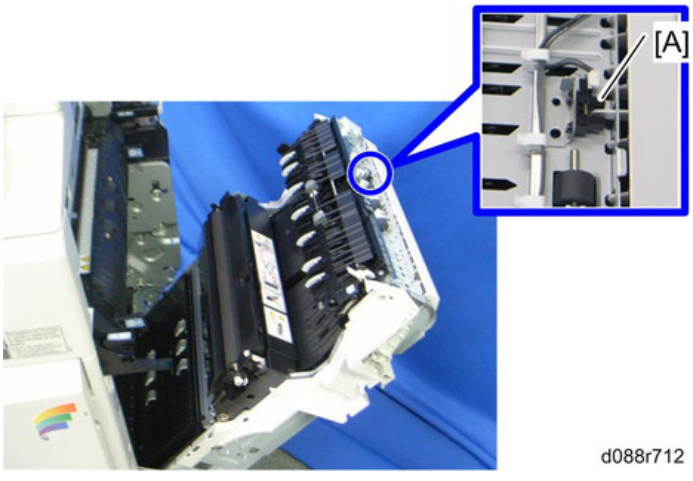
⚠CAUTION

- Keep holding the right door before removing the right door completely. Otherwise, the right door can fall down and injure you.

10. Press the projection [B] to pull the right door shaft into the unit, and then remove the duplex unit [C] (x 1, x 1, x 4, ground cable x 1).

Duplex Door Sensor

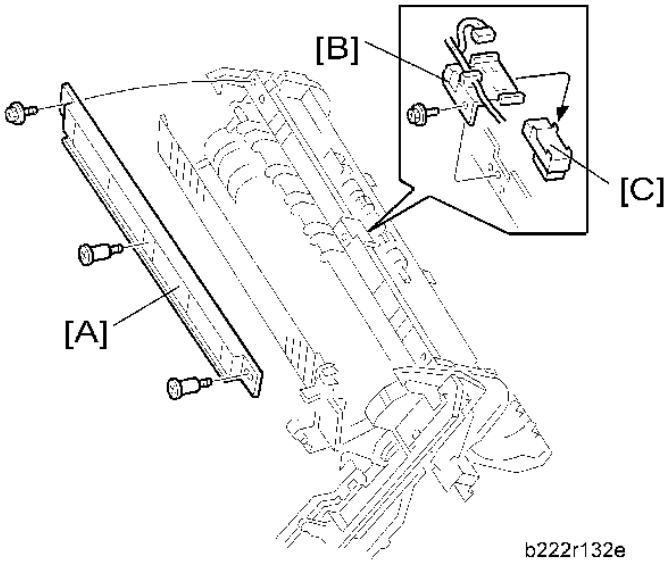
1. Right door cover (p.162)
2. Open the right door.



3. Duplex door sensor [A] (x 1, hook)

Duplex Entrance Sensor

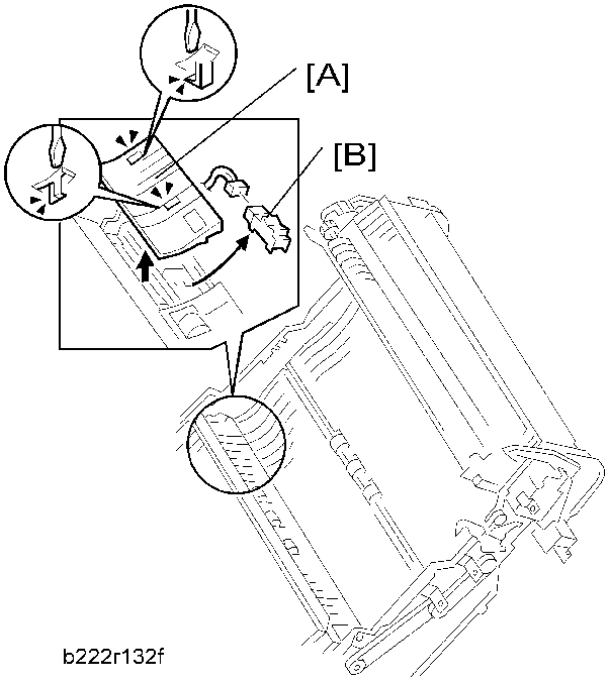
1. Right door cover (p.162)
2. Open the right door.



3. Duplex entrance guide [A] (x1, stepped screw x 2)
4. Duplex entrance sensor bracket [B] (x 1, x 1)
5. Duplex entrance sensor [C] (hook)

Duplex Exit Sensor

1. Paper transfer unit (p.162)



2. Guide plate [A] (two hooks)
3. Duplex exit sensor [B] (x 1, hook)

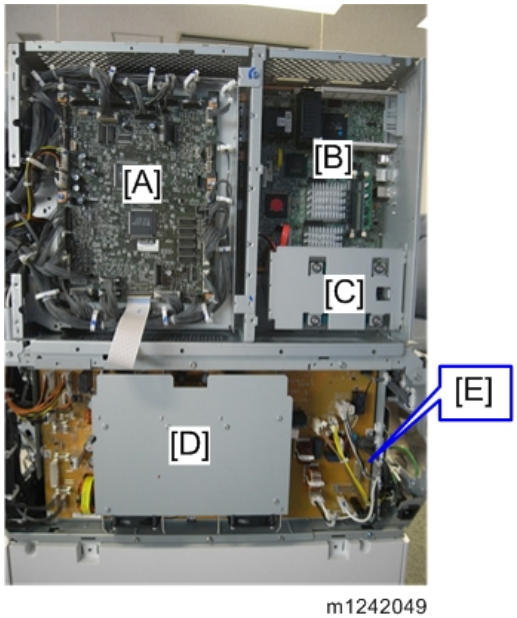
Electrical Components

Important

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

Boards

Controller Box closed

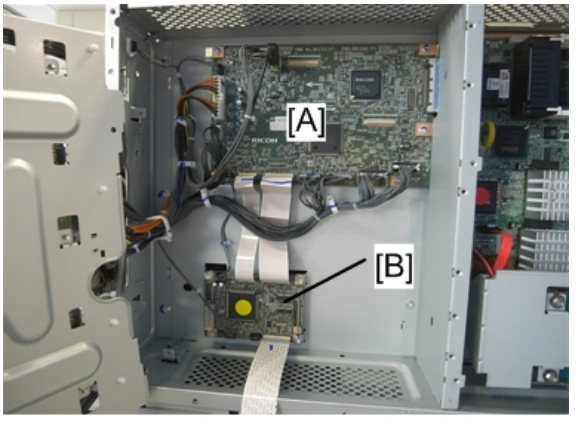


m1242049

[A]	IOB
[B]	Controller Board
[C]	HDD*1
[D]	PSU
[E]	High Voltage Supply Board (Behind the PSU [D])

*1 This is optional for P3c (M124) but supplied with P3d (M125) as standard equipment.

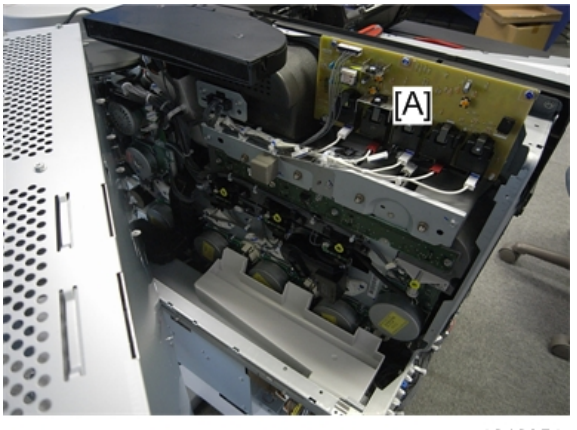
Behind the IOB



m1242050

[A]	BB (Bridge Board)
[B]	BCU

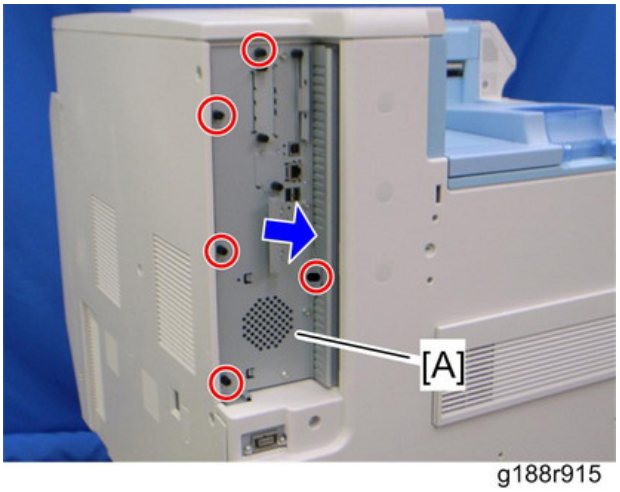
Controller Box Open



m1242051

[A]	ITB Power Supply Board

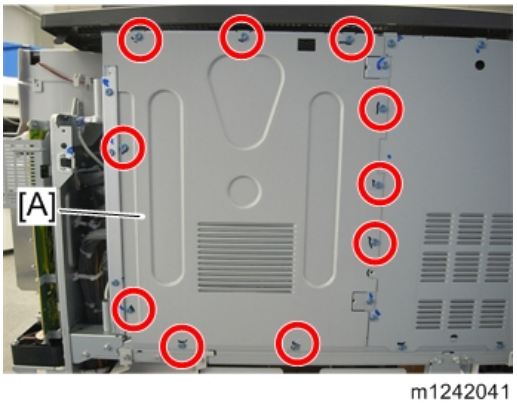
Controller Unit



1. Controller unit [A] (knob screw x 5)

Controller Box Right Cover

1. Rear cover (☛ p.118)

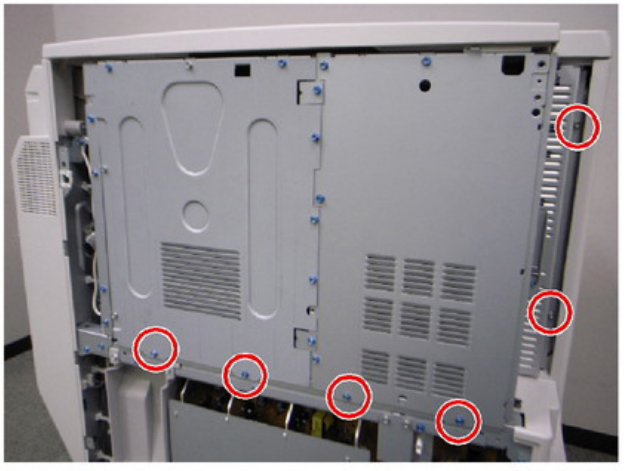


2. Controller box right cover [A] (x 10)

Controller Box

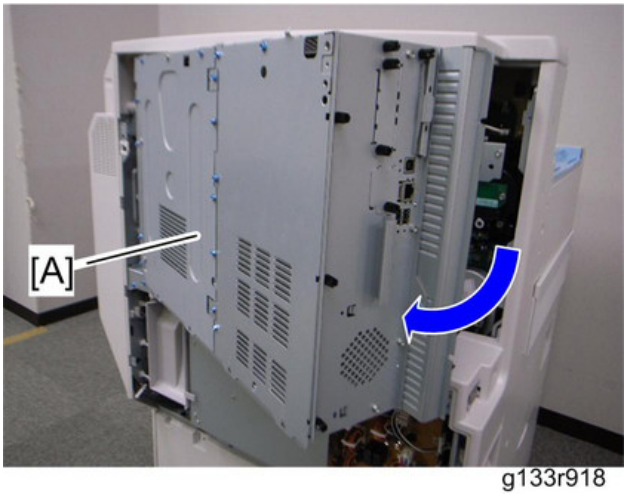
When opening the controller box

1. Rear cover (☛ p.118)



g133r917

2. Remove six screws (red circles).

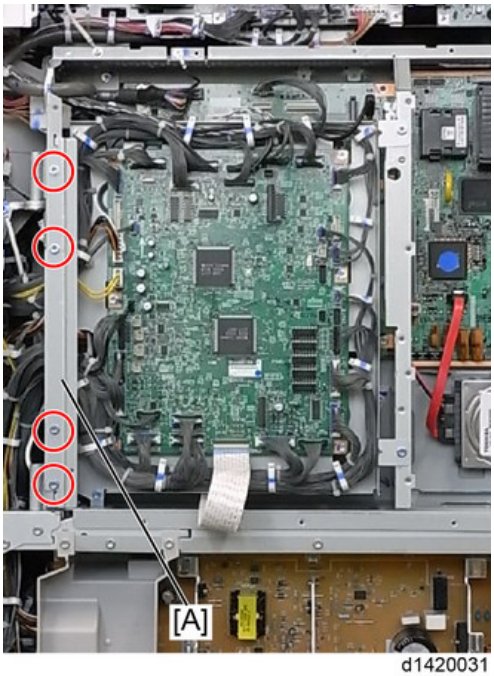


g133r918

3. Open the controller box [A].

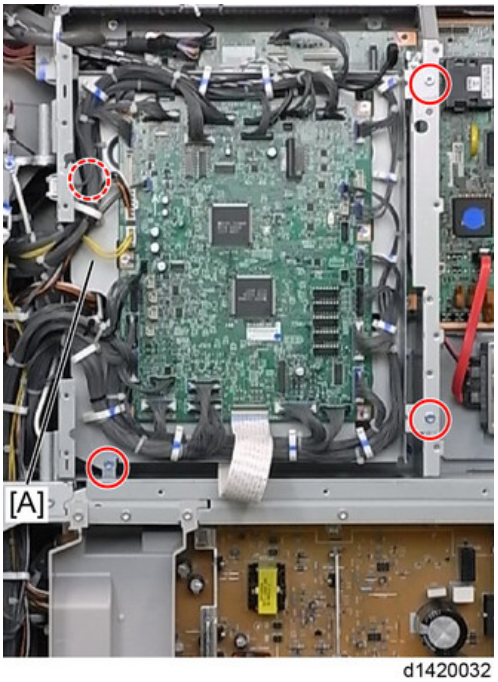
When removing the controller box

1. Rear cover (☛ p.118)
2. Right rear cover (☛ p.119)
3. Controller box right cover (☛ p.243)



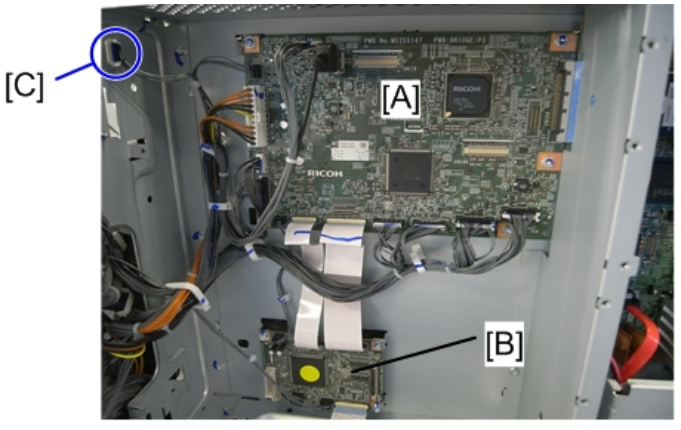
d1420031

4. Remove the controller box stay [A] (x 4).



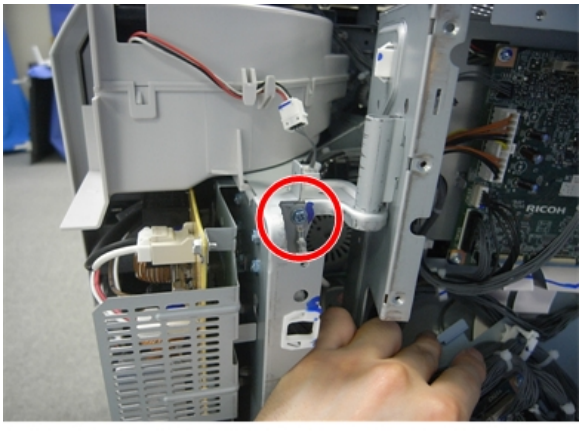
d1420032

5. IOB bracket [A] (x 4, x All)



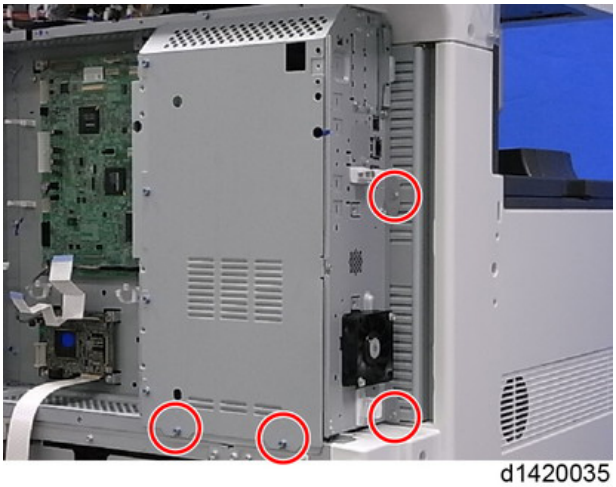
m1242042

6. Release all clamps on the controller box frame.
7. Disconnect all connectors on the BB (Bridge Board) [A] and the BCU board [B].
8. Disconnect the connector [C] at the outer controller box and at the inner controller box.

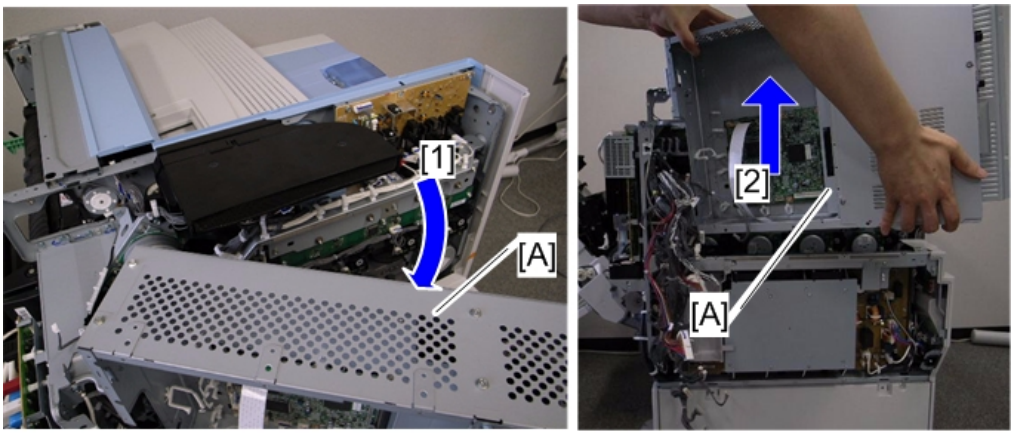


m1242043

9. Disconnect the grounding cable (x 1).



d1420035



m1242044

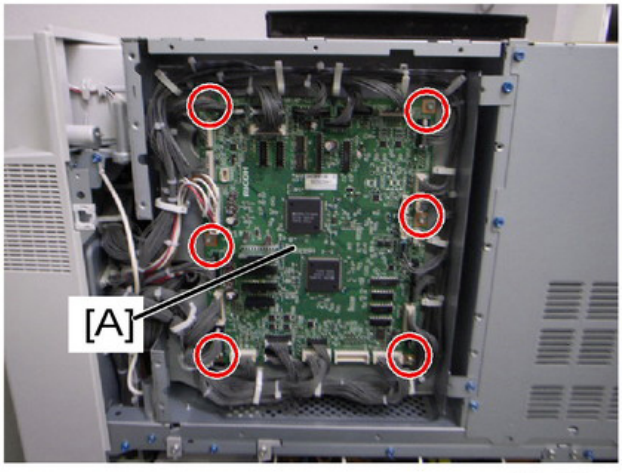
10. Open [1] and lift up [2] the controller box [A], and then remove it (x 4).

Note

- If you do not open the controller box, the second fan duct prevents you from removing the controller box.

IOB (In/Out Board)

1. Rear cover (p.118)
2. Controller box right cover (p.243)

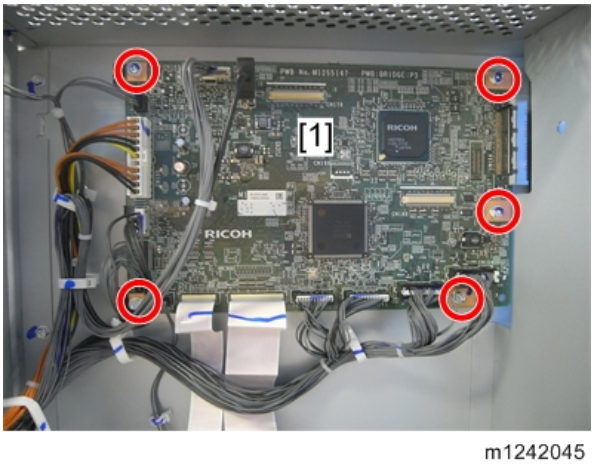


g133r921

3. IOB [A] (x 6, x All)

BB (Bridge Board)

1. Rear cover (p.118)
2. Controller box right cover (p.243)
3. IOB bracket (p.243)



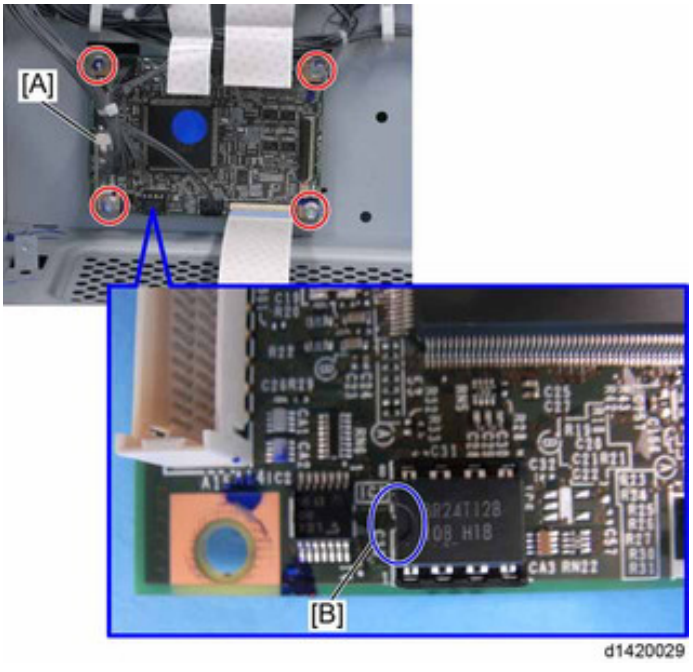
m1242045

4. BB [1] (x 5, x All)

BCU

1. Rear cover (p.118)

2. Controller box right cover (☛ p.243)
3. IOB bracket (☛ p.243)



4. BCU [A] (x 4, x All)

Note

- Make sure the NVRAM is correctly installed on the BCU. Insert the NVRAM in the NVRAM slot with the "half-moon" pointing [B] to the left side.

When installing the new BCU

Remove the NVRAM from the old BCU. Then install it on the new BCU after you replace the BCU. Replace the NVRAM (☛ p.261 "NVRAM Replacement Procedure") if the NVRAM on the old BCU is defective.

Note

- Make sure you print out the SMC reports ("SP Mode Data" and "Logging Data") before you replace the NVRAM.

⚠CAUTION

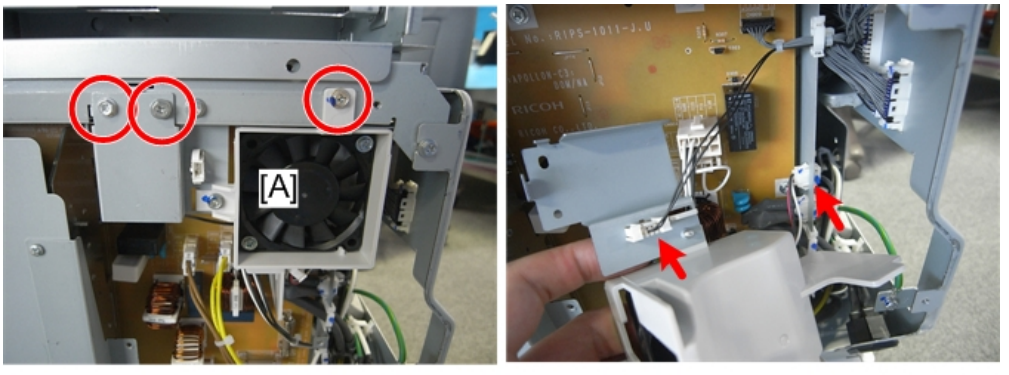
- Keep NVRAMs away from any objects that can cause static electricity. Static electricity can damage NVRAM data.
- Make sure that the DIP-switch settings on the old BCU are the same for the new BCU. Do not change the DIP switches on the BCU in the field.

- Make sure the serial number is input in the machine for the NVRAM data, if not, SC 995-001 occurs.

PSU

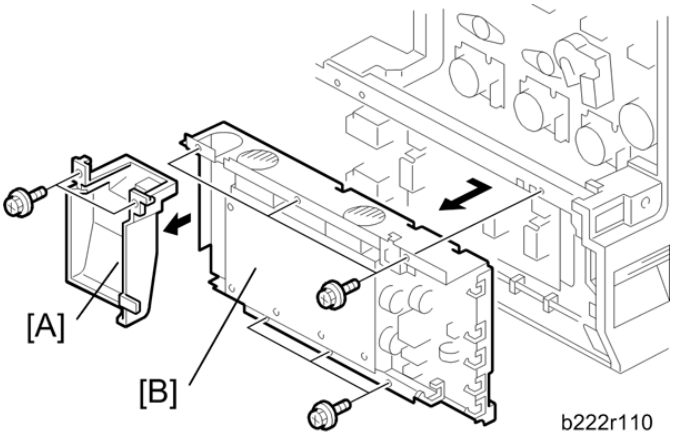
PSU bracket

1. Rear cover (☛ p.118)



m1242052

2. Duct fan with the bracket [A] (x 3, x 2).

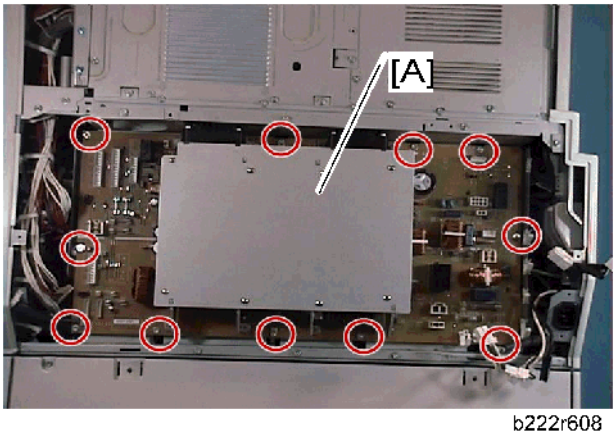


b222r110

3. Ventilation duct [A] (x 2)
4. PSU bracket [B] (x 6, x All, x All)

PSU board

1. Rear cover (☛ p.118)
2. Ventilation duct (☛ p.250)



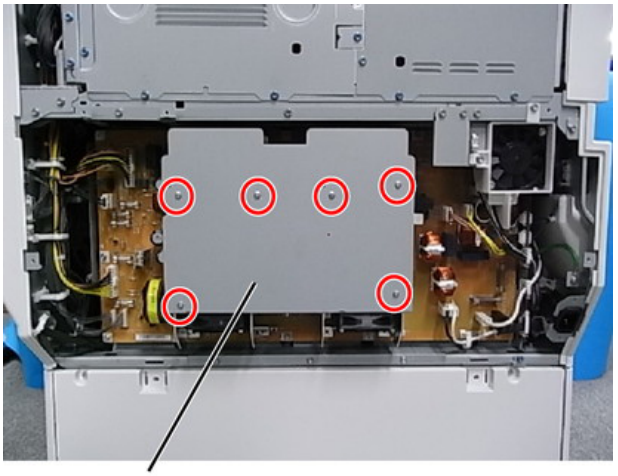
b222r608

RTB 24
Some parts of the board may be charged even if the power is unplugged.

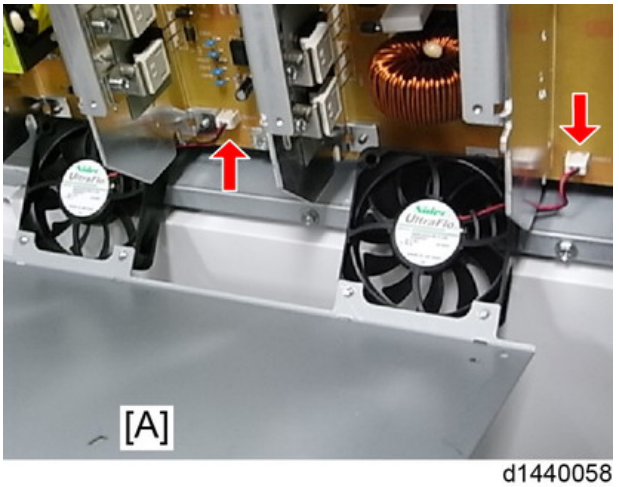
3. PSU board [A] (x 11, x All, x All)

PSU fans

1. Rear cover (p.118)

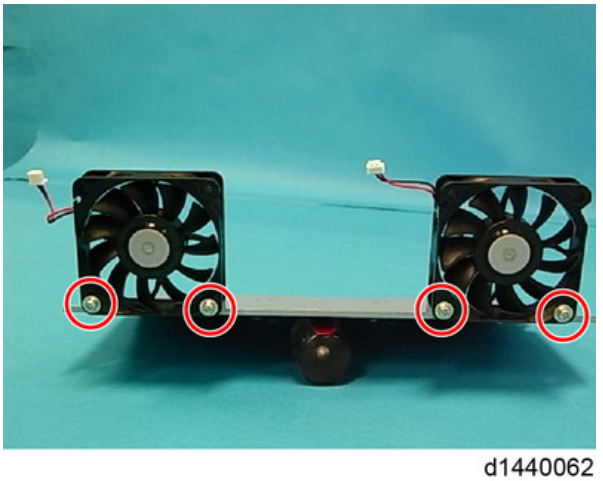


d1440057



d1440058

2. PSU fan bracket [A] (x 6, x 2)

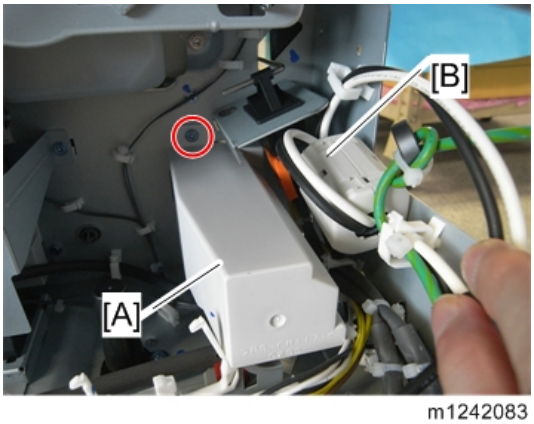


d1440062

3. PSU fans (x 2, each)

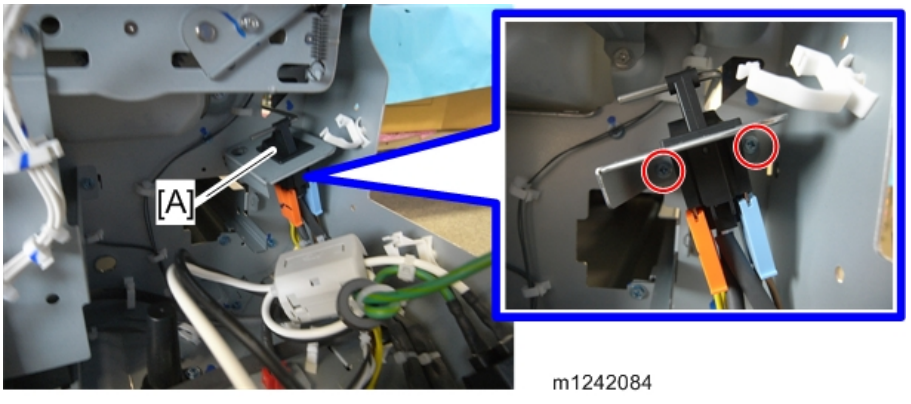
Shutdown Switch

1. PSU bracket (p.250)
2. Pull out tray 2.



m1242083

3. Tray left rail cover [A] (x 1)
4. Take aside the cords and ferrite core [B] (x 2).

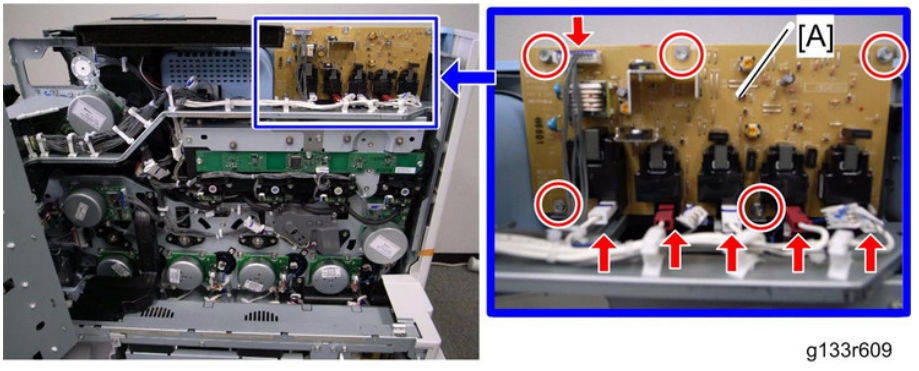


m1242084

5. Shutdown switch [A] (x 2)

ITB Power Supply Board

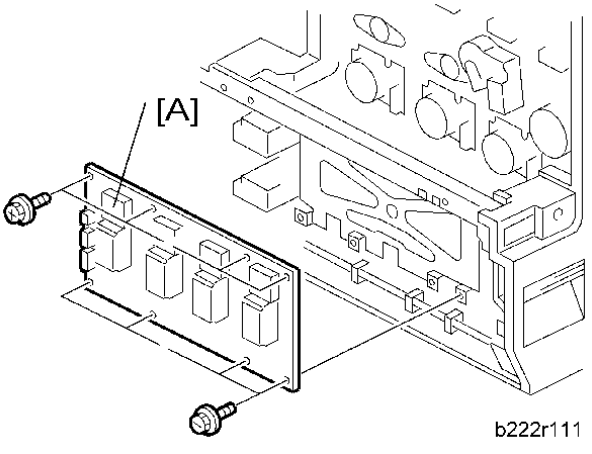
1. Rear cover (p.118)
2. Open the controller box (p.243)
3. Top right cover (p.119)
4. Top rear cover (p.119)



5. ITB power supply board [A] (x 5, x 6, x3)

High Voltage Supply Board

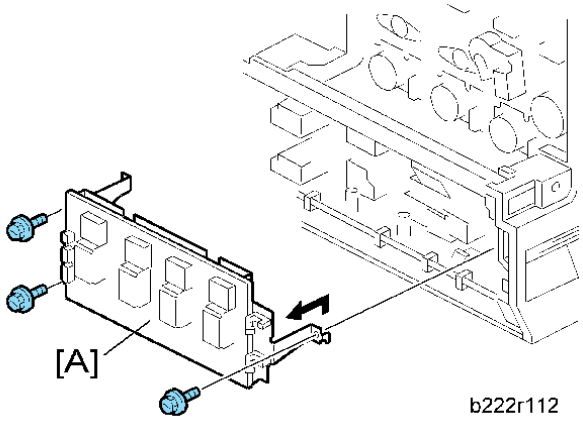
1. Rear cover (p.118)
2. PSU bracket (p.250)



3. High voltage supply board [A] (x 8, x All, x 2)

High Voltage Supply Board Bracket

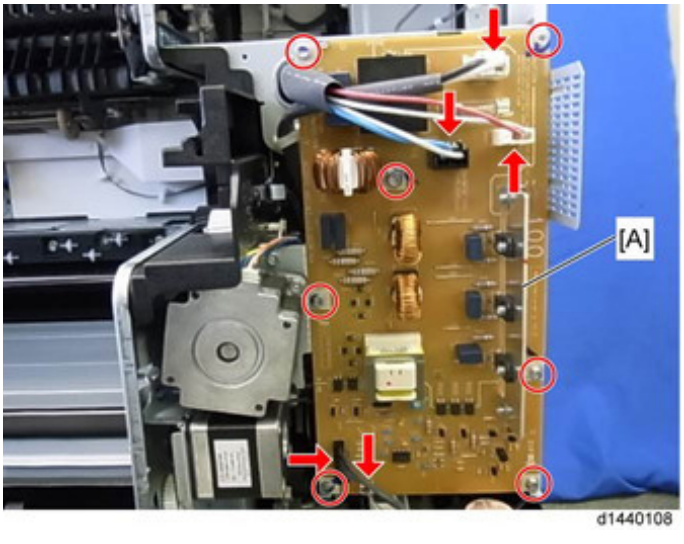
1. Rear cover (p.118)
2. PSU bracket (p.250)



3. High voltage supply board bracket [A] (x 3, x All, x 2)

AC Controller Board

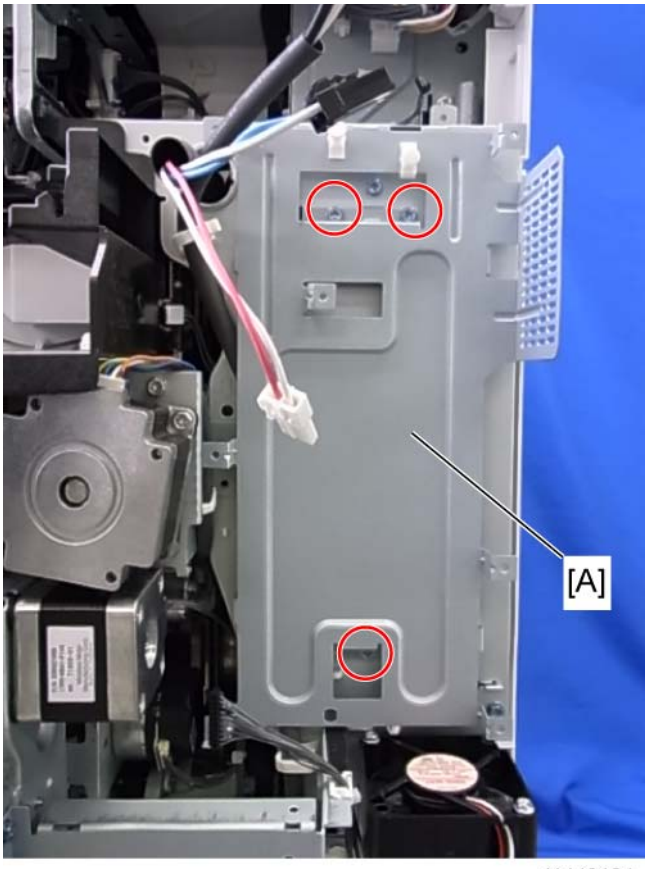
1. Rear cover (p.118)
2. Right rear cover (p.119)
3. Fusing duct (p.211)



4. AC controller board [A] (x 7, x 5)

AC Controller Board Bracket

1. AC controller board (p.255)

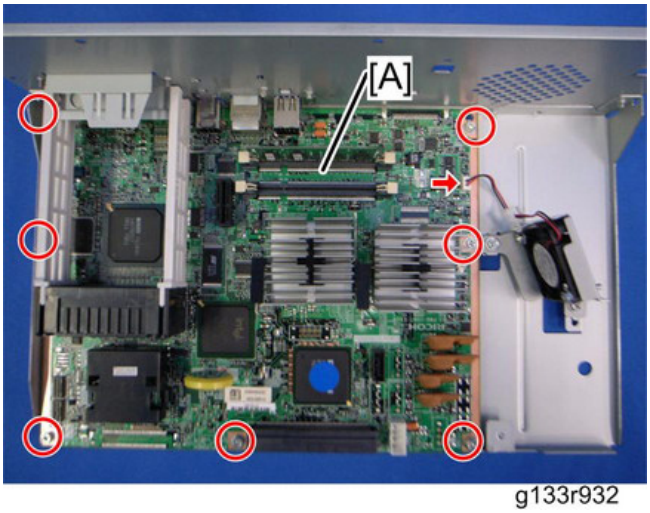


d1440124

2. AC controller board bracket [A] (x 3)

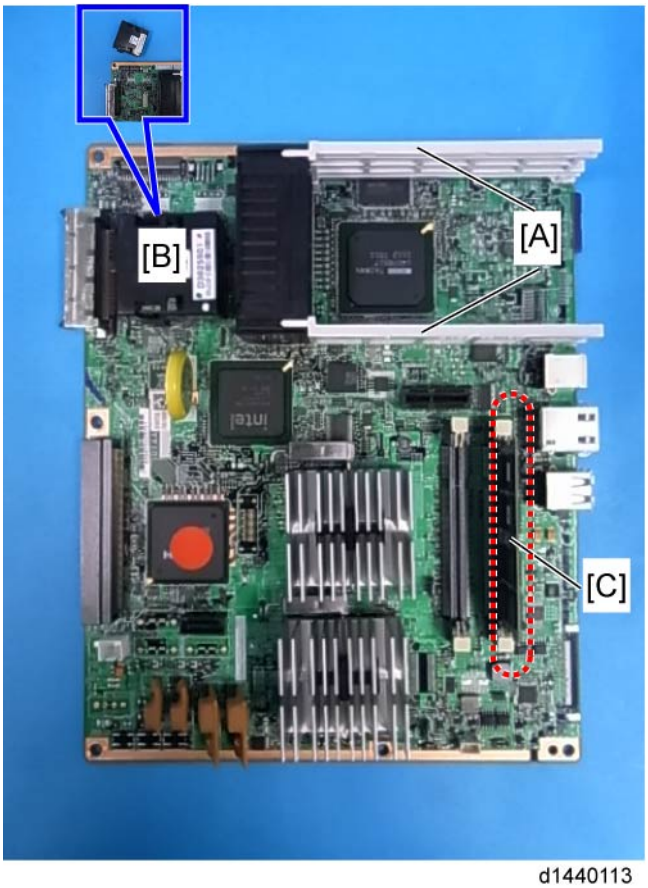
Controller Board

1. Controller unit (p.243)
2. HDD (p.259)



g133r932

3. Controller board [A] (x 7, x 1)



d1440113

4. Interface rails [A], NV-RAM [B], RAM-DIMM [C]

When installing the new controller board

Remove the NVRAM from the old controller board. Then install it on the new controller board after you replace the controller board. Replace the NVRAM if the NVRAM on the old controller board is defective.

Note

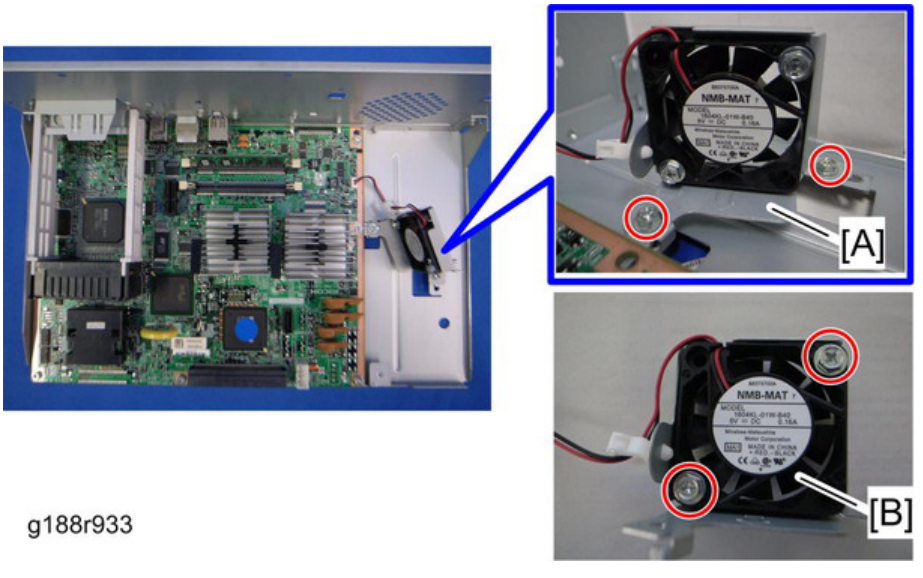
- Make sure you print out the SMC reports ("SP Mode Data" and "Logging Data") before you replace the NVRAM.

⚠CAUTION

- Keep NVRAMs away from any objects that can cause static electricity. Static electricity can damage NVRAM data.
- Make sure the NVRAM is correctly installed on the controller board.
- Make sure that the DIP-switch settings on the old controller board are the same for the new controller board. Do not change the DIP switches on the controller board in the field.

HDD Fan

1. Controller unit (☛ p.243)
2. HDD (☛ p.259)



g188r933

3. HDD fan bracket [A] (x 2)
4. HDD fan [B] (x 2, x 1)

When installing the HDD fan

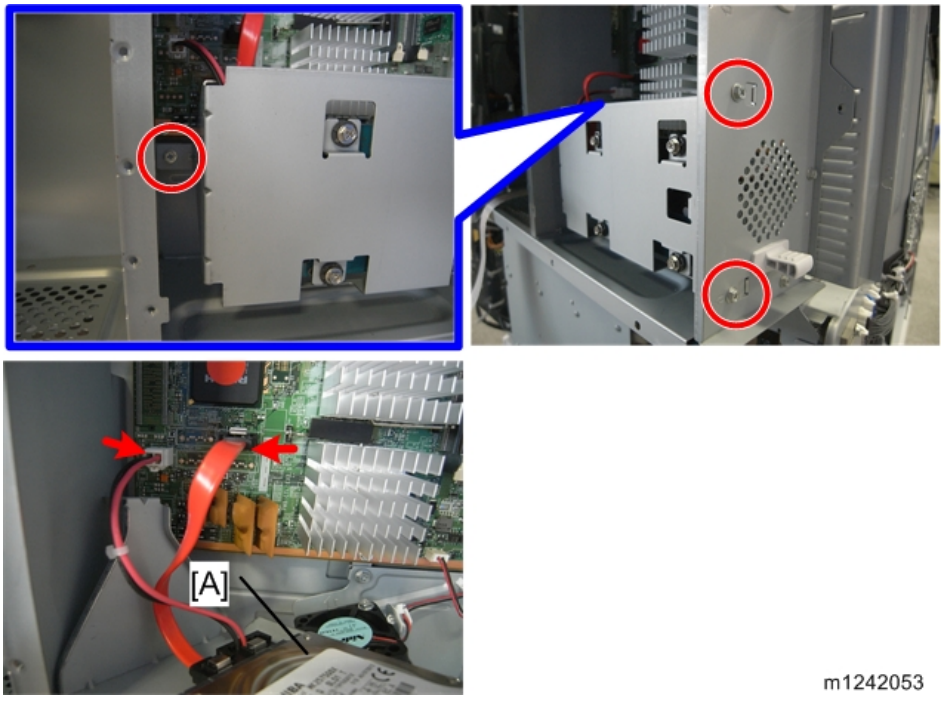
Make sure that the HDD fan is installed with its decal facing the right side of the machine.

HDD

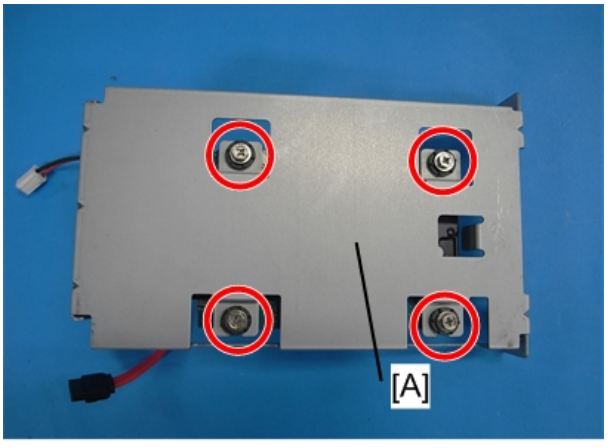
Note

- The HDD is an option for the P3c (M124) model.
- The HDD is a standard for the P3d (M125) model.

1. Controller unit (p.243)



2. Remove the HDD [A] with the bracket (x 3, x 2).



m1242054

3. Remove the HDD from the bracket [A] (x 4).

When installing a new HDD unit

1. Turn the main power switch on. The disk is automatically formatted.

Toner Bottle Detection Board

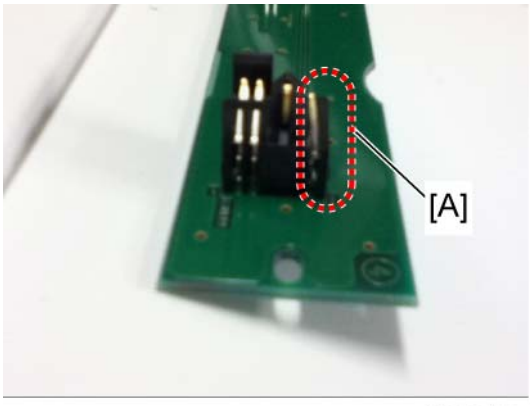
1. Open the controller box (p.243)



d1440167

2. Remove the grounding plate [A] completely (x 3).
3. Move the harnesses [C] downward to prevent the board from catching on them.

4. Pull out the toner bottle detection board [B] gently and horizontally (x 1, x 4)



d1440168

Important

- **The toner bottle detection board should be pulled out horizontally. If you ignore this, the toner bottle detection terminals [A] may be damaged.**

NVRAM Replacement Procedure

This machine has two types of NVRAM. One is on the BCU (p.248 "BCU"); the other is on the controller board (p.256 "Controller Board").

NVRAM on the BCU

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Output the SMC data (SP5-990-001) if possible.
3. Turn the main switch off.
4. Install an SD card into SD card slot 2. Then turn the main power on.
5. Copy the NVRAM data to an SD card (SP5-824-001) if possible.
6. Turn off the main switch. Then unplug the power cord.
7. Replace the NVRAM on the BCU and reassemble the machine.
8. Plug in the power cord. Then turn the main switch on.
9. Select a paper-size type (SP5-131-001).
10. Specify the serial number and destination code of the machine.

Note

- Contact your supervisor for details on how to enter the serial number and destination code.

- SC 999 or "Fusing Unit Setting Error" can be shown until the serial number and destination code are correctly programmed.

11. Turn the main switch off and on.
12. Copy the data from the SD card to the NVRAM (SP5-825-001) if you have successfully copied them to the SD card.
13. Turn the main switch off. Then remove the SD card from SD card slot 2.
14. Turn the main switch on.
15. Specify the SP and UP mode settings.
16. Do the process control self-check (SP3-011-003).

Note

- If the message “SD card for restoration is required.” appears after the NVRAM replacement, the encryption key should be restored. See “Encryption Key Restoration for NVRAM” for the restoration procedure. (☛ p.597 "Encryption Key Restoration for NVRAM")

NVRAM on the controller board

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Output the SMC data (“ALL”) using SP5-990-001. (SP5-990-001)
3. Turn off the main switch.
4. Insert a blank SD card into slot #2, and then turn on the main switch.
5. Upload the NVRAM data to the blank SD card using SP5-824-001 (NVRAM Data Upload).
6. Turn off the main power switch, and then unplug the AC power cord.
7. Remove the SD card containing the NVRAM data from slot #2.
8. Replace the NVRAM on the controller board with a new one.
9. Plug in the AC power cord, and then turn on the main power switch.

Important

- **When you do this, SC995-02 (Defective NVRAM) will be displayed. However, DO NOT turn off the main power switch. Continue with this procedure.**

10. Re-insert the SD card that you removed in step 7 back into slot #2.
11. Download the old NVRAM data from the SD card onto the new NVRAM using SP5-825-001 (NVRAM Data Download).

Note

- This will take about 2 or 3 minutes.

12. Turn off the main power switch, and then remove the SD card from slot #2.
13. Turn on the main power switch.

14. Output the SMC data ("ALL") using SP5-990-001, and make sure that it matches the SMC data you printed out in step 2 above (except for the value of the total counter).

Note

- The value of the total counter is reset to "0" when the NVRAM is replaced.

15. Do the process control self-check (SP3-011-003).

Important

- **Do all of the following if SP5-824-001 (NVRAM Data Upload) and SP5-825-001 (NVRAM Data Download) cannot be performed for some reason.**
  1. **Manually enter all data on the SMC report (factory settings).**

Note

- If the message "SD card for restoration is required." appears after the NVRAM replacement, the encryption key should be restored. See "Encryption Key Restoration for NVRAM" for the restoration procedure. (p.597 "Encryption Key Restoration for NVRAM")

Tube Cooling Fan (1st Duct Fan)

1. Rear cover (p.118)



d1440059

2. Tube cooling fan bracket [A] (x 2, x 1)
3. Tube cooling fan (1st Duct Fan)

Using Dip Switches

Controller Board

DIP SW No.	OFF	ON
1	Boot-up from Flash Memory	Boot-up from SD card
2 to 8	Factory Use Only: Do not change the switch settings.	

BCU Board

DIP SW No.	OFF	ON
1 and 2	Factory Use Only: Do not change the switch settings.	

5. System Maintenance

Service Program Mode

⚠CAUTION

- Make sure that the data-in LED (⇦) is not on before you go into the SP mode. This LED indicates that some data is coming to the machine. When the LED is on, wait for the machine to process the data.

SP Tables

See "Appendices" for the following information:

- Service SP Table
- Engine SP Tables

Enabling and Disabling Service Program Mode

Note

- The Service Program Mode is for use by service representatives only. If this mode is used by anyone other than service representatives for any reason, data might be deleted or settings might be changed. In such case, product quality cannot be guaranteed any more.

Entering SP Mode

For details, ask your supervisor.

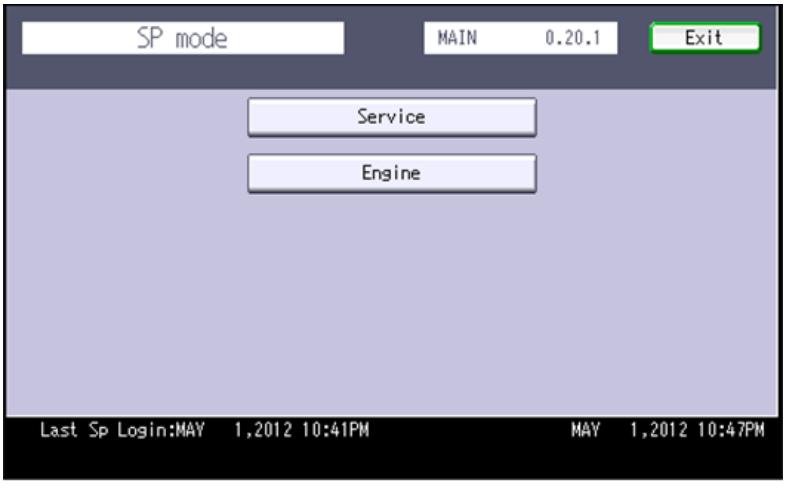
Exiting SP Mode

Press "Exit" on the LCD twice to return to the user screen.

Types of SP Modes

- **Service SP:** SP modes related to the controller functions
- **Engine SP:** SP modes related to the engine functions

Select one of the Service Program modes (Service, or Engine) from the touch panel as shown in the diagram below after you access the SP mode.

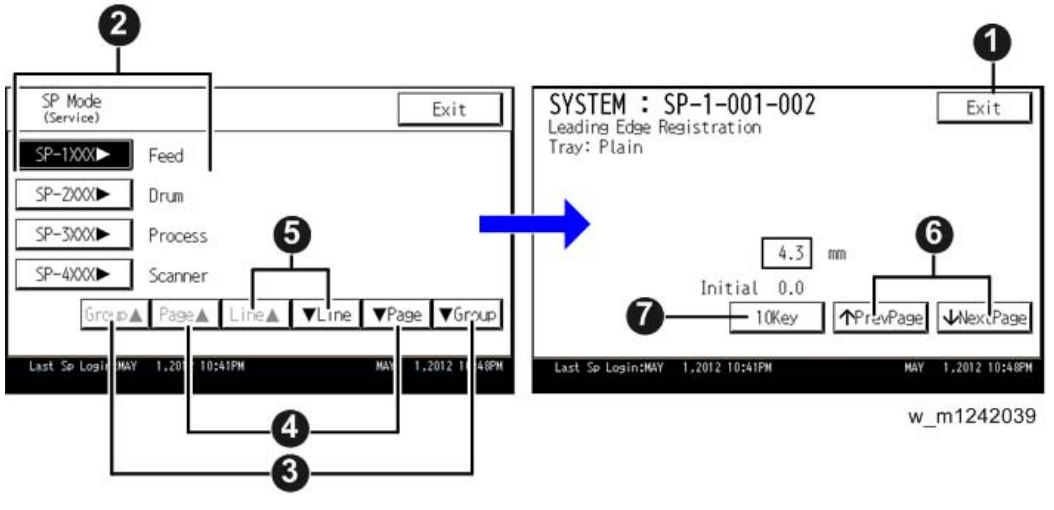


w_m1242040

5

SP Mode Button Summary

Here is a short summary of the touch-panel buttons.



w_m1242039

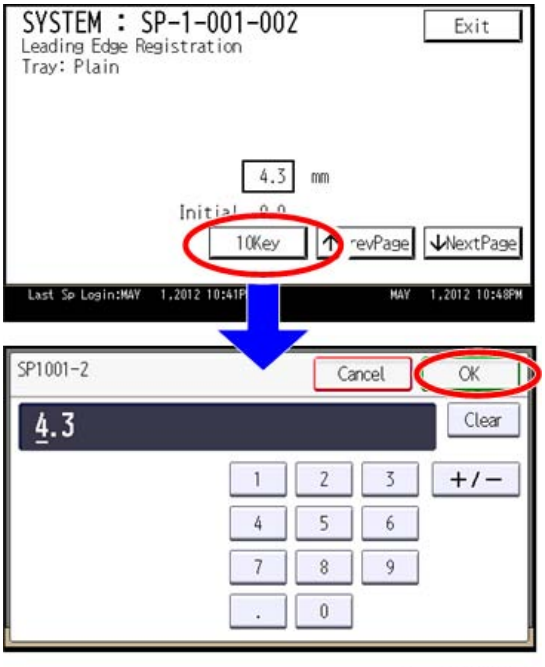
1	Press two times to leave the SP mode and return to the user screen to resume normal operation.
2	Press any Class 1 number to open a list of Class 2 SP modes.
3	Press to scroll the show to the previous or next group.
4	Press to scroll to the previous or next display in segments the size of the screen display (page).
5	Press to scroll the show the previous or next line (line by line).

6	Press to move the highlight on the left to the previous or next selection in the list.
7	Switch to the number key screen. For an SP that requires you to enter numbers, press "10 key" to display the number key screen, enter the number, and then press "OK" to confirm the specified value.

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 that you want to adjust.
3. Use the scrolling buttons in the bottom 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 bottom touch-panel buttons to scroll to the number and title of the item that you want to set and press it. The selected setting appears.



w_m1242038

Note

- Refer to the Service Tables for the range of allowed settings.

5. Do this procedure to enter a setting:
   - Press "10 key" to display the number keys.

- Enter the value, and then press "OK". (The value is not registered if you enter a number that is out of range.)
- Press "Exit" to exit from the setting.

6. Press "Exit" twice to return to the user screen.

Exiting Service Mode

Press the Exit key on the touch-panel.

Service Mode Lock/Unlock

At locations where the machine contains sensitive data, the customer engineer cannot operate the machine until the Administrator turns the service mode lock off. This function makes sure that work on the machine is always done with the permission of the Administrator.

1. If you cannot go into the SP mode, ask the Administrator to log in with the User Tool and then set "Service Mode Lock" to OFF after he or she logs in:

   User Tools > System Settings > Administrator Tools > Service Mode Lock > OFF

   - This unlocks the machine and lets you get access to all the SP codes.
   - The CE can service the machine and turn the machine off and on. It is not necessary to ask the Administrator to log in again each time the machine is turned on.

2. Go into the SP mode and set SP5169 to "1" if you must use the printer bit switches.
3. After machine servicing is completed:
   - Change SP5169 from "1" to "0".
   - Turn the machine off and on. Tell the administrator that you have completed servicing the machine.
   - The Administrator will then set the "Service Mode Lock" to ON.

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.

Others

The following symbols are used in the SP mode tables.

FA: Factory setting

(Data may be adjusted from the default setting at the factory. Refer to the factory setting sheets enclosed. You can find it under the jammed paper removal decal.)

DFU: Design/Factory Use only

Do not touch these SP modes in the field.

A sharp (#) to the right hand side of the mode number column means that the main switch must be turned off and on to effect the setting change.

An asterisk (*) to the right hand side of the mode number column means that this mode is stored in the NVRAM. If you do a RAM clear, this SP mode will be reset to the default value. "ENG" and "CTL" show which NVRAM contains the data.

- ENG: NVRAM on the BCU board
- CTL: NVRAM on the controller board

The settings of each SP mode are explained in the right-hand column of the SP table in the following way.

[Adjustable range / **Default setting** / Step] Alphanumeric

Note

- If "Alphanumeric" is written to the right of the bracket as shown above, the setting of the SP mode shows on the screen using alphanumeric characters instead of only numbers. However, the settings in the bracket in the SP mode table are explained by using only the numbers.

SSP: This denotes a "Special Service Program" mode setting.

Service SP Table

SP1-XXX (Service Mode)

1001	[Bit Switch]			
001	Bit Switch 1		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**No I/O Timeout**	**Disable**	Enable
		Enable: The MFP I/O Timeout setting will have no effect. I/O Timeouts will never occur.		
	bit 4	**SD Card Save Mode**	**Disable**	Enable
		Enable: Print jobs will be saved to an SD Card in the GW SD slot. For details, see p. 477 "Card Save Function" in the "Main chapters: 5. System Maintenance".		
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	**[RPCS,PCL]: Printable area frame border**	**Disable**	Enable
		Enable: The machine prints all RPCS and PCL jobs with a border on the edges of the printable area.		

1001	[Bit Switch]

002	Bit Switch 2		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**Applying a collation Type**	**Shift Collate**	Normal Collate
		A collation type (shift or normal) will be applied to all jobs that do not already have a 'Collate Type' configured. **Note** • If #5-0 is enabled, this Bit Switch has no effect.		
	bit 3	**[PCL5e/c,PS]: PDL Auto Switching**	**Enable**	1: Disable
		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	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**

003	Bit Switch 3		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**[PCL5e/c]: Legacy HP compatibility**	**Disable**	Enable
		Enable: Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually "<ESC>*r0A") will be changed to "<ESC>*r1A"		
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
004	Bit Switch 4		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**IPDS print-side reversal**	**Disable**	Enable
		If enabled, the simplex pages of IPDS jobs will be printed on the front side because of printing on the back side of the page. This might reduce printing speed.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	IPDS support tools	**Disable**	Enable
		Enable: Enables the port for IPDS support tools.		

1001	**[Bit Switch]**

005	Bit Switch 5		0	1
	bit 0	**Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.**	**Disable**	Enable
		If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available types will depend on the device and configured options. After enabling the function, the settings will appear under: "User Tools > Printer Features > System"		
	bit 1	**Multiple copies if a paper size or type mismatch occurs**	**Disable (Single copy)**	Enable (Multiple copy)
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.		
	bit 2	**Prevent SDK applications from altering the contents of a job.**	**Disable**	Enable
		If this switch is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter". Note: The main purpose of this switch is for troubleshooting the effects of SDK applications on data.		
	bit 3	**[PS] PS Criteria**	**Pattern3**	Pattern1
		Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not. Pattern3: includes most PS commands. Pattern1: A small number of PS tags and headers		
	bit 4	**Increase max number of the stored jobs.**	**Disable (100)**	Enable (1000)
		Enable: Changes the maximum number of jobs that can be stored on the HDD via Job Type settings to 1000. The default is 100.		
	bit 5	DFU	-	-

RTB 18a
Bit 4: Modified

	bit 6	**Method for determining the image rotation for the edge to bind on.**	**Disable**	Enable
		If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs. The old models are below: - PCL: Pre-04A models - PS/PDF/RPCS:Pre-05S models		
	bit 7	**Letterhead mode printing**	**Disable**	Enable (Duplex)
		Routes all pages through the duplex unit. Disable: Simplex pages or the last page of an odd-paged duplex job, are not routed through the duplex unit. This could result in problems with letterhead/pre-printed pages. Only affects pages specified as Letterhead paper.		

1001	**[Bit Switch]**		
006	Bit Switch 6 **DFU**	-	-

1001	**[Bit Switch]**			
007	Bit Switch 7		0	1
	bit 0	**Print path**	**Disable**	Enable
		If enabled, simplex pages (in mixed simplex/duplex PS/PCL5 jobs only) and the last page of an odd paged duplex job (PS, PCL5, PCL6), are always routed through the duplex unit. Not having to switch paper paths increases the print speed slightly.		
	bit 1	DFU	-	-
	bit 2			
	bit 3			
	bit 4			
	bit 5	DFU	-	-
	bit 6			

	bit 7	DFU	-	-

1001	[Bit Switch]			
008	Bit Switch 8		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**[PCL,PS]: Allow BW jobs to print without requiring User Code**	**Disable**	Enable
		Enable: BW jobs submitted without a user code will be printed even if usercode authentication is enabled. **Note** • Color jobs will not be printed without a valid user code.		
	bit 4	**PCL edge to edge printing setting**	**Disable (Standard)**	Enable (BMS)
		Switches the edge to edge printing setting for custom-made machines (BMS).		
	bit 5	DFU	-	-
	bit 6		**Disable**	Enable
	bit 7		**Disable**	Enable

1001	[Bit Switch]			
009	Bit Switch 9		0	1
	bit 0	**PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).**	**"Disabled (Immediately)"**	"Enabled (10 seconds)"
		To be used if PDL auto-detection fails. A failure of PDL autodetection doesn't necessarily mean that the job can't be printed. This bit switch tells the device whether to time-out immediately (default) upon failure or to wait 10 seconds.		

	bit 1	DFU	-	-
	bit 2	**Job Cancel**	**Disabled (Not cancelled)**	Enabled (Cancelled)
		If this bit switch, all jobs will be cancelled after a jam occurs. Note: If this bitsw is enabled, printing under the following conditions might result in problems: - Job submission via USB or Parallel Port - Spool printing (WIM >Configuration > Device Settings > System)		
	bit 3	DFU	-	-
	bit 4	**Timing of the PJL Status ReadBack (JOB END) when printing multiple collated copies.**	**Disable**	Enable
		This switch determines the timing of the PJL USTATUS JOB END sent when multiple collated copies are being printed. 0 (default): JOB END is sent by the device to the client after the first copy has completed printing. This causes the page counter to be incremented after the first copy and then again at the end of the job. 1: JOB END is sent by the device to the client after the last copy has finished printing. This causes the page counter to be incremented at the end of each job.		
	bit 5	**Display UTF-8 text in the operation panel**	**Enabled**	Disabled
		Enabled (=0): Text composed of UTF-8 characters can be displayed in the operation panel. Disabled (=1): UTF-8 characters cannot be displayed in the operation panel. For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this switch is enabled (=0).		
	bit 6			

	bit 7	**Enable/Disable Print from USB/SD's Preview function**	Enabled	**Disabled**
		Determines whether Print from USB/SD will have the Preview function. Enabled (=0): Print from USB/SD will have the Preview function. Disabled (=1): Print from USB/SD will not have the Preview function.		

1001	[Bit Switch]			
010	Bit Switch A		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	**Auto Job Promotion locks the queue**	**Queue is not locked after AJP**	Queue locked after AJP
		If this is 1, then after a job is stored using Auto Job Promotion, new jobs cannot be added to the queue until the stored job has been completely printed.		
	bit 6	**Allow use of Auto Job Promotion if connected to an external charge device.**	**Does not allow AJP with ECD**	Allows AJP with ECD
		If this is 0, Auto Job Promotion will be automatically disabled if an external charge device is connected. Note: We do not officially support enabling this switch (1). Use it at your own risk.		
	bit 7	DFU	-	-

1001	[Bit Switch]			
011	Bit Switch B		0	1
	bit 0	DFU	-	-

	bit 1	**Print job interruption**	**Does not allow interruption**	Allow interruption
		0 (default): Print jobs are not interrupted. If a job is promoted to the top of the print queue, it will wait for the currently printing job to finish. 1: If a job is promoted to the top of the queue, it will interrupt the currently printing job and start printing immediately.		
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**		
012	Bit Switch C	0	1
	bit 0 DFU	-	-
	bit 1 DFU	-	-
	bit 2 DFU	-	-
	bit 3 DFU	-	-
	bit 4 DFU	-	-
	bit 5 DFU	-	-
	bit 6 DFU	-	-
	bit 7 DFU	-	-

1003	**[Clear Setting]**		
001	Initialize System	*CTL	[- / - / -] [Execute]
	Initializes settings in the "System" menu of the user mode.		

003	Delete Program	*CTL	[- / - / -] [Execute]

1004	[Print Summary]		
001	Service Summary	CTL	[- / - / -] [Execute]
	Prints the service summary sheet (a summary of all the controller settings).		

1005	[Display Version]		
001	Printer Version	CTL	[- / - / -]
	Displays the version of the controller firmware.		

1007	[Supply Display]		
	Sets displaying supply information or not. 0: Displays supply information 1: Does not display supply information		
001	Development	*CTL	[0 or 1 / 1 / 1 /step]
002	PCU	*CTL	
003	Transfer	*CTL	
004	Int. Transfer	*CTL	
005	Transfer Roller	*CTL	
006	Fuser	*CTL	
007	Fuser Oil	*CTL	

1101	[Data Recall]
	Recalls a set of gamma settings. This can be either a) the factory setting, b) the previous setting, or c) the current setting.

001	Factory	*CTL	[- / **-** / -] [Execute]
002	Previous	*CTL	
003	Current	*CTL	
004	ACC	*CTL	

1102	**[Resolution Setting]**		
	Selects the printing mode (resolution) for the printer gamma adjustment.		
001	Tone Control Mode Selection	CTL	[0 to 7 / **0** / 1/step] 0: 1200x1200 Photo (1bit/4col) 1: 600x600 Photo (4bit/4col) 2: 600x600 Photo (2bit/4col) 3: 600x600 Photo (1bit/4col) 4: 1200x1200 Text (1bit/4col) 5: 600x600 Text (4bit/4col) 6: 600x600 Text (2bit/4col) 7: 600x600 Text (1bit/4col)

1103	**[Test Page]**		
	Prints the test page to check the color balance before and after the gamma adjustment.		
001	Color Gray Scale	CTL	[- / **-** / -] [Execute]
002	Color Pattern	CTL	

1104	**[Gamma Adjustment]**		
	Adjusts the printer gamma for the mode selected in the "Mode Selection" menu.		
001	Black: Highlight	CTL	[0 to 30 / **15** / 1/step]
002	Black: Shadow	CTL	
003	Black: Middle	CTL	
004	Black: IDmax	CTL	
005	Black	CTL	

006	Black	CTL	
007	Black	CTL	
008	Black	CTL	
009	Black	CTL	
010	Black	CTL	
011	Black	CTL	
012	Black	CTL	
013	Black	CTL	
014	Black	CTL	
015	Black	CTL	
016	Black	CTL	
021	Cyan: Highlight	CTL	[0 to 30 / **15** / 1/step]
022	Cyan: Shadow	CTL	
023	Cyan: Middle	CTL	
024	Cyan: IDmax	CTL	
025	Cyan	CTL	
026	Cyan	CTL	
027	Cyan	CTL	
028	Cyan	CTL	
029	Cyan	CTL	
030	Cyan	CTL	
031	Cyan	CTL	
032	Cyan	CTL	
033	Cyan	CTL	
034	Cyan	CTL	
035	Cyan	CTL	

036	Cyan	CTL	
041	Magenta: Highlight	CTL	[0 to 30 / **15** / 1/step]
042	Magenta: Shadow	CTL	
043	Magenta: Middle	CTL	
044	Magenta: IDmax	CTL	
045	Magenta	CTL	
046	Magenta	CTL	
047	Magenta	CTL	
048	Magenta	CTL	
049	Magenta	CTL	
050	Magenta	CTL	
051	Magenta	CTL	
052	Magenta	CTL	
053	Magenta	CTL	
054	Magenta	CTL	
055	Magenta	CTL	
056	Magenta	CTL	
061	Yellow: Highlight	CTL	[0 to 30 / **15** / 1/step]
062	Yellow: Shadow	CTL	
063	Yellow: Middle	CTL	
064	Yellow: IDmax	CTL	
065	Yellow	CTL	
066	Yellow	CTL	
067	Yellow	CTL	
068	Yellow	CTL	
069	Yellow	CTL	

070	Yellow	CTL	
071	Yellow	CTL	
072	Yellow	CTL	
073	Yellow	CTL	
074	Yellow	CTL	
075	Yellow	CTL	
076	Yellow	CTL	

1105	**[Save Tone Control Value]**		
	Stores the print gamma adjusted with the "Gamma Adj." menu item as the current setting. Before the machine stores the new "current setting", it moves the data currently stored as the "current setting" to the "previous setting" memory storage location.		
001	Save Tone Control Value	*CTL	[- / **-** / -] [Execute]

1106	**[Toner Limit]**		
	Adjusts the maximum toner amount for image development.		
001	Toner Limit Value	*CTL	[0 to 400 / **220** / 1 %/step]

1108	**[Ext.TonerSave]**		
	Adjusts the maximum toner amount for image development.		
001	Mode1:Text	*CTL	[0 to 999 / ***75*** / 1 /step]
002	Mode2:Text	*CTL	[0 to 999 / **50** / 1 /step]
003	Mode1:Image	*CTL	[0 to 999 / ***75*** / 1 /step]
004	Mode2:Image	*CTL	[0 to 999 / **50** / 1 /step]
005	Mode1:Line	*CTL	[0 to 999 / ***75*** / 1 /step]
006	Mode2:Line	*CTL	[0 to 999 / **50** / 1 /step]
007	Mode1:Paint	*CTL	[0 to 999 / ***75*** / 1 /step]

008	Mode2:Paint	*CTL	[0 to 999 / **50** / 1 /step]

1109	**[EconomyColor]**		
	Adjusts the maximum toner amount for image development.		
001	Text	*CTL	[0 to 999 / **100** / 1 /step]
002	Image	*CTL	[0 to 999 / **50** / 1 /step]
003	Line	*CTL	[0 to 999 / **30** / 1 /step]
004	Paint	*CTL	[0 to 999 / **30** / 1 /step]

1110	**[Media Print Device Setting]**		
	Enables or disables the front I/F (USB/SD) for Media print support function.		
002	0:Disable 1:Enable	*CTL	[0 or 1 / **-** / 1/step] Default w/ Option: 0 Standard model: 1

1111	**[All Jobs Delete Mode]**		
	This switch determines whether all SCS jobs in progress are included in the SMC report when SP5990 is executed.		
001	0:excluding New Job 1:including New Job	*CTL	[0 or 1 / **1** / 1/step]

Engine SP Tables-1

SP1-XXX (Feed)

1001	**[Leading Edge Registration]** Leading Edge Registration Adjustment (Tray Location, Paper Type, Color Mode), Paper Type → Thin, Plain, Thick 1, Thick 2 or Thick 3		
	Adjusts the leading edge registration by changing the registration motor operation timing for each mode.		
002	Tray: Plain	*ENG	[-9.0 to 9.0 / **0.0** / 0.1 mm/step]
003	Tray: Middle Thick	*ENG	
004	Tray: Thick 1	*ENG	
005	Tray: Thick 2	*ENG	
007	By-pass: Plain	*ENG	
008	By-pass: Middle Thick	*ENG	
009	By-pass: Thick 1	*ENG	
010	By-pass: Thick 2	*ENG	
011	By-pass: Thick 3	*ENG	
013	Duplex: Plain	*ENG	
014	Duplex: Middle Thick	*ENG	
015	Duplex: Thick 1	*ENG	

016	Tray: Thick 3	*ENG	[-9.0 to 9.0 / **0.0** / 0.1 mm/step]
017	Tray: Plain:1200	*ENG	
018	Tray: Middle Thick:1200	*ENG	
019	Tray: Thick 1:1200	*ENG	
020	By-pass: Plain:1200	*ENG	
021	By-pass: Middle Thick:1200	*ENG	
022	By-pass: Thick 1:1200	*ENG	
023	Duplex: Plain:1200	*ENG	
024	Duplex: Middle Thick:1200	*ENG	
025	Duplex: Thick 1:1200	*ENG	
026	Tray: Thin	*ENG	[-9.0 to 9.0 / **0.0** / 0.1 mm/step]
027	By-pass: Thin	*ENG	
028	Duplex: Thin	*ENG	
029	Tray: Thin: 1200	*ENG	
030	By-pass: Thin: 1200	*ENG	
031	Duplex: Thin: 1200	*ENG	

1002	**[Side to Side Registration]** Side-to-Side Registration Adjustment
	Adjusts the side-to-side registration by changing the laser main scan start position for each mode.

001	By-pass Table	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 mm/step]
002	Paper Tray 1	*ENG	
003	Paper Tray 2	*ENG	
004	Paper Tray 3	*ENG	
005	Paper Tray 4	*ENG	
006	Duplex	*ENG	
007	Paper Tray 5	*ENG	
008	Large Capacity Tray	*ENG	

1003	**[Paper Buckle]** Paper Buckle Adjustment (Tray Location, Paper Type, Color mode), Paper Type → Plain, Thick, Thick1		
	Adjusts the amount of paper buckle at the registration roller by changing the paper feed timing.		
002	Paper Tray1: Plain	*ENG	[-9 to 5 / **-2** / 1 mm/step]
003	Tray1: Middle Thick	*ENG	[-9 to 5 / **-1** / 1 mm/step]
004	Paper Tray1: Thick1	*ENG	[-9 to 5 / **-2** / 1 mm/step]
007	Paper Tray2/3/4/5/LCT: Plain	*ENG	
008	Tray 2/3/4/5/LCT: Middle Thick	*ENG	[-9 to 5 / **-1** / 1 mm/step]
009	Paper Tray2/3/4/5/LCT: Thick 1	*ENG	[-9 to 5 / **-2** / 1 mm/step]
012	By-pass: Plain	*ENG	[-9 to 5 / **-1** / 1 mm/step]
013	By-pass: Middle Thick	*ENG	
014	By-pass: Thick 1	*ENG	[-9 to 5 / **-2** / 1 mm/step]
018	Duplex: Plain	*ENG	[-9 to 5 / **-1** / 1 mm/step]
019	Duplex: Middle Thick	*ENG	
020	Duplex: Thick 1	*ENG	[-9 to 5 / **-2** / 1 mm/step]

021	Paper Tray1: Plain:1200	*ENG	[-9 to 5 / **0** / 1 mm/step]
022	Tray1: Middle Thick:1200	*ENG	
023	Tray 2/3/4/5LCT: Plain:1200	*ENG	
024	Tray 2/3/4/5LCT: Mid:1200	*ENG	
025	By-pass: Plain:1200	*ENG	
026	By-pass: Middle Thick:1200	*ENG	
027	Paper Tray1: Thick1:1200	*ENG	[-9 to 5 / **-2** / 1 mm/step]
028	Paper Tray2/3/4/5/LCT: Thick 1:1200	*ENG	
029	By-pass: Thick 1:1200	*ENG	
030	Duplex: Plain: 1200	*ENG	[-9 to 5 / **0** / 1 mm/step]
031	Duplex: Middle Thick: 1200	*ENG	
032	Duplex: Thick 1: 1200	*ENG	[-9 to 5 / **-2** / 1 mm/step]

1007	**[By-Pass Size Detection]** By-Pass Size Detection Display		
001	LG	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
	Enables or disables the automatic paper size detection function of the by-pass tray. This SP determines what paper size the machine detects if the detected size is less than 8.5". 0: OFF (Letter/SEF), 1: ON (Legal/SEF)		

1101	**[Flicker Control]**		
	Enables or disables the Flicker Control.		
030	Flicker Control	*ENG	[0 to 1 / **0** / 1/step] **0: Disable** 1: Enable

1102	**[Feed Permit Setting]**
	Specified the settings of the paper feeding timing.

006	Rotation Time	*ENG	[0 to 100 / **0** / 1 sec/step]
012	Rotation Time:Sp.1	*ENG	[0 to 100 / **0** / 1 sec/step]
018	Rotation Time:Sp2	*ENG	[0 to 100 / **0** / 1 sec/step]

1105	**[Print Target Temp.]**		
	(Printing Mode, Roller Type, [Color], Simplex/Duplex) Roller Type → Center and Ends: Fusing sleeve belt, Pressure → Pressure roller Paper Type → Plain, Thin, Thick, OHP, Middle Thick, Special, Postcard		
001	Plain1:FC:Center	*ENG	[100 to 180 / **P3c:158(NA,TA), 160(EU,ASIA,CHN) P3d:161(NA,TA), 163(EU,ASIA)** / 1 deg/step]
	Specifies the fusing sleeve belt target temperature for the ready condition in full color printing.		
003	Plain1:BW:Center	*ENG	[100 to 180 / **P3c:158(NA,TW), 160(EU,ASIA,CHN) P3d:161(NA,TW), 163(EU,ASIA)** / 1 deg/step]
	Specifies the fusing sleeve belt target temperature for the ready condition in BW printing.		
005	Plain2:FC:Center	*ENG	[100 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
	Specifies the fusing sleeve belt target temperature for the ready condition in full color printing.		
007	Plain2:BW:Center	*ENG	[100 to 180 / **P3c:157(NA,TW), 159(EU,ASIA,CHN), P3d:160(NA,TW), 162(EU,ASIA)** / 1 deg/step]
	Specifies the fusing sleeve belt target temperature for the ready condition in BW printing.		
009	Thin:FC:Center	*ENG	[100 to 180 / **P3c:148, P3d:151** / 1 deg/step]
011	Thin:BW:Center	*ENG	[100 to 180 / **P3c: 148, P3d: 151** / 1 deg/step]
013	M-thick:FC:Center	*ENG	[100 to 180 / **P3c: 170, P3d: 173** / 1 deg/step]

015	M-thick:BW:Center	*ENG	[100 to 180 / **P3c:168(NA,TW), 170(EU,ASIA,CHN), P3d:171(NA,TW), 173(EU,ASIA)** / 1 deg/step]
017	Thick1:FC:Center	*ENG	[100 to 180 / **171** / 1 deg/step]
019	Thick1:BW:Center	*ENG	[100 to 180 / **171** / 1 deg/step]
021	Thick2:FC:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
023	Thick2:BW:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
025	Thick3:FC:Center	*ENG	[100 to 180 / **163** / 1 deg/step]
027	Thick3:BW:Center	*ENG	[100 to 180 / **163** / 1 deg/step]
029	Special1:FC:Center	*ENG	[100 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
031	Special1:BW:Center	*ENG	[100 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
033	Special2:FC:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
035	Special2:BW:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
037	Special3:FC:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
039	Special3:BW:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
041	Envelop:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
101	Plain1:FC:Center:Low Speed	*ENG	[100 to 180 / **123** / 1 deg/step]
103	Plain1:BW:Center:Low Speed	*ENG	[100 to 180 / **123** / 1 deg/step]
105	Plain2:FC:Center:Low Speed	*ENG	[100 to 180 / **128** / 1 deg/step]
107	Plain2:BW:Center:Low Speed	*ENG	[100 to 180 / **128** / 1 deg/step]
109	M-thick:FC:Center:Low Speed	*ENG	[100 to 180 / **143** / 1 deg/step]
111	M-thick:BW:Center:Low Speed	*ENG	[100 to 180 / **143** / 1 deg/step]

113	Thick1:FC:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]
115	Thick1:BW:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]
117	Special1:FC:Center:Low Speed	*ENG	[100 to 180 / **123** / 1 deg/step]
119	Special1:BW:Center:Low Speed	*ENG	[100 to 180 / **128** / 1 deg/step]
121	Special2:FC:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]
123	Special2:BW:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]
125	Plain1:Glossy:Center	*ENG	[100 to 180 / **138** / 1 deg/step]
127	Plain2:Glossy:Center	*ENG	[100 to 180 / **143** / 1 deg/step]
129	M-thick:Glossy:Center	*ENG	[100 to 180 / **148** / 1 deg/step]
131	OHP:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
133	Envelop:Center:Low Speed	*ENG	[100 to 180 / **163** / 1 deg/step]
135	Thin:FC:Center:Low Speed	*ENG	[100 to 180 / **118** / 1 deg/step]
137	Thin:BW:Center:Low Speed	*ENG	[100 to 180 / **118** / 1 deg/step]
139	Thick4:FC:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
141	Thick4:BW:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
143	Postcard:Center	*ENG	[100 to 180 / **158** / 1 deg/step]

1106	**[Fusing Temp. Display]**		
001	Heat: Center	ENG	[-10 to 250 / **-** / 1 deg/step] Displays the temperature of the fusing sleeve belt.
002	Heat: End	ENG	
003	Press: Center	ENG	[-10 to 250 / **-** / 1 deg/step] Displays the temperature of the pressure roller.
004	Press: End	ENG	

1112	**[Image Processing Temp. Correct]**		
	These SPs are used for fusing temperature control for variable job images. This control reduces the power consumption when the machine copies or prints a job text image in black and white mode.		
002	Temp.:Plain:Center:Level2	*ENG	Specifies the subtractive temperature level 2 of the fusing temperature control for variable job images. **Usage Limitation:** Use 0°C or less for this setting. [-30 to 20 / **P3c:-13(NA,TW),-20(EU,ASIA,CHN),** **P3d:-10(NA,TW),-17(EU,ASIA)** / 1 deg/step]

5

1113	**[Curl Correction]**		
001	Execute Pattern	*ENG	[0 to 2 / **0** / 1 /step] 0: Off, 1: On (No Decurl), 2: On
	Selects the curl correction type.		
002	Humidity:Threshold:M-humid	*ENG	[0 to 100 / **1** / 1 %/step]
	Specifies the threshold between low and middle humidity.		
003	Humidity:Threshold:H-humid	*ENG	[0 to 100 / **65** / 1 %/step]
	Specifies the threshold between middle and high humidity.		
004	Permit Temp.:Delta:Press:M-humid	*ENG	[0 to 200 / **40** / 1 deg/step]
	Specifies the threshold temperature for the curl control in middle humidity.		
005	Permit Temp.:Delta:Press:H-humid	*ENG	[0 to 200 / **30** / 1 deg/step]
	Specifies the threshold temperature for the curl control in high humidity.		
006	Permit Temp.:Delta:Press:M-humid:No Decurl	*ENG	[0 to 200 / **30** / 1 deg/step]
	Specifies the threshold temperature for the no curl control in middle humidity.		

007	Permit Temp.:Delta:Press:H-humid:No Decurl	*ENG	[0 to 200 / **20** / 1 deg/step]
	Specifies the threshold temperature for the no curl control in high humidity.		
008	CPM:M-humid	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the CPM ratio of the decurl control against to the normal operation in middle humidity.		
009	CPM:H-humid	*ENG	[0 to 100 / **65** / 1 %/step]
	Specifies the CPM ratio of the decurl control against to the normal operation in high humidity.		
010	CPM:M-humid:No Decurl	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the CPM ratio against of the no decurl control to the normal operation in middle humidity.		
011	CPM:H-humid:No Decurl	*ENG	[0 to 100 / **65** / 1 %/step]
	Specifies the CPM ratio against of the no decurl control to the normal operation in high humidity.		

1133	**[Voltage Detection]**		
	Detects AC power voltage.		
001	Voltage Detection	*ENG	[0 to 350 / **1** / 1 V/step]

1141	**[Fusing SC Issue Time Info]**		
	Displays the time when an SC code was issued.		
001	SC Number	*ENG	Displays the issued SC number. [0 to 99999 / **-** / 1/step]
101	Htg Roller:Ctr Det1	*ENG	Displays the temperature at the center of the fusing sleeve belt when an SC was issued. [-50 to 300 / **-** / 1 deg/step]
102	Htg Rolloer:End Det1	*ENG	Displays the temperature at the end of the fusing sleeve belt when an SC was issued. [-50 to 300 / **-** / 1 deg/step]

103	Press Roller:Ctr Det1	*ENG	Displays the temperature at the center of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
104	Press Roller:End Det1	*ENG	Displays the temperature at the end of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
151	Htg Roller:Ctr Det2	*ENG	Displays the temperature at the center of the fusing sleeve belt when an SC was issued. [-50 to 300 / - / 1 deg/step]
152	Htg Roller:End Det2	*ENG	Displays the temperature at the end of the fusing sleeve belt when an SC was issued. [-50 to 300 / - / 1 deg/step]
153	Press Roller:Ctr Det2	*ENG	Displays the temperature at the center of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
154	Press Roller:End Det2	*ENG	Displays the temperature at the end of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
201	Htg Roller:Ctr Det3	*ENG	Displays the temperature at the center of the fusing sleeve belt when an SC was issued. [-50 to 300 / - / 1 deg/step]
202	Htg Rolloer:End Det3	*ENG	Displays the temperature at the end of the fusing sleeve belt when an SC was issued. [-50 to 300 / - / 1 deg/step]
203	Press Roller:Ctr Det3	*ENG	Displays the temperature at the center of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
204	Press Roller:End Det3	*ENG	Displays the temperature at the end of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]

1142	**[Fusing Jam Detection]**

001	SC Display	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
	Enables or disables the fusing consecutive jam (three times) SC detection.		

1154	**[Overshoot Prevent Control]**		
	If 1 is selected, overshoot prevent control doesn't execute when main power is off and transits immediately.		
001	Main Switch OFF Immediate Transition Select	*ENG	[-10 to 100 / **0** / 1/step]
1154	**[Switch Rotation Start/Stop]**		
	-		
005	Heater On Timing From Motor ON	*ENG	[0 to 250 / **50** / 10msec/step]
006	Overshoot Prevent Temp. Abnormal Case	*ENG	[0 to 250 / **P3c:157(NA,TW), 159(EU,ASIA,CHN), P3d:160(NA,TW), 162(EU,ASIA,CHN)** / 1/step]

1801	**[Motor Speed Adjust]**		
001	Registration:Plain:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
002	Registration:Plain:High	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
003	Registration:Middle Thick:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
004	Registration:Middle Thick:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
005	Registration:Middle Thick:High	*ENG	
006	Registration:Thick 1:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
007	Registration:Thick1:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
008	Registration:Thick 2:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
009	Registration:Thick 3:Low	*ENG	

010	Duplex CW:Plain:Low	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
011	Duplex CW:Normal:High	*ENG	
012	Duplex CW:Middle Thick:Low	*ENG	
013	Duplex CW:Middle Thick:Mid	*ENG	
014	Duplex CW:Middle Thick:High	*ENG	
015	Duplex CW:Thick1:Low	*ENG	
016	Duplex CW:Thick1:Mid	*ENG	
017	Duplex CW:Thick2:Low	*ENG	
018	Duplex CW:Thick3:Low	*ENG	
019	Duplex CCW:Normal:High	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
020	Duplex CCW:Middle Thick:Mid	*ENG	
021	Duplex CCW:Middle Thick:high	*ENG	
023	Duplex CCW:Thick1:Mid	*ENG	
024	Reverse CW:Normal:High	*ENG	[-4.0 to 4.0 / **-0.5** / 0.1%/step]
025	Reverse CW:Middle Thick:Mid	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
026	Reverse CW:Middle Thick:High	*ENG	[-4.0 to 4.0 / **-0.5** / 0.1%/step]

028	Reverse CW:Thick1:Mid	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
029	Reverse CCW:Normal:High	*ENG	
030	Reverse CCW:Middle Thick:Mid	*ENG	
031	Reverse CCW:Middle Thick:High	*ENG	
033	Reverse CCW:Thick1:Mid	*ENG	
034	Feed:Plain:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
035	Feed:Plain:High	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
036	Feed:Middle thick:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
037	Feed:Middle thick:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
038	Feed:Middle thick:High	*ENG	
039	Feed:Thick 1:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
040	Feed:Thick 1:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
041	Feed:Thick 2:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
042	Feed:Thick 3:Low	*ENG	
043	Bridge Motor:Low	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
044	Bridge Motor:Mid	*ENG	
045	Bridge Motor:High	*ENG	
060	KOpcDevMot:High	*ENG	[-4.00 to 4.00 / **-0.30** / 0.01 %/step]
061	KOpcDevMot:Mid	*ENG	
062	KOpcDevMot:Low	*ENG	
072	Fusing: High	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
073	Fusing: Mid	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
074	Fusing: Low	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]

075	TransferMot:High	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
076	TransferMot:Mid	*ENG	
077	TransferMot:Low	*ENG	
078	TonerMot	*ENG	[-30 to 30 / **10** / 5 %/step]
079	Fusing: 1200	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
080	Fusing:Thin:600	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]

1902	**[Amplitude Control]**		
004	Confirmation	ENG	[0 or 1 / **0** / - /step] -

1950	**[Fan Cooling Time Set]**		
	Adjust the rotation time for each fan motor after a job end.		
002	Fusing Exit Fan	*ENG	[0.0 to 120.0 / **0.0** / 0.1 min./step]
006	Main Suction Fan	*ENG	
007	Paper Exit Fan	*ENG	
008	PSU Fan	*ENG	
009	QSU Heater Cooling Fan	*ENG	
010	AC Control board Cooling Fan	*ENG	
011	Second Duct Fan	*ENG	
012	Toner Supply Cooling Fan	*ENG	

Engine SP Tables-2

SP2-XXX (Drum)

2101	[Color Registration Correction] FA		
	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. For details, see p.128 in the "Main chapters: 4. Replacement and Adjustment: Laser Optics". The value should be provided with the new laser optics housing unit.		
001	Main Dot: Bk	*ENG	[-512 to 511 / **0** / 1 dot/step]
002	Main Dot: Ma	*ENG	
003	Main Dot: Cy	*ENG	
004	Main Dot: Ye	*ENG	
006	Sub Line: Ma	*ENG	[-16384 to 16383 / **0** / 1 line/step]
007	Sub Line: Cy	*ENG	
008	Sub Line: Ye	*ENG	

2102	[Magnification Adjustment]		
	Adjusts the magnification in the main scan direction for copy mode and printer mode. These values are the parameters for the automatic line position adjustment and are adjusted at the factory. These SPs must be input only when a new laser unit is installed.		
001	Main Mag.: High Speed: Bk	*ENG	[0 to 560 / **280** / 1 /step]
002	Main Mag.: Medium Speed: Bk	*ENG	
003	Main Mag.: Low Speed: Bk	*ENG	
004	Main Mag.: High Speed: M	*ENG	[0 to 560 / **280** / 1 /step]
005	Main Mag.: Medium Speed: M	*ENG	
006	Main Mag.: Low Speed: M	*ENG	

007	Main Mag.: High Speed: C	*ENG	[0 to 560 / **280** / 1 /step]
008	Main Mag.: Medium Speed: C	*ENG	
009	Main Mag.: Low Speed: C	*ENG	
010	Main Mag.: High Speed: Y	*ENG	[0 to 560 / **280** / 1 /step]
011	Main Mag.: Medium Speed: Y	*ENG	
012	Main Mag.: Low Speed: Y	*ENG	

2103	**[Erase Margin Adjustment]** (Area, Paper Size)		
	Adjusts the erase margin by deleting image data at the margins.		
001	Lead Edge Width	*ENG	[0.0 to 9.9 / **4.2** / 0.1 mm/step]
002	Trail. Edge Width	*ENG	
003	Left	*ENG	[0.0 to 9.9 / **2.0** / 0.1 mm/step]
004	Right	*ENG	
006	Duplex Trail. L Size	*ENG	[0.0 to 4.0 / **1.0** / 0.1 mm/step]
007	Duplex Trail. M Size	*ENG	[0.0 to 4.0 / **0.8** / 0.1 mm/step]
008	Duplex Trail. S Size	*ENG	[0.0 to 4.0 / **0.6** / 0.1 mm/step]
009	Duplex Left Edge	*ENG	[0.0 to 1.5 / **0.3** / 0.1 mm/step]
010	Duplex Right Edge	*ENG	
011	Duplex Trail. L Size:Thick	*ENG	[0.0 to 4.0 / **1.0** / 0.1 mm/step]
012	Duplex Trail. M Size:Thick	*ENG	[0.0 to 4.0 / **0.8** / 0.1 mm/step]
013	Duplex Trail. S Size:Thick	*ENG	[0.0 to 4.0 / **0.6** / 0.1 mm/step]
014	Duplex Left Edge:Thick	*ENG	[0.0 to 1.5 / **0.3** / 0.1 mm/step]
015	Duplex Right Edge:Thick	*ENG	

2105	**[LD Power Adj.]** (Process Speed, Color)		
	Adjusts the LD power of each color for each process speed. Each LD power setting is decided by process control.		
001	High Speed: Bk	*ENG	[50 to 120 / **100** / 1%/step] Decreasing a value makes lines thinner on the output. Increasing a value makes lines thicker on the output.
002	High Speed: Ma	*ENG	
003	High Speed: Cy	*ENG	
004	High Speed: Ye	*ENG	
005	Middle Speed: Bk	*ENG	[50 to 120 / **100** / 1%/step] Decreasing a value makes lines thinner on the output. Increasing a value makes lines thicker on the output.
006	Middle Speed: Ma	*ENG	
007	Middle Speed: Cy	*ENG	
008	Middle Speed: Ye	*ENG	
009	Low Speed: Bk	*ENG	[50 to 120 / **100** / 1%/step] Decreasing a value makes lines thinner on the output. Increasing a value makes lines thicker on the output.
010	Low Speed: Ma	*ENG	
011	Low Speed: Cy	*ENG	
012	Low Speed: Ye	*ENG	

2109	**[Test Pattern]**
	Generates the test pattern using "COPY Window" tab in the LCD.

003	Pattern Selection	ENG	[0 to 23 / **0** / 1/step]
	0 None 1: Vertical Line (1dot) 2: Vertical Line (2dot) 3: Horizontal (1dot) 4: Horizontal (2dot) 5: Grid Vertical Line 6: Grid Horizontal Line 7: Grid pattern Small 8: Grid pattern Large 9: Argyle Pattern Small 10: Argyle Pattern Large		11. Independent Pattern (1dot) 12. Independent Pattern (2dot) 13. Independent Pattern (4dot) 14. Trimming Area 16: Hound's Tooth Check (Horizontal) 17: Band (Horizontal) 18: Band (Vertical) 19: Checker Flag Pattern 20: Grayscale Vertical Margin 21: Grayscale Horizontal Margin 23: Full Dot Pattern
005	Color Selection	ENG	Specifies the color for the test pattern. [1 to 4 / **1** / 1/step] 1: All colors, 2: Magenta, 3: Yellow, 4: Cyan
006	Density: Bk	ENG	Specifies the color density for the test pattern. [0 to 15 / **15** / 1 /step] 0: Lightest density 15: Darkest density
007	Density: Ma	ENG	
008	Density: Cy	ENG	
009	Density: Ye	ENG	

2111	**[Forced Line Position Adj.]**		
001	Mode a	ENG	Executes the fine line position adjustment twice. If this SP is not completed (NG is displayed), do SP2111-003 first and then try this SP again.
002	Mode b	ENG	Executes the fine line position adjustment once. If this SP is not completed, do SP2111-003 first and then try this SP again.

003	Mode c	ENG	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.

2112	**[TM/ID Sensor Check]** ID Sensor Check **FA**		
001	Execute	ENG	[0 or 1 / **0** / 1 /step] This SP is used to check the ID sensors at the factory. The results of this SP are displayed in SP2140 to SP2145.

2117	**[Skew Adjustment]**		
	Specifies a skew adjustment value for the skew motor M, C or Y. These SPs must be used when a new laser optics housing unit is installed or when SC2.585 occurs. For details, see p.128 "Laser Optics Housing Unit" in the "Main chapters: 4. Replacement and Adjustment: Laser Optics".		
001	Pulse: M	*ENG	[-50 to 50 / **0** / 1 pulse/step]
002	Pulse: C	*ENG	
003	Pulse: Y	*ENG	

2118	**[Skew Adjustment]**		
001	Execute: M	ENG	Changes the current skew adjustment values to the values specified with SP2117. These SPs must be used when a new laser optics housing unit is installed or when SC2.585 occurs. For details, see p.128 "Laser Optics Housing Unit" in the "Main chapters: 4. Replacement and Adjustment: Laser Optics".
002	Execute: C	ENG	
003	Execute: Y	ENG	

2119	**[Skew Adjustment Display]**
	Displays the current skew adjustment value for each skew motor.

001	M	*ENG	[-50 to 50 / **-** / 1 pulse/step]
002	C	*ENG	
003	Y	*ENG	

2120	[Thick Paper Skew Adj]		
	-		
001	On/Off	*ENG	[0 or 1 / **1** / 1 /step]

2121	[Skew Adjust Coefficient]		
	-		
001	Coefficient	*ENG	[0 to 2 / **0** / 1 /step]

2183	[Main Scan Length Detection]		
	-		
001	Execute: High: Bk	ENG	[- / **-** / -] [Execute]
002	Execute: Medium: Bk	ENG	
003	Execute: Low: Bk	ENG	
004	Execute: High: M	ENG	
005	Execute: Medium: M	ENG	
006	Execute: Low: M	ENG	
007	Execute: High: C	ENG	[- / **-** / -] [Execute]
008	Execute: Medium: C	ENG	
009	Execute: Low: V	ENG	
010	Execute: High: Y	ENG	
011	Execute: Medium: Y	ENG	
012	Execute: Low: Y	ENG	

2194	**[MUSIC Execution Result]** Line Position Adjustment: Execution Result		
001	Year	*ENG	[0 to 99 / - / 1 year/step]
	Displays the year of the last MUSIC execution.		
002	Month	*ENG	[1 to 12 / - / 1 month/step]
	Displays the month of the last MUSIC execution.		
003	Day	*ENG	[1 to 31 / - / 1 day/step]
	Displays the date of the last MUSIC execution.		
004	Hour	*ENG	[0 to 23 / - / 1 hour/step]
	Displays the time (hour) of the last MUSIC execution.		
005	Minute	*ENG	[0 to 59 / - / 1 minute/step]
	Displays the time (minute) of the last MUSIC execution.		
006	Temperature	*ENG	[0 to 100 / - / 1 deg/step]
	Displays the temperature of the last MUSIC execution.		
007	Execution Result	*ENG	[0 or 1 / - / 1 /step] 0: Completed successfully, 1: Failed
008	Number of Execution	*ENG	[0 to 999999 / - / 1 times/step]
009	Number of Failure	*ENG	[0 to 999999 / - / 1 times/step]
010	Error Result: M	*ENG	[0 to 9 / - / 1 /step] 0: Not done 1: Completed successfully 2: Cannot detect patterns 3: Fewer lines on the pattern than the target 4: Not used 5: Out of the adjustment range 6 to 9: Not used
011	Error Result: C	*ENG	
012	Error Result: Y	*ENG	

2220	**[Skew Origin Set]**
	Executes the skew motor initialization in the laser optics unit.

001	M: Skew Motor	*ENG	[- / - / -] Execute
002	C: Skew Motor	*ENG	
003	Y: Skew Motor	*ENG	

2241	[Temperature/Humidity: Display]		
	Displays the environment temperature and humidity.		
001	Temperature	ENG	[-50.0 to 450.0 / - / 0.1deg/step]
002	Relative Humidity	ENG	[0.0 to 1000.0 / - / 0.1 %RH/step]
003	Absolute Humidity	ENG	[0.00 to 100.00 / - / 0.01 g/m^3/step]
004	AIT Temperature	ENG	[0.0 to 70.0 / - / 0.1deg/step]

2242	[TS Operation Env. Log]		
	Displays TS Operation Env. logs.		
001	TS <= 40	ENG	[0 to 99999999 / - / 1/mm]
002	40 < TS <= 45	ENG	[0 to 99999999 / - / 1/mm]
003	45 < TS	ENG	[0 to 99999999 / - / 1/mm]
004	Log Clear	ENG	[0 or 1 / **0** / 1/step] 1: Clear

2982	[OPC Drum Refresh Mode]		
	-		
001	Manual Execution	ENG	[- / - / -] Execution

Engine SP Tables-3

SP3-XXX (Process)

3011	[Process Cont. Manual Execution]		
001	Normal	ENG	Executes the normal process control manually (potential control). Check the result with SP3-325-001 and 3-012-001 after executing this SP.
002	Density Adjustment	ENG	Executes the toner density adjustment manually.
003	Pre-ACC	ENG	Executes the process control that is normally done before ACC. The type of process control is selected with SP3-041-004.
004	Full MUSIC	ENG	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) twice.
005	Normal MUSIC	ENG	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) once.

3012	[Process Cont. Check Result] Process Control Self-check Result
	Displays the result of the latest process control self-check. All colors are displayed. The results are displayed in the order “Y C M K” e.g., 11 (Y) 99 (C) 11 (M) 11 (K): The self-check for Cyan failed but the others were successful. See "Process Control Self-Check Result" in the "Main chapters: 6. Troubleshooting: Process Control Error Conditions" for details.

001	History: Latest	*ENG	[1111 to 99999999 / - / 1/step]
002	Result: Latest 1	*ENG	
003	Result: Latest 2	*ENG	
004	Result: Latest 3	*ENG	
005	Result: Latest 4	*ENG	
006	Result: Latest 5	*ENG	
007	Result: Latest 6	*ENG	
008	Result: Latest 7	*ENG	
009	Result: Latest 8	*ENG	
010	Result: Latest 9	*ENG	

3013	**[T Sensor Initial Set: Exe]** Developer Initialization Setting		
001	Execution: ALL	ENG	Executes the developer initialization for each color. [-/ - / -] Execute
002	Execution: COL	ENG	
003	Execution: Bk	ENG	
004	Execution: M	ENG	
005	Execution: C	ENG	
006	Execution: Y	ENG	

3014	**[T Sensor Initial Set:Exe]** Developer Initialization Result: Display		
001	Display: YCMK	*ENG	[0 to 9999 / - / 1 /step] 1: Success, 2 to 9: Failure
	Displays the developer initialization result. See "Developer Initialization Result" in the "Main chapters: 6. Troubleshooting: Process Control Error Conditions" for details on the meaning of each code. All colors are displayed. Values are displayed in the order Y C M Bk. e.g., 1 (Y) 2 (C) 1 (M) 1 (Bk): Initialization of Cyan failed but the others succeeded.		

3015	**[Forced Toner Supply: Execute]** Forced Toner Supply ([Color])		
001	Execution: ALL	ENG	Executes the manual toner supply to the development unit. [-/ **-** / -] Execute
002	Execution: COL	ENG	
003	Execution: Bk	ENG	
004	Execution: M	ENG	
005	Execution: C	ENG	
006	Execution: Y	ENG	

3020	**[Vt Limit Error]**		
	-		
006	Upper Counter: Bk	*ENG	[0 to 99 / **0** / 1 times/step]
007	Upper Counter: M	*ENG	[0 to 99 / **0** / 1 times/step]
008	Upper Counter: C	*ENG	[0 to 99 / **0** / 1 times/step]
009	Upper Counter: Y	*ENG	[0 to 99 / **0** / 1 times/step]
010	Lower Counter: Bk	*ENG	[0 to 99 / **0** / 1 times/step]
011	Lower Counter: M	*ENG	[0 to 99 / **0** / 1 times/step]
012	Lower Counter: C	*ENG	[0 to 99 / **0** / 1 times/step]
013	Lower Counter: Y	*ENG	[0 to 99 / **0** / 1 times/step]

3021	**[TD Sensor Initial Set]**		
	Sets the execution flag of the developer initialization for each color.		
005	Execution Flag: Bk	*ENG	[0 or 1/ **0** / 1 /step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: M	*ENG	
007	Execution Flag: C	*ENG	
008	Execution Flag: Y	*ENG	

009	Set Prohibition	*ENG	Enables or disables developer initialization. [0 or 1/ **0** / 1 /step] 0: Enable 1: Disable

3022	**[Tonner Replenishment Mode]**		
	Sets the toner supply flag of each color.		
005	Execution Flag: Bk	*ENG	[0 or 1/ **0** / 1 /step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: M	*ENG	
007	Execution Flag: C	*ENG	
008	Execution Flag: Y	*ENG	

3041	**[Process Control Type]**		
001	Voltage Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (Use the fixed values for the charge DC bias and development DC bias set with SP2-005 and SP2-229.) 1: CONTROL
	Enables or disables potential control.		
002	LD Power Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (at the value in SP2221-xxx) 1: CONTROL (adjusted by process control)
	Selects the LD power control mode.		
003	AutoControl Prohibition Set	*ENG	[0 or 1 / **0** / 1/step] 0: Permit, 1: Forbid
	Enables or disables the automatic process control prohibition.		

004	Pre-ACC Process Control	*ENG	[0 to 3 / **2** / 1/step] 0: Not Executed 1: Process Control 2: TC Control (TD Adjustment) 3: Not used
	Selects the process control mode that is done before ACC.		
005	Pattern Calculation Method	*ENG	[0 to 2 / **2** / 1/step] 0: FIXED 1: INITIALIZED 2: CALCULATED
	Selects the process control method.		

3044	**[Toner Supply Type]**		
	Selects the toner supply method type.		
001	Bk	*ENG	[0 to 4 / **4** / 1/step] Alphanumeric 0: FIXED (with the supply rates stored with SP 3401) 1: PID (Vtref_Fixed) 2: PID (Vtref_Control) 3: Not used 4: MBD (Vtref_Control)
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3072	**[TD. Sens Check]**		
	Executes the TD Sensor checking.		
001	Exe All Colors	ENG	[-/ **-** / -] Execute

3073	**[TD. Sens Chk:Disp]**
	Displays the TD Sensor checking result for each sensor.

001	Vt:K	ENG	[0.00 to 5.00 / - / 0.01 V/step]
002	Vt:C	ENG	
003	Vt:M	ENG	
004	Vt:Y	ENG	

3201	**[TD Sensor: Vt Display]**		
	Display the current voltage of the TD sensor for each color.		
001	Current: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Current: M	*ENG	
003	Current: C	*ENG	
004	Current: Y	*ENG	

3221	**[Vtcnt: Display/Set]**		
	Displays or adjusts the current Vtcnt value for each color.		
001	Current: Bk	*ENG	[2.00 to 5.00 / **3.86** / 0.01 V/step]
002	Current: M	*ENG	
003	Current: C	*ENG	
004	Current: Y	*ENG	

3222	**[Vtref: Display/Set]**		
	Displays or adjusts the current Vtref value for each color.		
001	Current: Bk	*ENG	[0 to 5.5 / **3.00** / 0.01 V/step]
002	Current: M	*ENG	
003	Current: C	*ENG	
004	Current: Y	*ENG	

3236	[Toner Supply Consumption:Disp]		
	Displays the toner amount of the latest toner supply for each color.		
001	Latest: Bk	*ENG	[0.0 to 40000.0 / **0.0** / 0.1 mg/step]
002	Latest: M	*ENG	
003	Latest: C	*ENG	
004	Latest: Y	*ENG	

3238	[Vt Target Setting]		
	Displays the Vt target value at developer initialization.		
001	Bk	*ENG	[0.00 to 5.00 / **2.30** / 0.01 V/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3251	[Coverage]		
	These (-001 to -016) are coefficients for SP3-222-009 to -012.		
001	Latest Pixel: Bk	*ENG	Displays the latest coverage for each color. [0 to 9999 / - / 1 cm^2/step]
002	Latest Pixel: M	*ENG	
003	Latest Pixel: C	*ENG	
004	Latest Pixel: Y	*ENG	
005-008	Displays the average coverage of each color for the Vtref correction. "Average S" is defined when the number of developed pages does not reach the number specified with SP3251-017.		
005	Average S: Bk	*ENG	[0.00 to 100.00 / - / 0.01 %/step]
006	Average S: M	*ENG	
007	Average S: C	*ENG	
008	Average S: Y	*ENG	

009-012	Displays the average coverage of each color for the Vtref correction. "Average M" is defined when the number of developed pages does not reach the number specified with SP3251-018.		
009	Average M: Bk	*ENG	[0.00 to 100.00 / - / 0.01 %/step]
010	Average M: M	*ENG	
011	Average M: C	*ENG	
012	Average M: Y	*ENG	
013-016	Displays the average coverage of each color for the Vtref correction. "Average L" is defined when the number of developed pages does not reach the number specified with SP3-251-019.		
013	Average L: Bk	*ENG	[0.00 to 100.00 / - / 0.01 %/step]
014	Average L: M	*ENG	
015	Average L: C	*ENG	
016	Average L: Y	*ENG	
024-027	Displays the latest coverage ratio for each color.		
024	Latest Coverage: Bk	*ENG	[0.00 to 100.00 / - / 0.01 %/step]
025	Latest Coverage: M	*ENG	
026	Latest Coverage: C	*ENG	
027	Latest Coverage: Y	*ENG	

3311	[ID Sensor DetectValue: Vofset]		
005-007	Displays the ID sensor (diffusion) offset voltage for Vsg adjustments.		
005	Voffset dif: M	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
006	Voffset dif: C	*ENG	
007	Voffset dif: Y	*ENG	
008-010	Displays the ID sensor offset voltage for Vsg adjustments.		

008	Voffset TM (Front)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
009	Voffset TM (Center)	*ENG	
010	Voffset TM (Rear)	*ENG	

3321	[Vsg Adjustment: Execution]		
010	P/TM Sensor All	ENG	Execute the ID sensor initialization setting for all sensors [- / - / -] Execute

3322	[Vsg Adjustment Result: Vsg]		
	Displays the result value of the Vsg adjustment for each sensor.		
008	Vsg TM (Front)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
009	Vsg TM (Center)	*ENG	
010	Vsg TM (Rear)	*ENG	

3323	[Vsg Adjustment Result:Ifsg]		
	Displays the result value of the Vsg adjustment for each sensor.		
005	Ifsg: TM(Front)	*ENG	[0.0 to 50.0 / - / 0.1 mA/step]
006	Ifsg: TM(Center)	*ENG	
007	Ifsg: TM(Rear)	*ENG	

3324	[Vsg Adjustment: Set]		
	-		
003	Vsg Error Counter	*ENG	[0 to 99 / - / 1 times/step]

3325	[Vsg Adjustment Result]		
	Displays the result of the Vsg adjustment. The displayed numbers mean the result of each sensor (sensor for Front, sensor for Bk, sensor for Cyan, sensor for Center, sensor for Magenta, sensor for Yellow and sensor for Rear).		
001	Latest	*ENG	[111 to 999 / - / 1 /step] 9: Unexpected error 3: Offset voltage error 2: Vsg adjustment value error 1: O.K
002	Result: Latest 1	*ENG	
003	Result: Latest 2	*ENG	
004	Result: Latest 3	*ENG	
005	Result: Latest 4	*ENG	
006	Result: Latest 5	*ENG	
007	Result: Latest 6	*ENG	
008	Result: Latest 7	*ENG	
009	Result: Latest 8	*ENG	
010	Result: Latest 9	*ENG	

3401	[Fixed Supply Mode]		
	Adjusts the toner supply rate in the fixed toner supply mode.		
001	Fixed Rate: Bk	*ENG	[0 to 100 / **5** / 1 %/step] These SPs are used only when SP3-044 is set to "1".
002	Fixed Rate: M	*ENG	
003	Fixed Rate: C	*ENG	
004	Fixed Rate: Y	*ENG	

3451	[Toner Supply Carry Over:Disp]		
001	Bk	*ENG	Displays the toner supply time carried over from a previous toner supply mode for each color. [0 to 10000 / **0** / 1 msec/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3501	[Process Control Target M/A]		
	Adjusts the target M/A of the full coverage in single color printer mode.		
001	Maximum M/A: Bk	*ENG	[0.000 to 1.000 / **0.411** / 0.001 mg/cm^2/step]
002	Maximum M/A: M	*ENG	[0.000 to 1.000 / **0.476** / 0.001 mg/cm^2/step]
003	Maximum M/A: C	*ENG	[0.000 to 1.000 / **0.422** / 0.001 mg/cm^2/step]
004	Maximum M/A: Y	*ENG	[0.000 to 1.000 / **0.417** / 0.001 mg/cm^2/step]

3510	[ImageQuality Adj. Counter:Disp]		
	Displays the total page counter for each adjustment mode.		
001	Potential Control: BW	*ENG	[0 to 2000 / - / 1 page/step]
002	Potential Control: FC	*ENG	
003	Power ON: BW	*ENG	
004	Power ON: FC	*ENG	
005	MUSIC: BW	*ENG	
006	MUSIC: FC	*ENG	
007	Vsg Adj.	*ENG	
008	Charge AC Control	*ENG	

3513	[PCU Motor Stop Time: Bk]		
	Displays the last time that the PCDU motors stopped. These are used for process control execution timing.		
001	Year	*ENG	[0 to 99 / - / 1/step]
002	Month	*ENG	[1 to 12 / - / 1/step]
003	Date	*ENG	[1 to 31 / - / 1/step]

004	Hour	*ENG	[0 to 23 / - / 1/step]
005	Minute	*ENG	[0 to 59 / - / 1/step]

3514	[Environmental Display: Job End]		
	Displays the environmental conditions for the last job. These are used for process control execution timing.		
001	Temperature	*ENG	[-1280 to 1270 / - / 0.1°C/step]
002	Relative Humidity	*ENG	[0 to 1000 / - / 0.1%RH/step]
003	Absolute Humidity	*ENG	[0 to 1000 / - / 0.1 g/m^3/step]
004	AIT Temperature	*ENG	[-1280 to 1270 / - / 0.1 deg/step]

3515	[Execution Interval: Display]		
	Displays the current interval for process control execution. When the machine calculates the timing for process control, it uses a number of conditions. These are the results after considering all the conditions.		
001	Job End: Pot Control: BW	*ENG	[0 to 2000 / - / 1 page/step]
002	Job End: Pot Control: FC	*ENG	[0 to 2000 / - / 1 page/step]
003	Interrupt: Pot Control: BW	*ENG	[0 to 2000 / - / 1 page/step]
004	Interrupt: Pot Control: FC	*ENG	[0 to 2000 / - / 1 page/step]

3516	[Refresh Mode]		
	While making prints with low coverage, the developer is agitated with less toner consumption and the toner carrier attraction tends to increase. This may cause low image density or poor transfer (white dots). To prevent this, the coagulated toner or overcharged toner has to be consumed by performing the refresh mode.		
001	Dev. Motor Rotation: Dis: Bk	*ENG	[0.0 to 1000.0 / - / 0.1 m/step]
002	Dev. Motor Rotation: Dis: M	*ENG	
003	Dev. Motor Rotation: Dis: C	*ENG	
004	Dev. Motor Rotation: Dis: Y	*ENG	

006	Pixel Coverage Sum: Bk	*ENG	[0 to 65535 / - / 1 cm^2/step]
007	Pixel Coverage Sum: M	*ENG	
008	Pixel Coverage Sum: C	*ENG	
009	Pixel Coverage Sum: Y	*ENG	

3518	[ImageQualityAdj.:ExeFlag]		
	-		
001	Toner End Recovery: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON
002	Toner End Recovery: M	*ENG	
003	Toner End Recovery: C	*ENG	
004	Toner End Recovery: Y	*ENG	
005	Vsg Adj.	*ENG	
006	Developer Mixing	*ENG	
007	Process Control	*ENG	[0 to 2 / **0** / 1 /step] 0: OFF 1: ON (once) 2: ON (twice)
008	MUSIC	*ENG	
009	MUSIC (Skew Correction)	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON
010	Charge AC Control	*ENG	
011	Blade Damage Prevention	*ENG	
012	Vsgave Outside	*ENG	[0 or 1 / **0** / 1 /step] Sets "1", when the following values show. Vsg_reg_ave: 3.5 < Vsg_reg_ave < 4.5 or Vsg_dif_ave: 0.0 < Vsg_dif_ave < 0.5

3611	[Development Gamma: Display/Set]

001	Bk (Current)	*ENG	Displays the current development gamma for each color. [0.00 to 5.00 / - / 0.01 mg/cm^2/kV / step]
002	M (Current)	*ENG	
003	C (Current)	*ENG	
004	Y (Current)	*ENG	

3612	**[Vk Display]**		
	Displays Vk for each color.		
001	Bk	*ENG	[-300 to 300 / - / 1 V/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3621	**[Development DC Control: Disp]** Plain: High speed, Thick 1: Middle speed, Thick 2 & FINE: Low speed		
	Displays the development DC bias adjusted with the process control for each line speed and color.		
001	Plain: Bk	*ENG	[0 to 800 / - / 1 -V/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	
005	Thick 1: Bk	*ENG	[0 to 800 / - / 1 -V/step]
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	

009	Thick 2 & FINE: Bk	*ENG	[0 to 800 / - / 1 -V/step]
010	Thick 2 & FINE: M	*ENG	
011	Thick 2 & FINE: C	*ENG	
012	Thick 2 & FINE: Y	*ENG	

3631	[Charge DC Control: Display] Plain: High speed, Thick 1: Middle speed, Thick 2 & FINE: Low speed		
	Displays the charge DC voltage adjusted with the process control for each line speed and color.		
001	Plain: Bk	*ENG	[0 to 2000 / - / 1 -V/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	
005	Thick 1: Bk	*ENG	[0 to 2000 / - / 1 -V/step]
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2 & FINE: Bk	*ENG	[0 to 2000 / - / 1 -V/step]
010	Thick 2 & FINE: M	*ENG	
011	Thick 2 & FINE: C	*ENG	
012	Thick 2 & FINE: Y	*ENG	

3641	[Charge AC Control: Display] Plain: High speed
	Displays the charge AC voltage adjusted with the process control for each color.

001	Plain: Bk	*ENG	[0.00 to 3.00 / - / 0.01 kV/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	

3651	**[LD Power Control: Display]** Plain: High speed, Thick 1: Middle speed, Thick 2 & FINE: Low speed		
	Displays the LD power adjusted for each environment.		
001	Plain: Bk	*ENG	[0 to 200 / - / 1 %/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	
005	Thick 1: Bk	*ENG	[0 to 200 / - / 1 %/step]
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2 & FINE: Bk	*ENG	[0 to 200 / - / 1 %/step]
010	Thick 2 & FINE: M	*ENG	
011	Thick 2 & FINE: C	*ENG	
012	Thick 2 & FINE: Y	*ENG	

3710	**[HST Concentration Control: Set]** TD Sensor: Toner Concentration Control Setting		
	Selects the toner concentration control method by HST memory, which is in the TD sensor.		
001	Control Method: Selection	*ENG	[0 or 1 / **1** / 1 /step] 0: Not Use, 1: Use

3711	[HST Concentration Control: Bk]		
	Displays the factory settings of the black PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	
006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 $mg/cm^2/kV$ / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3712	[HST Concentration Control: M]		
	Displays the factory settings of the magenta PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	

006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 mg/cm^2/kV / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3713	[HST Concentration Control: C]		
	Displays the factory settings of the cyan PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	
006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]

013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 mg/cm^2/kV / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3714	[HST Concentration Control: Y]		
	Displays the factory settings of the yellow PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	
006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 mg/cm^2/kV / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3902	[Manual New Unit Set]
	Turns the new unit detection flag for each PM unit on or off. The use of these counters is explained in the PM section and in the relevant parts of section 3 (Replacement and Adjustment).

001	Development Unit: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
002	Development Unit: Y	*ENG	
003	Development Unit: C	*ENG	
004	Development Unit: M	*ENG	
005	Developer: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
006	Developer: Y	*ENG	
007	Developer: C	*ENG	
008	Developer: M	*ENG	
009	PCU: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
010	PCU: Y	*ENG	
011	PCU: C	*ENG	
012	PCU: M	*ENG	
013	Image Transfer Unit	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON Do not use 3902-013 if you only change the cleaning unit. 3902-015: This is for the image transfer belt cleaning unit.
014	Fusing Unit	*ENG	
015	Cleaning Unit	*ENG	
016	Paper Transfer Unit	*ENG	
017	Toner Collection Bottle	*ENG	
018	Fusing Belt Unit	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON "Fusing Roller" is designated as "Fusing Sleeve Belt" in this manual.
019	Pressure Roller	*ENG	
020	Toner Supply Unit: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
021	Toner Supply Unit: M	*ENG	
022	Toner Supply Unit: C	*ENG	
023	Toner Supply Unit: Y	*ENG	

Engine SP Tables-4

SP5-XXX (Mode)

5024	[mm/inch Display Selection]		
	Display units (mm or inch) for custom paper sizes.		
001	0:mm 1:inch	*CTL	[0 or 1 / **P3c:1(NA), 2 (EU, ASIA, CHN, TW), P3d:1(NA), 2(EU, ASIA,TW)** / 1 /step] 0: mm (Europe/Asia) 1: inch (USA)

RTB 18
SP5045:
Modified

5045	[Accounting counter]		
	Selects the counting method. **Note** • The counting method can be changed only once, regardless of whether the counter value is negative or positive.		
001	Counter Method	*CTL	[0 or 1 / **0** / 1 /step] 0: Developments 1: Prints

5047	[Paper Display]		
	Turns on or off the printed paper display on the LCD.		
001	Backing Paper	*CTL	[0 or 1 / **-** / 1 /step] 0: OFF, 1: ON

5051	[TonerRefillDetectionDisplay]		
	Enables or disables the toner refill detection display.		
001	-	*CTL	[0 or 1 / **0** / 1 /step] Alphanumeric 0: ON 1: OFF

5055	[Display IP Address]		
	Display or does not display the IP address on the LCD.		
001	-	*CTL	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON

5061	[Toner Remaining Icon Display Change]		
	Display or does not display the remaining toner display icon on the LCD.		
001	-	*CTL	[0 or 1 / **0** / 1] 0: Not display, 1: Display

5062	[Parts Replacement Alert Display]		
	Display or does not display the PM part yield on the LCD.		
001	Drum Unit: Bk	*CTL	[0 or 1 / **1** / 1] 0: Not display, 1: Display
002	Drum Unit: M	*CTL	
003	Drum Unit: C	*CTL	
004	Drum Unit: Y	*CTL	
005	Development Unit: Bk	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display
006	Development Unit: M	*CTL	
007	Development Unit: C	*CTL	
008	Development Unit: Y	*CTL	
009	Developer: Bk	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display
010	Developer: M	*CTL	
011	Developer: C	*CTL	
012	Developer: Y	*CTL	

013	Image Transfer Belt	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display
014	Image Transfer Cleaning Unit	*CTL	
015	Fusing Unit	*CTL	
016	Paper Transfer Roller Unit	*CTL	
017	Waster Toner bottle	*CTL	
018	Fusing Roller	*CTL	
019	Pressure Roller	*CTL	

5066	**[PM Parts Display]**		
	Display or does not display the "PM parts" button on the LCD.		
001	-	*CTL	[0 or 1 / **0** / 1 /step] 0: Not display, 1: Display

5067	**[Part Replacement Operation Type]**		
	Selects the service maintenance or user maintenance for each PM parts. If the user service is selected, PM alert is displayed on the LCD.		
001	Drum Unit: Bk	*CTL	**[0: Service]** or [1: User]
002	Drum Unit: M	*CTL	
003	Drum Unit: C	*CTL	
004	Drum Unit: Y	*CTL	
005	Development unit: Bk	*CTL	**[0: Service]** or [1: User]
006	Development unit: M	*CTL	
007	Development unit: C	*CTL	
008	Development unit: Y	*CTL	

009	Developer: Bk	*CTL	**[0: Service]** or [1: User]
010	Developer: M	*CTL	
011	Developer: C	*CTL	
012	Developer: Y	*CTL	
013	Image Transfer Belt	*CTL	**[0: Service]** or [1: User]
014	Image Transfer Cleaning Unit	*CTL	**[0: Service]** or [1: User]
015	Fusing Unit	*CTL	**[0: Service]** or [1: User]
016	Paper Transfer Roller Unit	*CTL	**[0: Service]** or [1: User]
017	Waste Toner bottle	*CTL	**[0: Service]** or [1: User]
018	Fusing Roller	*CTL	**[0: Service]** or [1: User]
019	Pressure Roller	*CTL	**[0: Service]** or [1: User]

5074	**[Home Screen Login]**		
	Sets the application that appears when the home key is pressed.		
002	Home Screen Login Setting	*CTL	[FFh / **0x0** / 1hex /step]
091	(0:OFF 1:SDK 2:Reserve)	*CTL	[0 to 2 / **0** / 1/step] 0: Function disable 1: SDK application 2: Legacy application (reserved)
092	Product ID	*CTL	Sets the Application product ID. [0x00 to 0xffff / **0** / 1/step]
093	Application ID	*CTL	[0 to 255 / **0** / 1/step]
	Sets the display category of the application that is specified in the SP5075-001,002		

5075	**[USB Keyboard]**
	Sets the function of the external keyboard.

001	Function Setting	*CTL	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5083	Toner Near End LED Setting		
001	-	*CTL	[0 or 1 / **0** / 1 /step] 0:LED Off 1:LED On

5104	**[Counter: Size Setting]**		
	Specifies whether the counter is doubled for A3/DLT. "Yes" counts except from the bypass tray. When "Yes" is selected, A3 and DLT paper are counted twice, that is A4 x2 and LT x2 respectively. **Default setting: Yes**		
001	Double Count	*CTL	[0 or 1 / **0** / 1/step]
002	Bypass Custom Paper Size	*CTL	[0 or 1 / **0** / 1/step]

5112	**[Non-Standard Paper Selection]**		
001	0:OFF 1:ON	*CTL	[0 or 1 / **1** / -]

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).		
001	-	*ENG	[0 to 2 / **P3c:1(NA), 2 (EU, ASIA, CHN, TW), P3d:1(NA), 2(EU, ASIA,TW)** / 1 / step]

5150	**[Bypass Length Setting]**		
	Determines whether the transfer sheet from the by-pass tray is used or not. Normally the paper length for sub scanning paper from the by-pass tray is limited to 600 mm, but this can be extended with this SP to 1260 mm.		
001	0: OFF 1: ON	*CTL	[**0**: OFF/ 1: ON]

5162	[App. Switch Method]		
001	-	*CTL	[0 or 1 / **0** / 1 /step] 0: Soft Key Set 1: Hard Key Set
	This program specifies the switch that selects an application program.		

5181	[Size Adjust]		
	Adjusts the paper size for each tray.		
001	TRAY 1	*ENG	[0 to 3 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF, 2: B5 LEF, 3: A5 LEF
002	TRAY 2: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF
003	TRAY 2: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A3, 1: DLT
004	TRAY 2: 3	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B4, 1: LG
005	TRAY 2: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B5 LEF, 1: Exe LEF
006	TRAY 3/T-LCT: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF
007	TRAY 3: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A3, 1: DLT

008	TRAY 3: 3	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B4, 1: LG
009	TRAY 3: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B5 LEF, 1: Exe LEF
010	TRAY 4: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF
011	TRAY 4: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A3, 1: DLT
012	TRAY 4: 3	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B4, 1: LG
013	TRAY 4: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B5 LEF, 1: Exe LEF
014	TRAY 5: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step]
015	TRAY 5: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step]
016	TRAY 5: 3	*ENG	[0 or 1 / **P3c 0(EU,ASIA,CHN,TW), P3d 1(NA)** / 1 /step]
017	TRAY 5: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step]
018	LCT	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4LEF, 1: LTLEF, 2: B5LEF

5186	[RK 4]		
	Enables or disables the prevention for RK4 (accounting device) disconnection. If the RK4 is disconnected for 10 seconds when this SP is set to "1 (Enable)", the machine automatically jams a sheet of paper and stops.		
001	-	*ENG	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5191	[Mode Set]		
	Enables or disables the STR (Suspend to RAM) mode.		
001	-	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On

5193	[External Controller Info. Settings]		
001	-	CTL	Sets the external controller type. This setting is appropriately adjusted if an external controller is installed in the machine. [0 to 10 / **0** / 1/step] 0: No external controller installed 1: EFI 2: Ratio 3: Egret 4: GJ 5: Creo 6: QX-100 7: Kurofune 8 to 10: Reserved

5199	[Paper Exit After Staple End.]		
001	-	CTL	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON

	Enables or disables the paper feeding out from the finisher without stapling. • If this setting is "1: ON", paper is fed out without stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number). • If this setting is "0: OFF", paper is fed out with stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number).

5302	**[Set Time]** Adjusts the RTC (real time clock) time setting for the local time zone. Examples: For Japan (+9 GMT), enter 540 (9 hours x 60 min.) DOM: +540 (Tokyo) NA: -300 (New York) EU: + 60 (Paris) CH: +480 (Peking) TW: +480 (Taipei) AS: +480 (Hong Kong) KO: +540 (Korea)		
002	Time Difference	*CTL	[-1440 to 1440 / **-300** / 1 min./step]

5307	**[Summer Time]**		
001	Setting	*CTL	[0 to 1 / **NA, EU, ASIA** / 1 /step] 0: Disabled 1: Enabled NA and EUR: 1, ASIA: 0
	Enables or disables the summer time mode. **Note** • Make sure that both SP5-307-3 and -4 are correctly set. Otherwise, this SP is not activated even if this SP is set to "1".		

003	Rule Set (Start)	*CTL	-
	Specifies the start setting for the summer time mode. There are 8 digits in this SP. For months 1 to 9, the "0" cannot be input in the first digit, so the eight-digit setting for -2 or -3 becomes a seven-digit setting. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [1 to 5] 4th digit: The day of the week. [0 to 6 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] 7th digit: The length of the advanced time. [0 to 9 / 1 hour /step] 8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step] • The digits are counted from the left. • Make sure that SP5-307-1 is set to "1".		
	For example: 3500010 (EU default) The timer is advanced by 1 hour at am 0:00 on the 5th Sunday in March		
004	Rule Set (End)	*CTL	-
	Specifies the end setting for the summer time mode. There are 8 digits in this SP. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [0 to 5] 4th digit: The day of the week. [0 to 7 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] The 7th and 8 digits must be set to "00". • The digits are counted from the left. • Make sure that SP5-307-1 is set to "1".		

5501	[PM Alarm Interval]		
001	PM Alarm Level	*CTL	[0 to 9999 / **0** / 1 /step] 0: Alarm off 1 to 9999: Alarm goes off when **Value (1 to 9999) x 1000 > PM counter**

002	Original Count Alarm	*CTL	[0 or 1 / **0** / 1 /step] 0: No alarm sounds 1: Alarm sounds after the number of originals passing through the ARDF > 10,000

5504	**[Jam Alarm Interval]**		
	Sets the alarm to sound for the specified jam level (document misfeeds are not included).		
001	-	*CTL	[0 to 3 / **3** / 1 /step] 0: Zero (Off) 1: Low (2.5K jams) 2: Medium (3K jams) 3: High (6K jams)

5505	**[Error Alarm]**		
	Sets the error alarm level. The error alarm counter counts "1" when any SC is detected. However, the error alarm counter decreases by "1" when an SC is not detected during a set number of copied sheets (for example, default 1500 sheets). The error alarm occurs when the SC error alarm counter reaches "5".		
001	-	*CTL	[0 to 255 / **P3c: 25, P3d: 35** / 100 copies / step]

5507	**[Supply Alarm]**		
	Enables or disables notifying a supply call via @Remote.		
001	Paper Supply Alarm	*CTL	[0 or 1 / **0** / 1 /step] 0: Off 1: On
002	Staple Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On
003	Toner Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On

005	DrumLifeRemain Supply Alarm		[0 or 1 / **1** / 1 /step] 0: Off 1: On
006	WasteTonerBottle Supply Alarm		[0 or 1 / **1** / 1 /step] 0: Off 1: On
007	Tensya Supply Alarm		[0 or 1 / **1** / 1 /step] 0: Off 1: On
008	Fuser Supply Alarm		[0 or 1 / **1** / 1 /step] 0: Off 1: On
080	Toner Call Timing	*CTL	Changes the timing of the "Toner Supply Call" via @Remote, when the following conditions occur. [0 or 1 / **0** / 1 /step] 0: At replacement 1: At near end
128	Interval :Others	*CTL	[00250 to 10000 / **1000** / 1 /step]
132	Interval :A3	*CTL	
133	Interval :A4	*CTL	
134	Interval :A5	*CTL	
141	Interval :B4	*CTL	
142	Interval :B5	*CTL	
160	Interval :DLT	*CTL	
164	Interval :LG	*CTL	
166	Interval :LT	*CTL	
172	Interval :HLT	*CTL	

5508	**[CC Call]**		
001	Jam Remains	*CTL	[0 or 1 / **1** / 1 /step] 0: Disable, 1: Enable
	Enables/disables initiating a call for an unattended paper jam.		

002	Continuous Jams	*CTL	[0 or 1 / **1** / - /step] 0: Disable, 1: Enable
	Enables/disables initiating a call for consecutive paper jams.		
003	Continuous Door Open	*CTL	[0 or 1 / **1** / - /step] 0: Disable, 1: Enable
	Enables/disables initiating a call when the front door remains open.		
011	Jam Detection: Time Length	*CTL	[3 to 30 / **10** / 1 minute /step]
	Sets the time a jam must remain before it becomes an “unattended paper jam”. This setting is enabled only when SP5508-004 is set to "1".		
012	Jam Detection: Continuous Count	*CTL	[2 to 10 / **5** / 1 /step]
	Sets the number of consecutive paper jams required to initiate a call. This setting is enabled only when SP5508-004 is set to "1".		
013	Door Open: Time Length	*CTL	[3 to 30 / **10** / 1 /step]
	Sets the length of time the door remains open before the machine initiates a call. This setting is enabled only when SP5-508-004 is set to "1".		

5515	**[SC/Alarm Setting]**		
	With NRS (New Remote Service) in use, these SP codes can be set to issue an SC call when an SC error occurs. If this SP is switched off, the SC call is not issued when an SC error occurs.		
001	SC Call	*CTL	[0 or 1 / **1** / -] 0: Off 1: On
002	Service Parts Near End Call	*CTL	
003	Service Parts End Call	*CTL	
004	User Call	*CTL	

006	Communication Test Call	*CTL	[0 or 1 / **1** / -] 0: Off 1: On
007	Machine Information Notice	*CTL	
008	Alarm Notice	*CTL	
009	Non Genuine Tonner Alarm	*CTL	
010	Supply Automatic Ordering Call	*CTL	
011	Supply Management Report Call	*CTL	
012	Jam/Door Open Call	*CTL	

5516	**[Individual PM Part Alarm Call]**		
	With @Remote in use, these SP codes can be set to issue an PM alarm call when one of SP parts reaches its yield.		
001	Disable/Enable Setting (0: Not send, 1: Send)	*CTL	[0 or 1 / **1** / -] 0: Not send, 1: Send
004	Percent yield for triggering PM alert	*CTL	[1 to 255 / ***75*** / 1 %/step]

5745	**[Deemed Power Consumption]**		
	Displays the status of each mode.		
211	Controller Standby	*CTL	[0 to 9999 / **0** / 1 /step]
212	STR	*CTL	[0 to 9999 / **0** / 1 /step]
213	Main Power Off	*CTL	[0 to 9999 / **0** / 1 /step]
214	Scanning and Printing	*CTL	[0 to 9999 / **0** / 1 /step]
215	Printing	*CTL	[0 to 9999 / **0** / 1 /step]
216	Scanning	*CTL	[0 to 9999 / **0** / 1 /step]
217	Engine Standby	*CTL	[0 to 9999 / **0** / 1 /step]

218	Low Power Consumption	*CTL	[0 to 9999 / **0** / 1 /step]
219	Silent Consumption	*CTL	[0 to 9999 / **0** / 1 /step]
220	Fusing off standby	*CTL	[0 to 9999 / **0** / 1 /step]

5746	[BMLinkS]		
001	available	*CTL	[0 or 1 / **1** / 1/step]
002	Interval:mon	*CTL	[10 to 3600 / **60** / 1/step]
004	available:log	*CTL	[0 or 1 / **1** / 1/step]

5749	[Import/Export]		
001	Export	*CTL	[- / **-** / -] Target: [System] [Printer] [Fax] [Scanner] Option: [Unique] [Secret] Crypt config: [Encryption] [Execute]
101	Import	CTL	[- / **-** / -] Option: [Unique] Crypt config: [Encryption] Encryption key (if selected) [Execute]
251	Export Result Print (SP)	CTL	[- / **-** / -] [Execute]
252	Import Result Print (SP)	CTL	[- / **-** / -] [Execute]

5750	[Job Access Log]		
	-		
001	ChgLogMaxNum	*CTL	[0 or 1 / **0** / 1/step] 0: Default Num 1: Change Num

5801	[Memory Clear]		
001	All Clear	CTL	[- / - / -] [Execute]
	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.		
003	SCS	CTL	[- / - / -] [Execute]
	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.		
004	IMH Memory Clr	-	[- / - / -] [Execute]
	-		
005	MCS	CTL	Initializes the MCS settings. [- / - / -] [Execute]
008	Printer Application	CTL	[- / - / -] [Execute]
	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		

010	Web Service	CTL	[- / - / -] [Execute]
	Deletes the network file application management files and thumbnails, and initializes the job login ID.		
011	NCS	CTL	[- / - / -] [Execute]
	All setting of Network Setup (User Menu) (NCS: Network Control Service)		
014	DCS Memory Clr	CTL	[- / - / -] [Execute]
	Initializes the DCS (Delivery Control Service) settings.		
015	Clear UCS Setting	CTL	[- / - / -] [Execute]
	Initializes the UCS (User Information Control Service) settings.		
016	MIRS Memory Clr	CTL	[- / - / -] [Execute]
	Initializes the MIRS (Machine Information Report Service) settings.		
017	CCS	CTL	Initializes the CCS (Certification and Charge-control Service) settings. [- / - / -] [Execute]
018	SRM Memory Clr	CTL	Initializes the SRM (System Resource Manager) settings. [- / - / -] [Execute]
019	LCS Memory Clr	CTL	[- / - / -] [Execute]
	Initializes the LCS settings.		

021	ECS	CTL	Initializes the ECS settings. [- / **-** / -] [Execute]
025	websys		[- / **-** / -] [Execute]

5803	**[Input Check]**
	See "Input Check Table" (☛ p.440).

5804	**[Output Check]**
	See "Output Check Table" (☛ p.449).

5805	**[Anti-Condensation Heater]**		
001	0:OFF / 1:ON	*ENG	[0 or 1 / **0** / 1/step] 0:OFF 1:ON

5810	**[SC Reset]**		
	Resets a type A service call condition. **Note** • Turn the main switch off and on after resetting the SC code.		
001	Fusing SC Reset	ENG	[0 or 1 / **0** / 1/step]
002	Hard High Temp. Detection	ENG	

5811	**[MachineSerial]**		
	Machine Serial Number Display		
002	Display	*ENG	[0 to 255 / **0** / 1/step]
	Displays the machine serial number.		
004	BCU	ENG	[0 to 255 / **0** / 1/step]
	Inputs		

005	Novita	ENG	[0 to 255 / **0** / 1/step]
	Inputs		

5812	[Service Tel. No. Setting]		
001	Service	*CTL	-
	Sets the telephone number for a service representative. This number is printed on the Counter List, which can be printed with the user's "Counter" menu. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
002	Facsimile	*CTL	-
	Sets the fax or telephone number for a service representative. This number is printed on the Counter List. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
003	Supply	*CTL	-
	Use this to input the telephone number of your supplier for consumables. Enter the number and press #.		
004	Operation	*CTL	-
	Use this to input the telephone number of your sales agency. Enter the number and press #.		
101	Disp Inquiry	*CTL	[0 or 1 / **0** / 1/step] 0: Does not display 1: Displays
	Display or doesn't display the service phone number.		

5816	[Remote Service]		
001	I/F Setting	*CTL	[0 to 2 / **2** / 1 /step] 0: Remote service off 1: CSS remote service on 2: NRS remote service on
	Selects the remote service setting.		

002	CE Call	*CTL	[0 or 1 / **1** / 1 /step] 0: Start of the service 1: End of the service
	Performs the CE Call at the start or end of the service. **Note** • This SP is activated only when SP 5816-001 is set to "2".		
003	Function Flag	*CTL	[0 or 1 / **0** / 1 /step] 0: Disabled 1: Enabled
	Enables or disables the remote service function.		
004	Communication Test Call	CTL	[- / **-** / -] [Execute]
	This SP issues a test call from a GW machine to determine whether it can communicate successfully with the call center after it has been set up for NRS. Successful return will be in the range 0 to 99.		
005	Device Information Call	CTL	[- / **-** / -] [Execute]
	This SP issues a call to notify the NRS device information to the call center. Successful return will be in the range 0 to 99.		
007	SSL Disable	*CTL	[0 or 1 / **0** / 1 /step] 0: Yes. SSL not used. 1: No. SSL used.
	Controls if RCG (Remote Communication Gate) confirmation is done by SSL during an RCG send for the @Remote over a network interface.		
008	RCG Connect Timeout	*CTL	[1 to 90 / **30** / 1 second /step]
	Sets the length of time (seconds) for the time-out when the RCG (Remote Communication Gate) connects during a call via the @Remote network.		
009	RCG Write Timeout	*CTL	[1 to 100 / **60** / 1 second /step]
	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.		

011	Port 80 Enable	*CTL	[0 or 1 / **0** / 1 /step] 0: No. Access denied 1: Yes. Access granted.
	Controls if permission is given to get access to the SOAP method over Port 80 on the @Remote network.		
012	@Remote Communication Permission Setting	*CTL	[0 or 1 / **1** / 1 /step] 0: Not permitted 1:Permitted
	-		
013	RFU Timing	*CTL	[0 or 1 / **1** / 1 /step] 0: Any status of a target machine 1: Sleep or panel off mode only
	Selects the timing for the remote firmware updating.		
014	RCG Error Cause	CTL	[0 or 1 / **0** / 1 /step]
	0: Normal 1: Fails to reflect the client/server certificate settings by network failure to reboot. Transitions to 0 on restarting the machine.		
021	RCG – C Registed	*CTL	[0 or 1 / **0** / 1 /step] 0: Installation not completed 1: Installation completed
	This SP displays the RCG-N installation end flag.		
023	Connect Type (N/M)	*CTL	[0 or 1 / **0** / 1 /step] 0: Internet connection 1: Dial-up connection
	This SP displays and selects the RCG-N connection method.		
061	Cert Expire Timing **DFU**	*CTL	[0 to 0xffffffff / **0** / 1 /step]
	Proximity of the expiration of the certification.		

062	Use Proxy	*CTL	[0 or 1 / **0** / 1 /step] 0: Not use 1: Use
	This SP setting determines if the proxy server is used when the machine communicates with the service center.		
063	Proxy Host	*CTL	-
	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. **Note** • The address display is limited to 128 characters. Characters beyond the 128 character are ignored. • This address is customer information and is not printed in the SMC report.		
064	Proxy PortNumber	*CTL	[0 to 0xffff / **0** / 1 /step]
	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. **Note** • This port number is customer information and is not printed in the SMC report.		
065	Proxy User Name	*CTL	-
	This SP sets the HTTP proxy certification user name. **Note** • The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored. • This name is customer information and is not printed in the SMC report.		

066	Proxy Password	*CTL	-
	This SP sets the HTTP proxy certification password. **Note** • The length of the password is limited to 31 characters. Any character beyond the 31st character is ignored. • This name is customer information and is not printed in the SMC report.		

067	CERT:Up State		*CTL	[0 to 255 / **0** / 1 /step]
	Displays the status of the certification update.			
	0	The certification used by RCG-N 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 an certification error has been received, and the rescue certification is being recorded.		
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.		

068	CERT:Error	*CTL	[0 to 255 / **0** / 1 /step]
	Displays a number code that describes the reason for the request for update of the certification.		
	0	Normal. There is no request for certification update in progress.	
	1	Request for certification update in progress. The current certification has expired.	
	2	An SSL error notification has been issued. Issued after the certification has expired.	
	3	Notification of shift from a common authentication to an individual certification.	
	4	Notification of a common certification without ID2.	
	5	Notification that no certification was issued.	
	6	Notification that GW URL does not exist.	
069	CERT:Up ID	*CTL	-
	The ID of the request for certification.		
083	Firm Up Status	*CTL	[0 to 5 / **0** / 1 /step]
	Displays the status of the firmware update.		
085	Firm Up User Check	*CTL	-
	This SP setting determines if the operator can confirm the previous version of the firmware before the firmware update execution. If the option to confirm the previous version is selected, a notification is sent to the system manager and the firmware update is done with the firmware files from the URL.		
086	Firmware Size	*CTL	-
	Allows the service technician to confirm the size of the firmware data files during the firmware update execution.		
087	CERT: Macro Ver.	CTL	-
	Displays the macro version of the @Remote certification.		
088	CERT: PAC Ver.	CTL	-
	Displays the PAC version of the @Remote certification.		

089	CERT: ID2 Code	CTL	-
	Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_). Asteriskes (****) indicate that no @Remote certification exists.		
090	CERT: Subject	CTL	-
	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.		
091	CERT: Serial No	CTL	-
	Displays serial number for the NRS certification. Asterisks (****) indicate that no DESS exists.		
092	CERT: Issuer	CTL	-
	Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asteriskes (****)indicate that no DESS exists.		
093	CERT: Valid Start	CTL	-
	Displays the start time of the period for which the current @Remote certification is enabled.		
094	CERT: Valid End	CTL	-
	Displays the end time of the period for which the current @Remote certification is enabled.		

102	CERT: Strength	CTL	[1 or 2 / **1** / 1 /step] 1: 512 bit 2: 2048 bit
	Displays cryptic strength of the NRS certification.		
	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.		
200	Manual Polling	CTL	-
	Executes the manual polling.		
201	Regist Status	CTL	[0 to 4 / **0** / 1 /step]
	Displays a number that indicates the status of the @Remote service device. 0: Neither the registered device by the external nor embedded RCG device is set. 1: The embedded RCG device is being set. Only Box registration is completed. In this status, this unit cannot answer a polling request from the external RCG. 2. The embedded RCG device is set. In this status, the external RCG unit cannot answer a polling request. 3. The registered device by the external RCG is being set. In this status the embedded RCG device cannot be set. 4 The registered module by the external RCG has not started.		
202	Letter Number	*CTL	-
	Allows entry of the number of the request needed for the RCG-N device.		
203	Confirm Execute	CTL	-
	Executes the inquiry request to the @Remote GW URL.		

204	Confirm Result	CTL	[0 to 255 / **0** / 1 /step]
	Displays a number that indicates the result of the inquiry executed with SP5816 203. **0**: Succeeded 1: Inquiry number error 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Inquiry executing		
205	Confirm Place	CTL	-
	Displays the result of the notification sent to the device from the GW URL in answer to the inquiry request. Displayed only when the result is registered at the GW URL.		
206	Register Execute	CTL	-
	Executes "Embedded RCG Registration".		
207	Register Result	CTL	[0 to 255 / **0** / 1 /step]
	Displays a number that indicates the registration result. 0: Succeeded 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Registration executing		

208	Error Code	CTL	[-2147483647 to 2147483647 / 0 / -]
	Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.		
	Cause	**Code**	**Meaning**
	Illegal Modem Parameter	-11001	Chat parameter error
		-11002	Chat execution error
		-11003	Unexpected error
		-11004	
		-11005	
	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.
	Operation Error, Incorrect Setting	-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	ID2 mismatch between an individual certification and NVRAM
		-12010	Certification area is not initialized.

208	Error Caused by Response from GW URL	-2385	Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387	Not supported at the Service Center
		-2389	Database out of service
		-2390	Program out of service
		-2391	Two registrations for same device
		-2392	Parameter error
		-2393	Basil not managed
		-2394	Device not managed
		-2395	Box ID for Basil is illegal
		-2396	Device ID for Basil is illegal
		-2397	Incorrect ID2 format
		-2398	Incorrect request number format
209	Instal Clear	CTL	-
	Releases the machine from its embedded RCG setup		
250	CommLog Print	CTL	-
	Prints the communication log.		

5821	**[Remote Service Address]**		
002	RCG IP Address	*CTL	[00000000h to FFFFFFFFh / **00000000h** / 1 /step]
	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		
003	RCG Port	*CTL	[0 to 65535 / **443** / 1 /step]
	Sets the port number of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		

004	RCG URL Path	*CTL	[0 to 16 characters / **/RCG/services/** / - / step]
	Sets the URL path of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		

5824	**[NV-RAM Data Upload]**		
	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card. For details, see "NVRAM Data Upload/Download" in the "Main chapters: 5. System Maintenance".		
001	NV-RAM Data Upload	CTL	-

5825	**[NV-RAM Data Download]**		
	Downloads the UP and SP mode data from an SD card to the NVRAM. For details, see "NVRAM Data Upload/Download" in the "Main chapters: 5. System Maintenance".		
001	NV-RAM Download	CTL	[- / **-** / -] [Execute]

5828	**[Network Setting]**		
001	IPv4 Address (Ethernet/ IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 address for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
002	IPv4 Subnet Mask (Ethernet/IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 subnet mask for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
003	IPv4 Default Gateway (Ethernet/IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 default gateway used by the network for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
006	DHCP	*CTL	[0 to 1 / **1** / 1 /step] 0: Not used (manual setting) 1: Used
	This SP code allows you check and change the setting that determines whether the IP address is used with DHCP on an Ethernet or wireless (802.11) LAN network.		

021	Active IPv4 Address	CTL	This SP allows you to check the IPv4 address that was used when the machine started up with DHCP.
022	Active IPv4 Subnet Mask	CTL	This SP allows you to check the IPv4 subnet mask setting that was used when the machine started up with DHCP.
023	Active IPv4 Gateway Address	CTL	This SP allows you to check the IPv4 default gateway setting that was used when the machine started up with DHCP.
050	1284 Compatibility (Centro)	*CTL	Enables or disables 1284 Compatibility. [0 or 1 / **1** / 1 /step] 0: Disabled, 1: Enabled
052	ECP (Centro)	*CTL	[0 or 1 / **1** / 1 /step] 0: Disabled, 1: Enabled
	Enables or disables ECP Compatibility. **Note** • This SP is activated only when SP5-828-50 is set to "1".		
065	Job Spooling	*CTL	Switches the job spooling on and off. [0 to 1 / **0** / 1 /step] 0: No spooling 1: Spooling enabled
066	Job Spooling Clear: Start Time	*CTL	[0 to 1 / **1** / 1 /step] 1: OFF Resumes printing spooled job. 0: ON Clears spooled job.
	This SP determines whether the job interrupted at power off is resumed at the next power on. This SP operates only when SP5828-065 is set to "1".		

<table>
<tr><td rowspan="7">069</td><td colspan="2">Job Spooling (Protocol)</td><td>*CTL</td><td colspan="2">[0 to 1 / 1 / 1 /step]
0: No spooling
1: Spooling enabled</td></tr>
<tr><td colspan="5">This SP determines whether job spooling is enabled or disabled for each protocol. This is an 8-bit setting.</td></tr>
<tr><td>0</td><td>LPR</td><td colspan="2">4</td><td>BMLinks (Japan Only)</td></tr>
<tr><td>1</td><td>FTP (Not Used)</td><td colspan="2">5</td><td>DIPRINT</td></tr>
<tr><td>2</td><td>IPP</td><td colspan="2">6</td><td>Reserved (Not Used)</td></tr>
<tr><td>3</td><td>SMB</td><td colspan="2">7</td><td>Reserved (Not Used)</td></tr>
<tr><td rowspan="2">087</td><td colspan="2">Protocol Usingage</td><td>*CTL</td><td colspan="2">[0 or 1 / 0x00000000 / 1/step]</td></tr>
<tr><td colspan="5">Shows which protocols have been used with the network.
0: Off (Not used the network with the protocol.)
1: On (Used the network with the protocol once or more.)
bit0: IPsec, bit1: IPv6, bit2: IEEE 802. 1X, bit3:Wireless LAN,
bit4: Security mode level setting, bit5:Appletalk, bit6: DHCP,
bit7: DHCPv6, bit8: telnet, bit9: SSL, bit10: HTTPS,
bit11: BMLinkS printing, bit12: diprint printing, bit13: LPR printing,
bit14: ftp printing, bit15: rsh printing, bit16: SMB printing,
bit17: WSD-Printer, bit18: WSD-Scanner, bit19: Scan to SMB,
bit20: Scan to NCP, bit21: Reserve, bit22: Bluetooth,
bit23: IEEE 1284, bit24: USB printing, bit25: Dynamic DNS,
bit26: Netware printing, bit27: LLTD, bit28: IPP printing,
bit29: IPP printing (SSL), bit30: ssh, bit31: sftp</td></tr>
<tr><td>090</td><td colspan="2">TELNET (0: OFF 1: ON)</td><td>*CTL</td><td colspan="2">Enables or disables the Telnet protocol.
[0 or 1 / 1 / 1/step]
0: Disable, 1: Enable</td></tr>
<tr><td>091</td><td colspan="2">Web (0: OFF 1: ON)</td><td>*CTL</td><td colspan="2">Enables or disables the Web operation.
[0 or 1 / 1 / 1/step]
0: Disable, 1: Enable</td></tr>
</table>

145	Active IPv6 Link Local Address	CTL	This is the IPv6 local address link referenced on the Ethernet or wireless LAN (802.11b) in the format: "Link Local Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
147	Active IPv6 Stateless Address 1	CTL	These SPs are the IPv6 status addresses (1 to 5) referenced on the Ethernet or wireless LAN (802.11b) in the format: "Status Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
149	Active IPv6 Stateless Address 2	CTL	
151	Active IPv6 Stateless Address 3	CTL	
153	Active IPv6 Stateless Address 4	CTL	
155	Active IPv6 Stateless Address 5	CTL	
156	IPv6 Manual Address	*CTL	This SP is the IPv6 manually set address referenced on the Ethernet or wireless LAN (802.11b) in the format: "Manual Set Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
158	IPv6 Gateway Address	*CTL	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.
159		CTL	This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN (802.11b). The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
161	IPv6 Stateless Auto Setting	*CTL	Enables or disables the automatic setting for IPv6 stateless. [0 or 1 / **1** / 1 /step] 0: Disable, 1: Enable

236	Web Item visible	*CTL	[0 x 0000 to 0 x ffff / **0 x ffff** / - /step] 0: Not displayed 1: Displayed
	Displays or does not display the Web system items. bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)		
237	Web shopping link visible	*CTL	[0 to 1 / **1** / 1 /step] 0: Not display 1:Display
	Displays or does not display the link to Net RICOH on the top page and link page of the web system.		
238	Web supplies Link visible	*CTL	[0 to 1 / **1** / 1 /step] 0: Not display 1:Display
	Displays or does not display the link to Consumable Supplier on the top page and link page of the web system.		
239	Web Link1 Name	*CTL	-
	This SP confirms or changes the URL1 name on the link page of the web system. The maximum characters for the URL name are 31 characters.		
240	Web Link1 URL	*CTL	-
	This SP confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.		
241	Web Link1 visible	*CTL	[0 to 1 / **1** / - /step] 0: Not display 1:Display
	Displays or does not display the link to URL1 on the top page of the web system.		
242	Web Link2 Name	*CTL	-
	Same as "-239"		

243	Web Link2 URL	*CTL	-
	Same as "-240"		
244	Web Link2 visible	*CTL	-
	Same as "-241"		
247	DHCPv6 Address	CTL	[00000000000000000000000000000000h - FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFh / - / - / step]
	Gets DHCPv6 address.		
249	DHCPv6 DUID	CTL	[00000000000000000000000000000000h - FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFh / **00000000000000000000000000000000h (0000:0000:0000:0000:0000:0000:0000:0000 / 0)** / - /step]
	Sets DHCPv6 DUID.		
252		*CTL	[0 to 1 / **1** / -]

5832	**[HDD]** HDD Initialization

001	HDD Formatting (ALL)	CTL	Initializes the hard disk. Use this SP mode only if there is a hard disk error. [- / - / -] [Execute]
002	HDD Formatting (IMH)	CTL	
003	HDD Formatting (Thumbnail)	CTL	
004	HDD Formatting (Job Log)	CTL	
005	HDD Formatting (Printer Fonts)	CTL	
006	HDD Formatting (User Info1)	CTL	
007	HDD Formatting (User Info2)	CTL	
008	HDD Formatting (Scanner Mail)	CTL	
009	HDD Formatting (Data for a Design)	CTL	
010	HDD Formatting (Log)	CTL	
011	HDD Formatting (Ridoc I/F)	CTL	

5840	[IEEE 802.11]		
006	Channel MAX	*CTL	**Range:** DOM 1-14 NA/CHN/TW 1-11 EU 1-13 **Default:** DOM **14** NA/CHN/TW **11** EU **13**

007	Channel MIN	*CTL	**Range:** DOM 1-14 NA/CHN/TW 1-11 EU 1-13 **Default: 1**
008	Transmission Speed	*CTL	[0 x 00 to 0 x FF / **0 x FF to Auto** / -] **0 x FF to Auto** [Default] 0 x 11 – 55M Fix 0 x 10 – 48M Fix 0 x 0F – 36M Fix 0 x 0E – 18M Fix 0 x 0D – 12M Fix 0 x 0B – 9M Fix 0 x 0A – 6M Fix 0 x 07 – 11M Fix 0 x 05 – 5.5M Fix 0 x 08 – 1M Fix 0 x 13 – 0 x FE (reserved) 0 x 12 – 72M (reserved) 0 x 09 – 22M (reserved)
011	WEP Key Select		
013	RTS/CTS Thresh	*CTL	[0 to 3000 / **2432** / 1/step]
	Adjusts the RTS/CTS threshold for the IEEE802.11 card. This SP is displayed only when the IEEE802.11 card is installed.		
042	Fragment Thresh	*CTL	[256 to 2346 / **2346** / 1/step]
	Adjusts the fragment threshold for the IEEE802.11 card. This SP is displayed only when the IEEE802.11 card is installed.		

043	11g CTS to Self	*CTL	[0 or 1 / **1** / 1/step] 0: OFF, 1: ON
	Determines whether the CTS self function is turned on or off. This SP is displayed only when the IEEE802.11 card is installed.		
044	11g Slot Time	*CTL	[0 or 1 / **0** / 1/step] 0: 20 um, 1: 9 um
	Selects the slot time for IEEE802.11.		
045	WPA Debug Lvl	*CTL	[1 to 3 / **3** / 1/step] 1: Info 2: warning 3: error
	Selects the debug level for WPA authentication application. This SP is displayed only when the IEEE802.11 card is installed.		

5841	**[Supply Name Setting]**
	Specifies supply names. These appear on the screen when the user presses the Inquiry button in the user tools screen.

001	Toner Name Setting: Black	*CTL	[0 to 20 / **0** / 1byte/step]
002	Toner Name Setting: Cyan	*CTL	
003	Toner Name Setting: Yellow	*CTL	
004	Toner Name Setting: Magenta	*CTL	
007	OrgStamp	*CTL	
011	Staple Std1	*CTL	
012	Staple Std2	*CTL	
013	Staple Std3	*CTL	
014	Staple Std4	*CTL	
021	Staple Bind 1	*CTL	
022	Staple Blind2	*CTL	
023	Staple Blind 3	*CTL	

5844	**[USB]**		
005	Fixed USB Port	*CTL	[0 to 2 / **0** / 1 /step] 0: OFF 1: Level 1 2: Level 2
	This SP standardizes for common use the model name and serial number for USB PnP (Plug & Play). It determines whether the driver requires re-installation.		
006	PnP Model Name	*CTL	Default: **Laser Printer** (up to 20 characters allowed).
	This SP sets the model name to be used by the USB PnP when "Function Enable (Level 2) is set so the USB Serial No. can have a common name (SP5844-5).		

007	PnP Serial Number	*CTL	Default: **None** (up to 12 characters allowed for entry).
	This SP sets the serial number to be used by the USB PnP when "Function Enable (Level 2) set so the USB Serial No. can have a common name (SP5844-5). • Make sure that this entry is the same as the serial number in use. • At initialization the serial number generated from the model name is used, not the setting of this SP code. • At times other than initialization, the value set for this SP code is used.		
100	Notify Unsupport	*CTL	[0 to 1 / **1** / 1 /step] 0: Function enable 1: Function disable
	This SP determines whether an alert message appears on the control panel when a USB device (unsupported device) that cannot use an A-connector is connected. • An unsupported device is a device that cannot use the functions of the USB device. For example, a USB mouse cannot be used even if connected. • If the PictBridge option is not mounted, even if a digital camera is connected it cannot be used because it is an unsupported device.		

5845	**[Delivery Server Setting]**		
	Provides items for delivery server settings.		
022	Rapid Sending Control	*CTL	[0 or 1 / **1** / 1 /step] 0: Disable 1: Enable
	Enables or disables the prevention function for the continuous data sending error.		

5846	**[UCS Setting]**		
010	LDAP Search Timeout	*CTL	[1 to 255 / **60** / 1 /step]
	Sets the length of the timeout for the search of the LDAP server.		

041	Fill Addr Acl Info.	CTL	-
	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. 4. The address book and its initial data are created on the HDD automatically. 5. However, at this point the address book can be accessed by only the system administrator or key operator. 6. Enter the SP mode and do SP5846-041. After this SP executes successfully, any user can access the address book.		
043	Addr Book Media	*CTL	[0 to 30 / **0** / 1 /step] 0: Unconfirmed 1: SD Slot 1 2: SD Slot 2 4: USB Flash ROM 20: HDD 30: Nothing
	Displays the slot number where an address book data is in.		
047	Initialize Local Addr Book	CTL	[- / **-** / -] [Execute]
	Clears the local address book information, including the user code.		
049	Initialize LDAP Addr Book	CTL	[- / **-** / -] [Execute]
	Clears the LDAP address book information, except the user code.		

050	Initialize All Addr Book	CTL	[- / - / -] [Execute]
	Clears all directory information managed by UCS, including all user codes.		
051	Backup All Addr Book	CTL	[- / - / -] [Execute]
	Uploads all directory information to the SD card.		
052	Restore All Addr Book	CTL	[- / - / -] [Execute]
	Downloads all directory information from the SD card.		
053	Clear Backup Info	CTL	[- / - / -] [Execute]
	Deletes the address book data from the SD card in the service slot. Deletes only the files that were uploaded from this machine. This feature does not work if the card is write-protected. **Note** • After you do this SP, go out of the SP mode, and then turn the power off. • Do not remove the SD card until the Power LED stops flashing.		
060	Search option	*CTL	[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 0: Checks both upper/lower case characters 1: Japan Only 2: Japan Only 3: Japan Only 4 to 7: Not Used		

062	Complexity option 1	*CTL	[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. **Note** • This SP does not normally require adjustment. • This SP is enabled only after the system administrator has set up a group password policy to control access to the address book.		
063	Complexity Option 2 **DFU**	*CTL	[0 to 32 / **0** / 1 /step]
064	Complexity Option 3 **DFU**	*CTL	[0 to 32 / **0** / 1 /step]
065	Complexity Option 4 **DFU**	*CTL	[0 to 32 / **0** / 1 /step]
094	Encryption Stat	*CTL	[0 to 255 / **-** / 1 /step]
	Shows the status of the encryption function for the address book data.		

5848	**[Web Service]**		
	5848 2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router. 5848 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.		
004	Access Control: udirectory (Only Lower 4 bits)	*CTL	Switches access control on and off. [0000 or 0001 / **0000** / 1/step] 0000: No access control 0001: Access control
009	Access Ctrl: Job Ctrl (Lower 4 bits)	*CTL	
011	Access Ctrl: Devicemanagement (Lower 4bits)	*CTL	
022	Access Ctrl: uadministration (Lower 4bits)	*CTL	

210	Setting: LogType: Job1	*CTL	NIA
211	Setting: LogType: Job2	*CTL	
212	Setting: LogType: Access	*CTL	
213	Setting: Primary Srv	*CTL	
214	Setting: Secondary Srv	*CTL	
215	Setting: StartTime	*CTL	
216	Setting: IntervalTime	*CTL	
217	Setting: Timing	*CTL	

5849	[Installation Date]		
001	Display	*CTL	[- / - / -]
	The "Counter Clear Day" has been changed to "Installation Date" or "Inst. Date".		
002	Switch to Print	*CTL	[0 or 1 / **1** / 1 /step] 0: OFF (No Print) 1: ON (Print)
	Determines whether the installation date is printed on the printout for the total counter.		
003	Setup Count	*CTL	[0 or 99999999 / **0** / 1 /step]
	Displays the total counter at the setting day (SP5849-001).		

5853	[Stamp Data Download]		
001		CTL	[- / - / -] [Execute]
	Use this SP to download the fixed stamp data stored in the firmware of the ROM and copy it to the HDD. This SP can be executed as many times as required. This SP must be executed after replacing or formatting the hard disks. **Note** • This SP can be executed only with the hard disks installed.		

5856	**[Remote ROM Update]**		
	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.		
002	Local Port	*CTL	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5857	**[Save Debug Log]**		
001	On/Off (1:ON 0:OFF)	*CTL	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON
	Switches the debug log feature on and off. The debug log cannot be captured until this feature is switched on.		
002	Target (2: HDD 3: SD)	*CTL	[1 to 3 / **2** / 1 /step] 1:IC Card 2: HDD 3: SD Card
	Selects the storage device to save debug logs information when the conditions set with SP5-858 are satisfied.		
005	Save to HDD	*CTL	[-999999 to 9999999 / **0** / 1 /step]
	Saves the debug log of the input SC number in memory to the HDD. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.		
006	Save to SD Card	*CTL	[-999999 to 9999999 / **0** / 1/step]
	Saves the debug log of the input SC number in memory to the SD card.		

009	Copy HDD to SD Card (Latest 4 MB)	*CTL	[- / - / -] [Execute]
	Takes the most recent 4 MB of the log written to the hard disk and copies them to the SD Card. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.		
010	Copy HDD to SD Card (Latest 4 MB Any Key)	*CTL	[- / - / -] [Execute]
	Takes the log of the specified key from the log on the hard disk and copies it to the SD Card. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4 MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card. This SP does not execute if there is no log on the HDD with no key specified.		
011	Erase HDD Debug Data	*CTL	[- / - / -] [Execute]
	Erases all debug logs on the HDD		
012	Erase SD Card Debug Data	*CTL	[- / - / -] [Execute]
	Erases all debug logs on the SD Card. If the card contains only debugging files generated by an event specified by SP5858, the files are erased when SP5857 010 or 011 is executed. To enable this SP, the machine must be cycled off and on.		
013	Free Space on SD Card	*CTL	[- / - / -] [Execute]
	Displays the amount of space available on the SD card.		
014	Copy SD to SD (Latest 4 MB)	*CTL	[- / - / -] [Execute]
	Copies the last 4MB of the log (written directly to the card from shared memory) onto an SD card.		

015	Copy SD to SD (Latest 4 MB Any Key)	*CTL	[- / - / -] [Execute]
	This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number.		
016	Make HDD Debug	*CTL	[- / - / -] [Execute]
	This SP creates a 32 MB file to store a log on the HDD.		
017	Make SD Debug	*CTL	[- / - / -] [Execute]
	This SP creates a 4 MB file to store a log on an SD card.		

5

5858	**[Debug Save When]**		
	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.		
001	Engine SC Error (0: OFF, 1: ON)	*CTL	[0 or 1 / **0** / 1/ step]
	Turns on/off the debug save for SC codes generated by copier engine errors.		
002	Controller SC Error (0: OFF, 1: ON)	*CTL	[0 or 1 / **0** / 1/ step]
	Turns on/off the debug save for SC codes generated by GW controller errors.		
003	Any SC Error	*CTL	[0 to 65535 / **0** / 1 /step]
004	Jam (0: OFF, 1: ON)	*CTL	[0 or 1 / **0** / 1/ step]
	Turns on/off the debug save for jam errors.		

5859	**[Debug Save Key No.]**
	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller board.

001	Key 1	*CTL	[–9999999 to 9999999 / **0** / 1 /step]
002	Key 2	*CTL	
003	Key 3	*CTL	
004	Key 4	*CTL	
005	Key 5	*CTL	
006	Key 6	*CTL	
007	Key 7	*CTL	
008	Key 8	*CTL	
009	Key 9	*CTL	
010	Key 10	*CTL	

5860	**[SMTP/POP3/IMAP4]**		
021	MDN Response RFC2298 Compliance	*CTL	[0 to 1 / **1** / 1 /step] 0: No 1: Yes
	Determines whether RFC2.5298 compliance is switched on for MDN reply mail.		
025	SMTP Auth. Direct Setting	*CTL	[0 to 255 / **0** / - /step]
	Selects the authentication method for SMPT. **Bit switch:** • Bit 0: LOGIN • Bit 1: PLAIN • Bit 2: CRAM MD5 • Bit 3: DIGEST MD5 • Bit 4 to 7: Not used **Note** • This SP is activated only when SMTP authorization is enabled by UP mode.		

026	S/MIME: MIME Header Setting	*CTL	[0 to 2 / **0** / 1 /step] 0: Microsoft Outlook Express standard 1: Internet Draft standard 2: RFC standard
	Selects the MIME header type of an E-mail sent by S/MIME.		

5869	**[RAM Disk Setting]**		
001	Mail Function	*CTL	[0 or 1 / **0** / 1 /step]
	Writes to flash ROM the common proof for validating the device for @Remote specifications.		

5870	**[Common Key Info Writing]**		
001	Writing	CTL	-
	Writes to flash ROM the common proof for validating the device for @Remote specifications.		
003	Initialize	CTL	-
	Initializes the data area of the common proof for validating.		

5873	**[SD Card Appli Move]**		
001	Move Exec	CTL	-
	This SP copies the application programs from the original SD card in SD card slot 2 to an SD card in SD card slot 1.		
002	Undo Exec	CTL	-
	This SP copies back the application programs from an SD card in SD Card Slot 2 to the original SD card in SD card slot 1. Use this menu when you have mistakenly copied some programs by using "Move Exec" (SP5873-1).		

5875	**[SC Auto Reboot]**

001	Reboot Setting	*CTL	[0 or 1/ **0** / 1 /step] 0: The machine reboots automatically when the machine issues an SC error and logs the SC error code. If the same SC occurs again, the machine does not reboot. 1: The machine does not reboot when an SC error occurs. The reboot is not executed for Type A or C SC codes.
	Enables or disables the automatic reboot function when an SC error occurs.		
002	Reboot Type	*CTL	[0 or 1 / **0** / 1 /step] 0: Manual reboot 1: Automatic reboot
	Selects the reboot method for SC.		

5878	**[Option Setup]**		
002	Data Overwrite Security	CTL	[- / **-** / -] [Execute]
	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.		

5881	**[Fixed Phrase Block Erasing]**		
001	Fixed Phase Block Erasing	CTL	[- / **-** / -] [Execute]
	Deletes the fixed phrase.		

5883	**[Line Speed Selection]**		
	Selects the line speed for middle thick paper.		
001	Middle Thick	*ENG	[0 or 1 / **0** / 1 /step] 0: MID CARD: Half Speed (115 mm/sec) 1: MID CARD: Normal Speed (C2.5c: 154, C2.5d: 205 mm/sec)

5887	[SD Get Counter]		
	This SP determines whether the ROM can be updated.		
	-	CTL	[- / - / -] [Execute]
001	This SP sends a text file to an SD card inserted in SD card Slot 2 (lower slot). The operation stores. The file is stored in a folder created in the root directory of the SD card called SD_COUNTER. The file is saved as a text file (*.txt) prefixed with the number of the machine. 1. Insert the SD card in SD card Slot 2 (lower slot). 2. Select SP5887 then touch [EXECUTE]. Touch [Execute] in the message when you are prompted.		

5888	[Personal Information Protect]		
001	Personal Information Protect	*CTL	[0 or 1 / **0** / 1 /step] 0: No authentication, No protection for logs 1: No authentication, Protected logs (only an administrator can see the logs)
	Selects the protection level for logs.		

5893	[SDK Application Counter]		
	Displays the counter name of each SDK application.		
001	SDK-1	CTL	-
002	SDK-2	CTL	
003	SDK-3	CTL	
004	SDK-4	CTL	
005	SDK-5	CTL	
006	SDK-6	CTL	

5894	[External Counter Setting]
	Test Name1_1

001	Switch Charge Mode	*ENG	[0 to 2 / **0** / 1/step]

5907	[Plug & Play Maker/Model Name]		
001	-	*CTL	-
	Selects the brand name and the production name for Windows Plug & Play. This information is stored in the NVRAM. If the NVRAM is defective, these names should be registered again. After selecting, press the "Original Type" key and "#" key at the same time. When the setting is completed, the beeper sounds five times.		

5913	[Switchover Permission Time]		
002	Print Application Timer	*CTL	[3 to 30 / **3** / 1 second /step]
	Sets the amount of time to elapse while the machine is in standby mode (and the operation panel keys have not been used) before another application can gain control of the display.		

5919	[HDD Encryption]		
001	Display Operation State	*CTL	[0 or 1 / **0** / 1 /step] 0: Not Activated 1: Activated
	Shows the status of the encryption function for the HDD.		

5930	[MeterClick Ch.]		
001	MeterClick Ch.	*ENG	[0 or 1 / **0** / 1 /step] 0:OFF 1:ON
010	PCU	*ENG	[0 or 1 / **1** / 1 /step] 0:OFF 1:ON
014	Mid Trans Unit	*ENG	[0 or 1 / **1** / 1 /step] 0:OFF 1:ON
016	Fusing Unit	*ENG	[0 or 1 / **0** / 1 /step] 0:OFF 1:ON

5967	[Copy Server : Set Function]		
001	(0: ON, 1: OFF)	*CTL	[0 or 1 / **1** / 1 /step]
	Enables and disables the document server. This is a security measure that prevents image data from being left in the temporary area of the HDD. After changing this setting, you must switch the main switch off and on to enable the new setting.		

5974	[Cherry Server]		
	Specifies which version of ScanRouter, "Lite" or "Full", is installed.		
001	(0:Light 1:Full)	*CTL	[0 or 1 / **0** / –]

5990	[SP print mode]		
	Prints out the SMC sheets.		
001	All (Data List)	CTL	
002	SP (Mode Data List)	CTL	
003	User Program	CTL	
004	Logging Data	CTL	
005	Diagnostic Report	CTL	
006	Non-Default	CTL	
007	NIB Summary	CTL	-
008	Capture Log	CTL	
021	Copier User Program	CTL	
022	Scanner SP	CTL	
023	Scanner User Program	CTL	
024	SDK/J Summary	CTL	
025	SDK/J Application Info	CTL	

5992	[SP Text mode]
	Exports the SMC sheet data to the SD Card.

001	All (Data List)	CTL	Press "Execute" key to start exporting the SMC data in the SP mode display.
002	SP (Mode Data List)	CTL	
003	User Program	CTL	
004	Logging Data	CTL	
005	Diagnostic Report	CTL	
006	Non-Default	CTL	
007	NIB Summary	CTL	
008	Capture Log	CTL	
021	Copier User Program	CTL	
022	Scanner SP	CTL	
023	Scanner User Program	CTL	
024	SDK/J Summary	CTL	
025	SDK/J Application Info	CTL	
026	Printer SP mode	CTL	

5998	**[Fusing Cont mode]** Fusing Control Mode		
	Turns the silent fusing warm-up mode on or off.		
001	fast/silent	*ENG	[0 or 1 / **1** / 1 /step] 0: Silent (less noise) 1: Fast (less time)

Engine SP Tables-5

SP6-XXX (Peripherals)

6128	[Punch Position: Sub Scan]		
	Adjusts the punching position in the sub scan direction.		
001	Domestic 2Hole (Europe 2Hole)	*ENG	[-7.5 to 7.5 / **0** / 0.5 mm/step]
002	North America 3Hole		
003	Europe 4Hole		
004	North Europe 4Hole		
005	North America 2Hole		

6129	[Punch Position: Main Scan]		
	Adjusts the punching position in the main scan direction.		
001	Domestic 2Hole (Europe 2Hole)	*ENG	[-2.0 to 2.0 / **0** / 0.4 mm/step]
002	North America 3Hole		
003	Europe 4Hole		
004	North Europe 4Hole		
005	North America 2Hole		

6130	[Skew Correction: Buckle Adj.]
	Adjusts the paper buckle for each paper size.

001	A3T	*ENG	[-5.0 to 5.0 / **0** / 0.2 mm/step]
002	B4T		
003	A4T		
004	A4Y		
005	B5T		
006	B5Y		
007	DLT-T		
008	LG-T		
009	LT-T		
010	LT-Y		
011	12*18		
012	Other		

6131	**[Skew Correction Control]**
	Selects the skew correction control for each paper size. These are only activated for D636/D637.

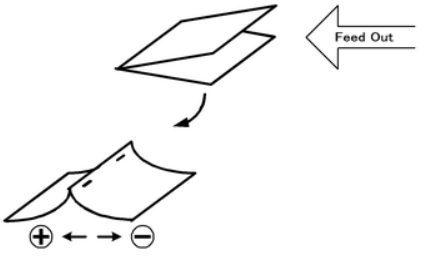
001	A3T	*ENG	[0 or 1 / **0** / 1/step] 0: No (No skew correction) 1: Roller Stop Skew Correction
002	B4T		
003	A4T		
004	A4Y		
005	B5T		
006	B5Y		
007	DLT-T		
008	LG-T		
009	LT-T		
010	LT-Y		
011	12*18		
012	Other		

6132	**[Jogger Fence Fine Adj]**
	This SP adjusts the distance between the jogger fences and the sides of the stack on the finisher stapling tray in the (Booklet) Finisher D636/D637. The adjustment is done perpendicular to the direction of paper feed.

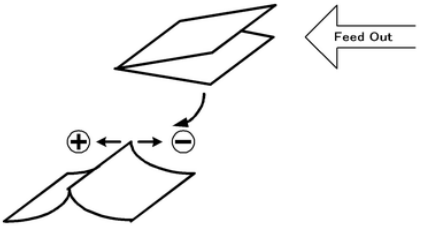
001	A3T	*ENG	[-1.5 to 1.5 / **0** / 0.5 mm/step] + Value: Increases distance between jogger fences and the sides of the stack. - Value: Decreases the distance between the jogger fences and the sides of the stack.
002	B4T		
003	A4T		
004	A4Y		
005	B5T		
006	B5Y		
007	DLT-T		
008	LG-T		
009	LT-T		
010	LT-Y		
011	12*18		
012	Other		

6133	**[Staple Position Adjustment]**		
	Adjusts the staple position for each finisher (D636/D637). + Value: Moves the staple position to the rear side. - Value: Moves the staple position to the front side.		
001	Finisher1	*ENG	[-3.5 to 3.5 / **0** / 0.5/step]

6134	**[Saddle Stitch Position Adjust]**
	Use this SP to adjust the stapling position of the booklet stapler when paper is stapled and folded in the Booklet Finisher D637.

001	A3T	*ENG	[-3.0 to 3.0 / **0** / 0.2 mm/step] + Value: Shifts staple position toward the crease. - Value: Shifts staple position away from the crease. 
002	B4T		
003	A4T		
004	B5T		
005	DLT-T		
006	LG-T		
007	LT-T		
008	12*18		
009	Other		

5

6135	**[Folder Position Adj.]**		
	This SP corrects the folding position when paper is stapled and folded in the Booklet Finisher D637.		
001	A3T	*ENG	[-3.0 to 3.0 / **0** / 0.2 mm/step] + Value: Shifts staple position toward the crease. - Value: Shifts staple position away from the crease. 
002	B4T		
003	A4T		
004	B5T		
005	DLT-T		
006	LG-T		
007	LT-T		
008	12*18		
009	Other		

6136	**[Folding Number]**		
001	-	*ENG	[1 to 30 / **2** / 1 time/step]
	Sets the number of times that folding is done in the Booklet Finisher D637.		

6137	**[Fin. Free Run]**		
	Sets the finisher free run on/off.		
001	Free Run1	ENG	[0 or 1 / **0** / 1 /step]
002	Free Run2	ENG	[0 or 1 / **0** / 1 /step]
003	Free Run3	ENG	[0 or 1 / **0** / 1 /step]
004	Free Run4	ENG	[0 or 1 / **0** / 1 /step]

6140	**[FIN (EUP) INPUT Check]** Finisher (D636/D637) Input Check
	Displays the signals received from sensors and switches of the (booklet) finisher. (☛ p. 440 "Input and Output Check")

6142	**[FIN (JAK) INPUT Check]** Mail Box (M413) Input Check
	Displays the signals received from sensors and switches of the Mail Box. (☛ p.440 "Input and Output Check")

6145	**[FIN (EUP) OUTPUT Check]** Finisher (D636/D637) Output Check
	Displays the signals received from sensors and switches of the (booklet) finisher. (☛ p. 440 "Input and Output Check")

6147	**[FIN (JAK) OUTPUT Check]** Mail Box (M413) Input Check
	Displays the signals received from sensors and switches of the Mail Box. (☛ p.440 "Input and Output Check")

6149	**[Max. Pre-Stack Sheet]**		
	Number of Pre-Stack Sheets		
001	-	*ENG	[0 to 3 / **3** / 1 sheet/step]
	This SP sets the number of sheets sent to the pre-stack tray. **Note** • You may need to adjust this setting or switch it off when feeding thick or slick paper.		

6150	**[INPUT Check]**
	Displays the signals received from sensors and switches of the bridge unit (D634) (☛ p. 440 "Input and Output Check").

6151	**[OUTPUT Check]**
	Displays the signals received from sensors and switches of the bridge unit (D634) (☛ p. 440 "Input and Output Check").

6157	**[OUTPUT Check]**		
001	4 bin: Junction Solenoid	ENG	[0 or 1 / **0** / 1/step] On/Off
	Displays the signals received from sensors and switches of the 4 bin tray (M413) (☛ p. 440 "Input and Output Check").		

6160	**[INPUT Check]**
	Displays the signals received from sensors and switches of the two-tray paper feed unit ((D580), LCT 2000 (D581) and LCT 1200 (D631) (☛ p.440 "Input and Output Check").

6161	**[OUTPUT Check]**
	Displays the signals received from sensors and switches of the two-tray paper feed unit (D580), LCT 2000 (D581) and LCT 1200 (D631) (☛ p.440 "Input and Output Check").

6800	**Sheet Conversion (Thick Paper)**		
001	Sheet Conversion (Thick Paper)	CTL	[1 to 3 / **3** / 1 sheet/step] 1: 1 Sheet 2: 2 Sheets 3: 3 Sheets
	Permits punching, including tab sheets. **Note:** Do not change this setting.		

6810	

001		CTL	[1 to 3 / **3** / 1/step]

6830	**Extra Staples**		
	More than the standard number of sheets can be stapled. This SP sets the additional number of sheets (This Setting + Standard Number = maximum number of sheets). • If the number of the maximum for staples is increased, and the mechanical warranty of the unit can be guaranteed, then the setting can take effect without changing the controller software. • However, assurance that mechanical performance can be guaranteed is required before changing the setting to increase the staple load for more than the maximum in the feed/exit specifications.		
001	Staple positions other than booklet stapling	*CTL	[0 to 50 / **0** / 1/step]
002	2 Booklet stapling	*CTL	[0 to 50 / **0** / 1/step]

6890	**Shading Control**		
001	ON/OFF	CTL	[0 or 1 / **0** / 1/step]
	Enables or disables the shading adjustment for DF mode.		

Engine SP Tables-6

SP7-XXX (Data Log)

7401	[Total SC]		
	Displays the number of SC codes detected.		
001	SC Counter	*CTL	[0 to 65535 / - / 1/step]
002	Total SC Counter	*CTL	[0 to 65535 / - / 1/step]

7403	[SC History]		
	Logs the SC codes detected. The 10 most recently detected SC Codes are not displayed on the screen, but can be seen on the SMC (logging) outputs.		
001	Latest	*CTL	-
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7502	[Total Paper Jam]		
	Displays the total number of jams detected.		
001	Jam Counter	* CTL	[0 to 65535 / - / 1/step]
002	Total Jam Counter	* CTL	[0 to 65535 / - / 1/step]

7503	[Total Original Jam]		
	Displays the total number of original jams.		
001	Original Jam counter	*CTL	[0 to 9999 / - / 1 original/step]

7504	[Paper Jam Loc] ON: On check, OFF: Off Check		
	Displays the number of jams according to the location where jams were detected. **NOTE:** The LCT is counted as the 3rd feed station.		
001	At Power On	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
003	Tray 1: On	*CTL	
004	Tray 2: On	*CTL	
005	Tray 3: On	*CTL	
006	Tray 4: On	*CTL	
007	LCT : On	*CTL	
008	Registration Sn: On (Bypath)	*CTL	
009	Registration Sn: On (Duplex)	*CTL	
011	Vertical Trans. 1: On	*CTL	
012	Vertical Trans. 2: On	*CTL	

013	Vertical Trans. 3: On	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
014	Vertical Trans. 4: On	*CTL	
017	Registration Sn: On (Tray)	*CTL	
018	Fusing Entrance: On	*CTL	
019	Fusing Exit: On	*CTL	
020	Paper Exit: On	*CTL	
021	Bridge Tray Exit: On	*CTL	
022	Bridge Relay: On	*CTL	
024	Junction Gate Sensor : On	*CTL	
025	Duplex Exit: On	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
026	Duplex Entrance: On (In)	*CTL	
027	Duplex Entrance: On (Out)	*CTL	
051	Vertical Trans. 1: Off	*CTL	
052	Vertical Trans. 2: Off	*CTL	
053	Vertical Trans. 3: Off	*CTL	
054	Vertical Trans. 4: Off	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
057	Registration Sensor: Off	*CTL	
058	LCT Feed Sensor : Off	*CTL	
060	Paper Exit Off	*CTL	
061	Bridge Exit: Off	*CTL	
062	Bridge Relay: Off	*CTL	

064	Junction Gate Sensor : Off	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
065	Duplex Exit: Off	*CTL	
066	Duplex Entrance: Off (In)	*CTL	
067	Duplex entrance : Off (Out)	*CTL	
100	Finisher Entrance: KIN	*CTL	
101	Finisher Shift Tray Exit: KIN	*CTL	
102	Finisher Staple: KIN	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
103	Finisher Exit: KIN	*CTL	
105	Finisher Tray Lift Motor: KIN	*CTL	
106	Finisher Jogger Motor: KIN	*CTL	
107	Finisher Shift Motor: KIN	*CTL	
108	Finisher Staple Motor: KIN	*CTL	
109	Finisher Exit Motor: KIN	*CTL	

191	Finisher Entrance: EUP	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
192	Finisher Proof Exit: EUP	*CTL	
193	Finisher Shift Tray Exit: EUP	*CTL	
194	Finisher Stapler Exit: EUP	*CTL	
195	Finisher Exit: EUP	*CTL	
198	Finisher Folder: EUP	*CTL	
199	Finisher Tray Motor: EUP	*CTL	
200	Finisher Jogger Motor: EUP	*CTL	
201	Finisher Shift Motor: EUP	*CTL	
202	Finisher Staple Moving Motor: EUP	*CTL	
203	Finisher Staple Motor: EUP	*CTL	
204	Finisher Folder Motor: EUP	*CTL	
206	Finisher Punch Motor: EUP	*CTL	

7505	[Original Jam Det]		
	Displays the total number of original jams by location.		
001	At Power On	*CTL	-
003	Separation Sensor: On	*CTL	-
004	Skew Correction Sn: On	*CTL	
005	Scanning Entrance Sn: On	*CTL	
006	Registration Sensor: On	*CTL	
007	Original Exit Sensor: On	*CTL	
008	Reverse Sensor: On	*CTL	

053	Separation Sensor: Off	*CTL	-
054	Skew Correction Sn: Off	*CTL	
055	Scanning Entrance Sn: Off	*CTL	
056	Registration Sensor: Off	*CTL	
057	Original Exit Sensor: Off	*CTL	
058	Reverse Sensor: Off	*CTL	

7506	[Jam Count by Paper Size]		
	Displays the number of jams according to the paper size.		
005	A4 LEF	*CTL	[0 to 9999 / - / 1 sheet/step]
006	A5 LEF	*CTL	
014	B5 LEF	*CTL	
038	LT LEF	*CTL	
044	HLT LEF	*CTL	
132	A3 SEF	*CTL	[0 to 9999 / - / 1 sheet/step]
133	A4 SEF	*CTL	
134	A5 SEF	*CTL	
141	B4 SEF	*CTL	
142	B5 SEF	*CTL	
160	DLT SEF	*CTL	
164	LG SEF	*CTL	
166	LT SEF	*CTL	
172	HLT SEF	*CTL	
255	Others	*CTL	[0 to 9999 / - / 1 sheet/step]

7507	[Plotter Jam History]
	Displays the 10 most recently detected paper jams.

001	Latest	*CTL	-
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7508	[Original Jam History]		
	Displays the 10 most recently detected original jams.		
001	Latest	*CTL	-
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7624	[Part Replacement Operation ON/OFF]
	Selects the PM maintenance for each part.

001	Drum unit: Bk	*CTL	[0 or 1 / **1** / -] 0: Not PM maintenance 1: PM maintenance
002	Drum unit: M	*CTL	
003	Drum unit: C	*CTL	
004	Drum unit: Y	*CTL	
005	Development unit: Bk	*CTL	
006	Development unit: M	*CTL	
007	Development unit: C	*CTL	
008	Development unit: Y	*CTL	
009	Developer: Bk	*CTL	
010	Developer:M	*CTL	
011	Developer:C	*CTL	
012	Developer:Y	*CTL	
013	Image Transfer Belt	*CTL	[0 or 1 / **1** / -] 0: Not PM maintenance 1: PM maintenance
014	Image Transfer Cleaning Unit	*CTL	
015	Fusing Unit	*CTL	
016	Paper Transfer Roller Unit	*CTL	
017	Waste Toner bottle	*CTL	
018	Fusing Roller	*CTL	
019	Pressure Roller	*CTL	

7801	**[ROM No]**
	Displays all versions and ROM numbers in the machine.

002	Engine	ENG	[- / - / -]
007	Finisher	ENG	
009	PTU	ENG	
011	MailBox	ENG	
019	PTU2	ENG	
110	LCT	ENG	
7801	**[Firmware Version]**		
	Displays all versions and ROM numbers in the machine.		
102	Engine	ENG	[- / - / -]
107	Finisher	ENG	
111	MailBox	ENG	
255	ROM No./ Firmware Version	CTL	Lists ROM No. and Firmware versions on the display. [- / - / -]

7803	**[PM Counter Display]** (Page, Unit, [Color])		
001 to 020	Displays the number of sheets printed for each current maintenance unit. PM counters click up based on the number of A4 (LT) LEF size sheets printed. Therefore, the A3 (DLT) Double Count is activated. The Double Count cannot be deactivated. When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter - Previous (SP7-906-1 to 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** • The LCT is counted as the 3rd feed station.		
001	PM Counter Display	*CTL	[0 to 9999999 / - / 1 /step]

002	Page: PCU: Bk	ENG	[0 to 9999999 / - / 1 page/step]
003	Page: PCU: M	ENG	
004	Page: PCU: C	ENG	
005	Page: PCU: Y	ENG	
006	Page: Development Unit: Bk	ENG	
007	Page: Development Unit: M	ENG	
008	Page: Development Unit: C	ENG	
009	Page: Development Unit: Y	ENG	
010	Page: Developer: Bk	ENG	[0 to 9999999 / - / 1 page/step]
011	Page: Developer: M	ENG	
012	Page: Developer: C	ENG	
013	Page: Developer: Y	ENG	
014	Page: Image Transfer	ENG	
015	Page: Cleaning Unit	ENG	
016	Page: Fusing Unit	ENG	
017	Page: Paper Transfer Unit	ENG	
018	Page: Toner Collection Bottle	ENG	
019	Page: Fusing Belt Unit	ENG	
020	Page: Pressure Roller	ENG	
021 to 024	Displays the number of pages of the pump unit for each current maintenance unit. When a unit is replaced, and SP7804-xxx is executed, the current PM counter value is moved to the PM Counter - Previous (SP7-906-020 to 112) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-020 to 112.		

021	Page: Toner Supply Unit: Bk	ENG	[0 to 9999999 / - / 1 page/step]
022	Page: Toner Supply Unit: M	ENG	
023	Page: Toner Supply Unit: C	ENG	
024	Page: Toner Supply Unit: Y	ENG	
031 to 048	Displays the number of revolutions of motors or clutches for each current maintenance unit. When a unit is replaced, and SP7804-xxx is executed, the current PM counter value is moved to the PM Counter - Previous (SP7-906-11 to 20) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-11 to 20.		
031	Rotation: PCU: Bk	ENG	[0 to 999999999 / - / 1 mm/step]
032	Rotation: PCU: M	ENG	
033	Rotation: PCU: C	ENG	
034	Rotation: PCU: Y	ENG	
035	Rotation: Development Unit: Bk	ENG	
036	Rotation: Development Unit: M	ENG	
037	Rotation: Development Unit: C	ENG	[0 to 999999999 / - / 1 mm/step]
038	Rotation: Development Unit: Y	ENG	
039	Rotation: Developer: Bk	ENG	
040	Rotation: Developer: M	ENG	
041	Rotation: Developer: C	ENG	
042	Rotation: Developer: Y	ENG	

043	Rotation: Image Transfer	ENG	[0 to 999999999 / - / 1 mm/step]
044	Rotation: Cleaning Unit	ENG	
045	Rotation: Fusing Unit	ENG	
046	Rotation: Paper Transfer Unit	ENG	
047	Measurement: Toner Collection bottle	ENG	
048	Rotation: Fusing Belt Unit	ENG	
049	Rotation: Pressure Roller	ENG	
050 to 053	Displays the running time of the pump unit for each current maintenance unit. When a unit is replaced, and SP7804-xxx is executed, the current PM counter value is moved to the PM Counter - Previous (SP7-906-020 to 112) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-020 to 112.		
050	Run Time: Toner Supply Unit: Bk	ENG	[0 to 999999999 / - / 1 msec/step]
051	Run Time: Toner Supply Unit: M	ENG	
052	Run Time: Toner Supply Unit: C	ENG	
053	Run Time: Toner Supply Unit: Y	ENG	
061 to 079	Displays the value given by the following formula: (Current revolution / Target revolution) × 100. This shows how much of the unit's expected lifetime has been used up. The Rotation (%) counter is based on rotations, not prints. If the number of rotations reaches the limit, the machine enters the end condition for that unit. If the print count lifetime is reached first, the machine also enters the end condition, even though the R (%) counter is still less than 100%.		

061	Rotation (%): PCU: Bk	ENG	[0 to 255 / - / 1 %/step] (☛ 079)
062	Rotation (%): PCU: M	ENG	
063	Rotation (%): PCU:C	ENG	
064	Rotation (%): PCU:Y	ENG	
065	Rotation (%): Development Unit: Bk	ENG	
066	Rotation (%): Development Unit: M	ENG	
067	Rotation (%): Development Unit: C	ENG	
068	Rotation (%): Development Unit: Y	ENG	
069	Rotation (%): Developer: Bk	ENG	
070	Rotation (%): Developer: M	ENG	
071	Rotation (%): Developer: C	ENG	
072	Rotation (%): Developer: Y	ENG	
073	Rotation (%): Image Transfer Belt	ENG	[0 to 255 / - / 1 %/step]
074	Rotation (%): Cleaning Unit	ENG	
075	Rotation (%): Fusing Unit	ENG	
076	Rotation (%): Paper Transfer Unit	ENG	
077	Measurement (%): Toner Collection bottle	ENG	
078	Rotation (%): Fusing Belt Unit	ENG	
079	Rotation (%): Pressure Roller	ENG	

080 to 083	Displays the value given by the following formula: (Current running time / Target running time) × 100. This shows how much of the unit's expected lifetime has been used up. The Run Time (%) counter is based on the running time, not printouts nor revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Run Time (%) counter is still less than 100%.		
080	Run Time(%):Toner Supply Unit: Bk	ENG	[0 to 255 / - / 1 %/step]
081	Run Time(%):Toner Supply Unit: M	ENG	
082	Run Time(%):Toner Supply Unit: C	ENG	
083	Run Time(%):Toner Supply Unit: Y	ENG	
091 to 108	Displays the value given by the following formula: (Current printouts / Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page (%) counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page (%) counter is still less than 100%.		

091	Page (%): PCU: Bk	ENG	[0 to 255 / - / 1 %/step]
092	Page (%): PCU: M	ENG	
093	Page (%): PCU: C	ENG	
094	Page (%): PCU: Y	ENG	
095	Page (%): Development Unit: Bk	ENG	
096	Page (%): Development Unit:M	ENG	
097	Page (%): Development Unit:C	ENG	
098	Page (%): Development Unit:Y	ENG	
099	Page (%): Developer: Bk	ENG	[0 to 255 / - / 1 %/step] (☛ 091)
100	Page (%): Developer: M	ENG	
101	Page (%): Developer: C	ENG	
102	Page (%): Developer: Y	ENG	
103	Page (%): Image Transfer	ENG	
104	Page (%): Cleaning Unit	ENG	
105	Page (%): Fusing Unit	ENG	
106	Page (%): Paper Transfer Unit	ENG	
107	Page (%): Fusing Belt Unit	ENG	
108	Page (%): Pressure Roller	ENG	
109 to 112	Displays the value given by the following formula: (Current printouts / Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page (%) counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page (%) counter is still less than 100%.		

109	Page (%):Toner Supply Unit: Bk	ENG	[0 to 255 / **-** / 1 %/step]
110	Page (%):Toner Supply Unit: M	ENG	
111	Page (%):Toner Supply Unit: C	ENG	
112	Page (%):Toner Supply Unit: Y	ENG	
114 to 118	-		
114	Yield(%):PCU:K	*ENG	[-999 to 999 / **100** / 1 %/step]
115	Yield(%):PCU:Col	*ENG	
116	Yield(%):PTR Unit	*ENG	
117	Yield(%):ITB	*ENG	
118	Yield(%):Fusing	*ENG	
255	ROM Version	CTL	-

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 counter value in SP7-906 (PM Counter - Previous) and reset the value of the current PM counter (SP7-803) to “0”.		
001	PM Counter Reset	CTL	[- / **-** / -] [Execute]

002	PCU: Bk	ENG	[- / - / -] [Execute]
003	PCU: M	ENG	
004	PCU: C	ENG	
005	PCU: Y	ENG	
006	PCU: All	ENG	
007	Development Unit: Bk	ENG	
008	Development Unit: M	ENG	
009	Development Unit: C	ENG	
010	Development Unit: Y	ENG	
011	Development Unit: All	ENG	
012	Developer: Bk	ENG	[- / - / -] [Execute]
013	Developer: M	ENG	
014	Developer: C	ENG	
015	Developer: Y	ENG	
016	Developer: All	ENG	
017	Image Transfer Belt	ENG	
018	Cleaning Unit	ENG	
019	Fusing Unit	ENG	
020	Paper Transfer Unit	ENG	
021	Toner Collection Bottle	ENG	
022	Fusing Belt Unit	ENG	
023	Pressure Roller	ENG	

024	Toner Supply Unit: Bk	ENG	[- / - / -] [Execute]
025	Toner Supply Unit: M	ENG	
026	Toner Supply Unit: C	ENG	
027	Toner Supply Unit: Y	ENG	
028	Toner Supply Unit: All	ENG	
029	Toner Supply Unit:CMY		
100	All	ENG	

7807	**[SC/Jam Counter Reset]**		
	Clears the counters related to SC codes and paper jams. **Note** • This SP doesn't delete either jam histories or SC code histories.		
001	SC/Jam Clear	CTL	[- / - / -] [Execute]

7832	**[Self-Diagnose Result Display]**		
	Displays the result of the diagnostics.		
001	Diag. Result	*CTL	[- / - / -]

7835	**[ACC Counter]**		
	Displays the ACC execution times for each mode.		
001	Copy ACC	*CTL	[0 to 9999999 / - / - /step]
002	Printer ACC	*CTL	

7836	**[Total Memory Size]**		
	Displays the memory capacity of the controller system.		
001	Total Memory Size	*CTL	[- / - / - MB]

7853	[Replacement Counter]		
	Displays the PM parts replacement number.		
001	PCU: Bk	ENG	[0 to 255 / - / 1 /step]
002	PCU: M	ENG	
003	PCU: C	ENG	
004	PCU: Y	ENG	
005	Development Unit: Bk	ENG	[0 to 255 / - / 1 /step]
006	Development Unit: M	ENG	
007	Development Unit: C	ENG	
008	Development Unit: Y	ENG	
009	Developer: Bk	ENG	[0 to 255 / - / 1 /step]
010	Developer: M	ENG	
011	Developer: C	ENG	
012	Developer: Y	ENG	
013	Image Transfer	ENG	[0 to 255 / - / 1 /step]
014	Cleaning Unit	ENG	
015	Fusing Unit	ENG	
016	Paper Transfer Unit	ENG	
017	Toner Collection Bottle	ENG	
018	Fusing Belt Unit	ENG	
019	Pressure Roller	ENG	
020	Toner Supply Unit: Bk	ENG	[0 to 255 / - / 1 /step]
021	Toner Supply Unit: M	ENG	
022	Toner Supply Unit: C	ENG	
023	Toner Supply Unit: Y	ENG	

7855	**[Coverage Range]** Sets the color coverage threshold. Coverage rate = Coverage per page / A4 full coverage (dots) x 100 There are three coverage counters: Color 1, Color 2, and Color 3 • [A] 5% (default) is adjustable with SP7855-001. • [B] 20% (default) is adjustable with SP7855-002.  **Note** • The setting value [B] must be set larger than [A]. The total numbers of printouts (BW printing plus color printing) for each coverage range are displayed with the following SPs. • Color1 counter: SP8601-021 • Color2 counter: SP8601-022 • Color3 counter: SP8601-023		
001	Coverage Range	*CTL	[1 to 200 / **5** / 1 /step]
002	Coverage Range 1	*CTL	[1 to 200 / **20** /1 /step]

7901	**[Assert Info.]** -		
001	File Name	*CTL	[- / - / -]
002	Number of Lines	*CTL	[- / - / -]
003	Location	*CTL	[- / - / -]

7906	**[Prev. Unit PM Counter]** (Page or Rotations, Unit, [Color]), Dev.: Development Unit
001 to 019	Displays the number of sheets printed with the previous maintenance units.

001	Page: PCU: Bk	ENG	[0 to 9999999 / - / 1 page/step]
002	Page: PCU: M	ENG	
003	Page: PCU: C	ENG	
004	Page: PCU: Y	ENG	
005	Page: Development Unit: Bk	ENG	
006	Page: Development Unit: M	ENG	
007	Page: Development Unit: C	ENG	
008	Page: Development Unit: Y	ENG	
009	Page: Developer: Bk	ENG	
010	Page: Developer: M	ENG	
011	Page: Developer: C	ENG	
012	Page: Developer: Y	ENG	
013	Page: Image Transfer	ENG	[0 to 9999999 / - / 1 page/step]
014	Page: Cleaning Unit	ENG	
015	Page: Fusing Unit	ENG	
016	Page: Paper Transfer Unit	ENG	
017	Page: Toner Collection Bottle	ENG	
018	Page: Fusing Belt Unit	ENG	
019	Page: Pressure Roller	ENG	
020 to 023	Displays the number of sheets printed with the previous maintenance units.		

020	Page: Toner Supply Unit: Bk	ENG	[0 to 9999999 / - / 1 page/step]
021	Page: Toner Supply Unit: M	ENG	
022	Page: Toner Supply Unit: C	ENG	
023	Page: Toner Supply Unit: Y	ENG	
031 to 046	Displays the number of revolutions for motors or clutches in the previous maintenance units. (☛ 031 - 046)		
031	Rotation: PCU: Bk	ENG	[0 to 999999999 / - / 1 mm/step] (☛ 019)
032	Rotation: PCU: M	ENG	
033	Rotation: PCU: C	ENG	
034	Rotation: PCU: Y	ENG	
035	Rotation: Development Unit: Bk	ENG	
036	Rotation: Development Unit: M	ENG	
037	Rotation: Development Unit: C	ENG	
038	Rotation: Development Unit: Y	ENG	
039	Rotation: Developer: Bk	ENG	
040	Rotation: Developer: M	ENG	
041	Rotation: Developer: C	ENG	
042	Rotation: Developer: Y	ENG	

043	Rotation: Image Transfer	ENG	[0 to 999999999 / - / 1 mm/step] (☛ 019)
044	Rotation: Cleaning Unit	ENG	
045	Rotation: Fusing Unit	ENG	
046	Rotation: Paper Transfer Unit	ENG	
047	Measurement: Toner Collection bottle	ENG	
048	Rotation: Fusing Belt Unit	ENG	
049	Rotation: Pressure Roller	ENG	
050 to 053	Displays the running time of the previous pump unit		
050	Run Time: Toner Supply Unit: Bk	ENG	[0 to 999999999 / - / 1 msec/step]
051	Run Time: Toner Supply Unit: M	ENG	
052	Run Time: Toner Supply Unit: C	ENG	
053	Run Time: Toner Supply Unit: Y	ENG	
061 to 079	Displays the value given by the following formula: (Current revolution / Target revolution) × 100. This shows how much of the unit's expected lifetime has been used up. The Rotation % counter is based on rotations, not prints. If the number of rotations reaches the limit, the machine enters the end condition for that unit. If the print count lifetime is reached first, the machine also enters the end condition, even though the Rotation % counter is still less than 100%.		

061	Rotation %: PCU: BK	ENG	[0 to 255 / - / 1 %/step]
062	Rotation %: PCU:M	ENG	
063	Rotation %: PCU:C	ENG	
064	Rotation %: PCU:Y	ENG	
065	Rotation %: Development Unit: Bk	ENG	
066	Rotation %: Development Unit: M	ENG	
067	Rotation %: Development Unit: C	ENG	
068	Rotation %: Development Unit: Y	ENG	
069	Rotation %: Developer: Bk	ENG	[0 to 255 / - / 1 %/step]
070	Rotation %: Developer: M	ENG	
071	Rotation %: Developer: C	ENG	
072	Rotation %: Developer: Y	ENG	
073	Rotation %: Image Transfer Belt	ENG	
074	Rotation %: Cleaning Unit	ENG	
075	Rotation %: Fusing Unit	ENG	
076	Rotation %: Paper Transfer Unit	ENG	
077	Measurement %: Toner Collection bottle	ENG	
078	Rotation (%): Fusing Belt Unit	ENG	
079	Rotation (%): Pressure Roller	ENG	

<table>
<tr><td>080 to 083</td><td colspan="3">Displays the value given by the following formula:
(Current running time / Target running time) × 100. This shows how much of the unit's expected lifetime has been used up.
The Run Time (%) counter is based on the total running time, not printouts nor revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Run Time (%) counter is still less than 100%.</td></tr>
<tr><td>080</td><td>Run Time (%):Toner Supply Unit : Bk</td><td>ENG</td><td rowspan="4">[0 to 255 / - / 1 %/step]</td></tr>
<tr><td>081</td><td>Run Time (%):Toner Supply Unit : M</td><td>ENG</td></tr>
<tr><td>082</td><td>Run Time (%):Toner Supply Unit : C</td><td>ENG</td></tr>
<tr><td>083</td><td>Run Time (%):Toner Supply Unit : Y</td><td>ENG</td></tr>
<tr><td>091 to 112</td><td colspan="3">Displays the value given by the following formula:
(Current printouts / Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up.
The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page % counter is still less than 100%.</td></tr>
</table>

091	Page %: PCU: Bk	ENG	[0 to 255 / - / 1 %/step]
092	Page %: PCU: M	ENG	
093	Page %: PCU: C	ENG	
094	Page %: PCU: Y	ENG	
095	Page %: Development Unit: Bk	ENG	
096	Page %: Development Unit: M	ENG	
097	Page %: Development Unit: C	ENG	
098	Page %: Development Unit: Y	ENG	
099	Page %: Developer: Bk	ENG	
100	Page %: Developer: M	ENG	
101	Page %: Developer: C	ENG	
102	Page %: Developer: Y	ENG	

103	Page %: Image Transfer	ENG	[0 to 255 / - / 1 %/step]
104	Page %: Cleaning Unit	ENG	
105	Page %: Fusing Unit	ENG	
106	Page %: Paper Transfer Unit	ENG	
107	Page (%): Fusing Belt Unit	ENG	
108	Page (%): Pressure Roller	ENG	
109	Page (%): Toner Supply Unit: Bk	ENG	
110	Page (%):Toner Supply Unit: M	ENG	
111	Page (%):Toner Supply Unit: C	ENG	
112	Page (%):Toner Supply Unit: Y	ENG	

7910	[ROM No]		
001	Engine	CTL	[- / - / -]
002	Lcdc	CTL	[- / - / -]
003	PI	CTL	[- / - / -]
005	ADF	CTL	[- / - / -]
007	Finisher	CTL	[- / - / -]
009	Bank	CTL	[- / - / -]
010	LCT	CTL	[- / - / -]
011	Mail Box	CTL	[- / - / -]
013	Duplex	CTL	[- / - / -]
014	Music	CTL	[- / - / -]
015	Scanner	CTL	[- / - / -]

016	IDU 1	CTL	[- / - / -]
017	IDU 2	CTL	[- / - / -]
018	NIB	CTL	[- / - / -]
021	DSP MUSIC	CTL	[- / - / -]
023	HDD Format Option	CTL	[- / - / -]
100	Launguage1	CTL	[- / - / -]
101	Launguage2	CTL	[- / - / -]
131	Bluetooth	CTL	[- / - / -]
132	NetwareOption	CTL	[- / - / -]
150	RPCS	CTL	[- / - / -]
151	PS	CTL	[- / - / -]
152	RPDL	CTL	[- / - / -]
153	R98	CTL	[- / - / -]
154	R16	CTL	[- / - / -]
155	RPGL	CTL	[- / - / -]
156	R55	CTL	[- / - / -]
157	RTIFF	CTL	[- / - / -]
158	PCL	CTL	[- / - / -]
159	PCLXL	CTL	[- / - / -]
160	MSIS	CTL	[- / - / -]
161	MSIS(OPTION)	CTL	[- / - / -]
162	PDF	CTL	[- / - / -]
163	BMLinkS	CTL	[- / - / -]
180	FONT	CTL	[- / - / -]
181	FONT1	CTL	[- / - / -]
182	FONT2	CTL	[- / - / -]

183	FONT3	CTL	[- / - / -]
200	Factory	CTL	[- / - / -]
202	Net File	CTL	[- / - / -]
203	Fax	CTL	[- / - / -]
204	Printer	CTL	[- / - / -]
205	Scanner	CTL	[- / - / -]
208	Key Monitor	CTL	[- / - / -]
209	Test Suite	CTL	[- / - / -]
210	MIB	CTL	[- / - / -]
211	WebSystem	CTL	[- / - / -]
212	WebDocBox	CTL	[- / - / -]

7911	[Firmware Version]		
001	Engine	CTL	[- / - / -]
002	Lcdc	CTL	[- / - / -]
003	PI	CTL	[- / - / -]
005	ADF	CTL	[- / - / -]
007	Finisher	CTL	[- / - / -]
009	Bank	CTL	[- / - / -]
010	LCT	CTL	[- / - / -]
011	Mail Box	CTL	[- / - / -]
013	Duplex	CTL	[- / - / -]
014	Music	CTL	[- / - / -]
015	Scanner	CTL	[- / - / -]
016	IDU 1	CTL	[- / - / -]
017	IDU 2	CTL	[- / - / -]

018	NIB	CTL	[- / - / -]
021	DSP MUSIC	CTL	[- / - / -]
023	HDD Format Option	CTL	[- / - / -]
100	Launguage1	CTL	[- / - / -]
101	Launguage2	CTL	[- / - / -]
131	Bluetooth	CTL	[- / - / -]
132	NetwareOption	CTL	[- / - / -]
150	RPCS	CTL	[- / - / -]
151	PS	CTL	[- / - / -]
152	RPDL	CTL	[- / - / -]
153	R98	CTL	[- / - / -]
154	R16	CTL	[- / - / -]
155	RPGL	CTL	[- / - / -]
156	R55	CTL	[- / - / -]
157	RTIFF	CTL	[- / - / -]
158	PCL	CTL	[- / - / -]
159	PCLXL	CTL	[- / - / -]
160	MSIS	CTL	[- / - / -]
161	MSIS(OPTION)	CTL	[- / - / -]
162	PDF	CTL	[- / - / -]
163	BMLinkS	CTL	[- / - / -]
180	FONT	CTL	[- / - / -]
181	FONT1	CTL	[- / - / -]
182	FONT2	CTL	[- / - / -]
183	FONT3	CTL	[- / - / -]
200	Factory	CTL	[- / - / -]

202	Net File	CTL	[- / - / -]
203	Fax	CTL	[- / - / -]
204	Printer	CTL	[- / - / -]
205	Scanner	CTL	[- / - / -]
208	Key Monitor	CTL	[- / - / -]
209	Test Suite	CTL	[- / - / -]
210	MIB	CTL	[- / - / -]
211	WebSystem	CTL	[- / - / -]
212	WebDocBox	CTL	[- / - / -]

7931	**[Toner Bottle Bk]**		
	Displays the toner bottle information for Bk.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	[0 or 1 / - / 1 /step]
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	[0 to 100 / - / 1 %/step]

013	EDP Code	*ENG	[0 or 1 / - / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 or 99999999 / - / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / - / 1 /step]
021	End Date	*ENG	

7932	[Toner Bottle M]		
	Displays the toner bottle information for M.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	[0 or 1 / - / 1 /step]
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	[0 to 100 / - / 1 %/step]

013	EDP Code	*ENG	[0 or 1 / - / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 to 99999999 / - / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / - / 1 /step]
021	End Date	*ENG	

7933	**[Toner Bottle C]**		
	Displays the toner bottle information for C.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	[0 or 1 / - / 1 /step]
011	Serial No.		
012	Toner Remaining	*ENG	[0 to 100 / - / 1 %/step]

013	EDP Code	*ENG	[0 or 1 / - / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 to 99999999 / - / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / - / 1 /step]
021	End Date		

7934	[Toner Bottle Y]		
	Displays the toner bottle information for Y.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	[0 or 1 / **0** / 1 /step]
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	[0 or 100 / **0** / 1 %/step]

013	EDP Code	*ENG	[0 or 1 / **0** / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 or 99999999 / **0** / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / **0** / 1 /step]
021	End Date	*ENG	

7935	**[Toner Bottle Log 1: Bk]**		
001 to 004	Displays the toner bottle information log 1 for Bk.		
001	Serial No.	ENG	[0 or 1 / **-** / 1 /step]
002	Attachment Date	ENG	[0 or 1 / **-** / 1 /step]
003	Attachment: Total Counter	ENG	[0 to 99999999 / **-** / 1 /step]
004	Refill Information	*ENG	[0 or 1 / **-** / 1 /step]
011 to 014	Displays the toner bottle information log 2 for Bk.		
011	Serial No.	ENG	[0 or 1 / **-** / 1 /step]
012	Attachment Date	ENG	[0 or 1 / **-** / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / **-** / 1 /step]
014	Refill Information	*ENG	[0 or 1 / **-** / 1 /step]
021 to 024	Displays the toner bottle information log 3 for Bk.		
021	Serial No.	ENG	[0 or 1 / **-** / 1 /step]
022	Attachment Date	ENG	[0 or 1 / **-** / 1 /step]

023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for Bk.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for Bk.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7936	[Toner Bottle Log 1: M]		
001 to 004	Displays the toner bottle information log 1 for M.		
001	Serial No.	ENG	[0 or 1 / - / 1 /step]
002	Attachment Date	ENG	[0 or 1 / - / 1 /step]
003	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
004	Refill Information	*ENG	[0 or 1 / - / 1 /step]
011 to 014	Displays the toner bottle information log 2 for M.		
011	Serial No.	ENG	[0 or 1 / - / 1 /step]
012	Attachment Date	ENG	[0 or 1 / - / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
014	Refill Information	*ENG	[0 or 1 / - / 1 /step]

021 to 024	Displays the toner bottle information log 3 for M.		
021	Serial No.	ENG	[0 or 1 / - / 1 /step]
022	Attachment Date	ENG	[0 or 1 / - / 1 /step]
023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for M.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for M.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7937	**[Toner Bottle Log 1: C]**		
001 to 004	Displays the toner bottle information log 1 for C.		
001	Serial No.	ENG	[0 or 1 / - / 1 /step]
002	Attachment Date	ENG	[0 or 1 / - / 1 /step]
003	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
004	Refill Information	*ENG	[0 or 1 / - / 1 /step]
011 to 014	Displays the toner bottle information log 2 for C.		

011	Serial No.	ENG	[0 or 1 / - / 1 /step]
012	Attachment Date	ENG	[0 or 1 / - / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
014	Refill Information	*ENG	[0 or 1 / - / 1 /step]
021 to 024	Displays the toner bottle information log 3 for C.		
021	Serial No.	ENG	[0 or 1 / - / 1 /step]
022	Attachment Date	ENG	[0 or 1 / - / 1 /step]
023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for C.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for C.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7938	**[Toner Bottle Log 1: Y]**		
001 to 004	Displays the toner bottle information log 1 for Y.		
001	Serial No.	ENG	[0 or 1 / - / 1 /step]
002	Attachment Date	ENG	[0 or 1 / - / 1 /step]

003	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
004	Refill Information	*ENG	[0 or 1 / - / 1 /step]
011 to 014	Displays the toner bottle information log 2 for Y.		
011	Serial No.	ENG	[0 or 1 / - / 1 /step]
012	Attachment Date	ENG	[0 or 1 / - / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
014	Refill Information	*ENG	[0 or 1 / - / 1 /step]
021 to 024	Displays the toner bottle information log 3 for Y.		
021	Serial No.	ENG	[0 or 1 / - / 1 /step]
022	Attachment Date	ENG	[0 or 1 / - / 1 /step]
023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for Y.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for Y.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7950	[Unit Replacement Date]		
	Displays the replacement date of each PM unit.		
001	Image Transfer Belt	*ENG	[0 to 999999 / - / 1 /step]
002	Cleaning Unit	*ENG	
003	Paper Transfer Unit	*ENG	
004	Fusing Unit	*ENG	
005	Toner Collection Bottle	*ENG	[0 or 1 / - 1 /step]
006	AIT:Bk	*ENG	[0 to 999999 / - / 1 /step]
007	AIT:M	*ENG	
008	AIT:C	*ENG	
009	AIT:Y	*ENG	
010	Fusing Belt Unit	*ENG	[0 to 999999 / - / 1 /step]
011	Pressure Roller	*ENG	
012	Toner Supply Unit: Bk	*ENG	
013	Toner Supply Unit: M	*ENG	
014	Toner Supply Unit: C	*ENG	
015	Toner Supply Unit: Y	*ENG	

7951	[Remaining Day Counter]		
	Displays the remaining unit life of each PM unit.		
001	Page: PCU: Bk	ENG	[0 to 255 / **255** / 1 day/step]
002	Page: PCU: M	ENG	
003	Page: PCU: C	ENG	
004	Page: PCU: Y	ENG	

005	Page: Development Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
006	Page: Development Unit: M	ENG	
007	Page: Development Unit: C	ENG	
008	Page: Development Unit: Y	ENG	
009	Page: Developer: Bk	ENG	[0 to 255 / **255** / 1 day/step]
010	Page: Developer: M	ENG	
011	Page: Developer: C	ENG	
012	Page: Developer: Y	ENG	
013	Page: Image Transfer	ENG	[0 to 255 / **255** / 1 day/step]
014	Page: Cleaning Unit	ENG	
015	Page: Fusing Unit	ENG	
016	Page: Paper Transfer Unit	ENG	
017	Page: Fusing Belt Unit	ENG	
018	Page: Pressure Roller	ENG	
019	Page: Toner Supply Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
020	Page: Toner Supply Unit: M	ENG	
021	Page: Toner Supply Unit: C	ENG	
022	Page: Toner Supply Unit: Y	ENG	
023	Page: Toner Supply Unit: CMY	ENG	
031	Rotation: PCU: Bk	ENG	[0 to 255 / **255** / 1 day/step]
032	Rotation: PCU: M	ENG	
033	Rotation: PCU: C	ENG	
034	Rotation: PCU: Y	ENG	

035	Rotation: Development Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
036	Rotation: Development Unit: M	ENG	
037	Rotation: Development Unit: C	ENG	
038	Rotation: Development Unit: Y	ENG	
039	Rotation: Developer: Bk	ENG	[0 to 255 / **255** / 1 day/step]
040	Rotation: Developer: M	ENG	
041	Rotation: Developer: C	ENG	
042	Rotation: Developer: Y	ENG	
043	Rotation: Image Transfer	ENG	[0 to 255 / **255** / 1 day/step]
044	Rotation: Cleaning Unit	ENG	
045	Rotation: Fusing Unit	ENG	
046	Rotation: Paper Transfer Unit	ENG	
047	Measurement: Toner Collection bottle	ENG	
048	Rotation: Fusing Belt Unit	ENG	
049	Rotation: Pressure Roller	ENG	

050	Run Time: Toner Supply Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
051	Run Time: Toner Supply Unit: M	ENG	
052	Run Time: Toner Supply Unit: C	ENG	
053	Run Time: Toner Supply Unit: Y	ENG	
054	Run Time: Toner Supply Unit: CMY	ENG	

101	Minimum: PCU: Bk	ENG	Displays one of the three, Remaining Day Counter: Rotation or Runtime, or Remaining Day Counter: Page, which is the minimum value. [0 to 255 / **255** / 1 day/step] For toner collection bottle, this SP is not displayed because its Remaining Day Counters is calculated with its weights only.
102	Minimum: PCU: M	ENG	
103	Minimum: PCU: C	ENG	
104	Minimum: PCU: Y	ENG	
105	Minimum: Development Unit: Bk	ENG	
		ENG	
106	Minimum: Development Unit: M	ENG	
107	Minimum: Development Unit: C	ENG	
108	Minimum: Development Unit: Y	ENG	
109	Minimum: Developer: Bk	ENG	
110	Minimum: Developer: M	ENG	
111	Minimum: Developer: C	ENG	
112	Minimum: Developer: Y	ENG	
113	Minimum: Image Transfer	ENG	
114	Minimum: Cleaning Unit	ENG	
115	Minimum: Fusing Unit	ENG	
116	Minimum: Paper Transfer Unit	ENG	
117	Minimum: Fusing Belt Unit	ENG	
118	Minimum: Pressure Roller	ENG	

119	Minimum: Toner Supply Unit: Bk	ENG	Displays either Remaining Day Counter: time or Page, which is less value. [0 to 255 / **255** / 1 day/step]
120	Minimum: Toner Supply Unit: M	ENG	
121	Minimum: Toner Supply Unit: C	ENG	
122	Minimum: Toner Supply Unit: Y	ENG	
123	Minimum: Toner Supply Unit: CMY	ENG	

7952	**[PM Yield Setting]**		
	Adjusts the unit yield of each PM unit.		
001	Rotation: Image Transfer Belt	ENG	[0 to 999999999 / **303401000** / 1 mm/step]
002	Rotation: Cleaning Unit	ENG	[0 to 999999999 / **151701000** / 1 mm/step]
003	Rotation: Fusing Unit	ENG	[0 to 999999999 / **P3c: 153198000, P3d: 170257000** / 1 mm/step]
004	Rotation: Paper Transfer Unit	ENG	[0 to 999999999 / **151701000** / 1 mm/step]
005	Run Time: Toner Supply Unit: Bk	ENG	[0 to 999999999 / **64103000** / 1000 msec/step]
006	Run Time: Toner Supply Unit: M	ENG	[0 to 999999999 / **52083000** / 1000 msec/step]
007	Run Time: Toner Supply Unit: C	ENG	[0 to 999999999 / **52083000** / 1000 msec/step]
008	Run Time: Toner Supply Unit: Y	ENG	[0 to 999999999 / **52083000** / 1000 msec/step]
011	Page: Image Transfer Belt	ENG	[0 to 999999 / **600000** / 1 sheet/step]
012	Page: Cleaning Unit	ENG	[0 to 999999 / **300000** / 1 sheet/step]

013	Page: Fusing Unit	ENG	[0 to 999999 / **300000** / 1 sheet/step]
014	Page: Paper Transfer Unit	ENG	[0 to 999999 / **300000** / 1 sheet/step]
015	Toner Supply Unit: Bk	ENG	[0 to 9999999 / **2000000** / 1 sheet/step]
016	Toner Supply Unit: M	ENG	[0 to 9999999 / **1500000** / 1 sheet/step]
017	Toner Supply Unit: C	ENG	[0 to 9999999 / **1500000** / 1 sheet/step]
018	Toner Supply Unit: Y	ENG	[0 to 9999999 / **1500000** / 1 sheet/step]
021	Day Threshold: PCU: Bk	ENG	Adjusts the threshold day for the near end fro each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
022	Day Threshold: PCU: M	ENG	
023	Day Threshold: PCU: C	ENG	
024	Day Threshold: PCU: Y	ENG	
025	Day Threshold: Development Unit: Bk	ENG	
026	Day Threshold: Development Unit: M	ENG	
027	Day Threshold: Development Unit: C	ENG	
028	Day Threshold: Development Unit: Y	ENG	
029	Day Threshold: Developer: Bk	ENG	
030	Day Threshold: Developer: M	ENG	
031	Day Threshold: Developer: C	ENG	
032	Day Threshold: Developer: Y	ENG	

033	Day Threshold: Image Transfer Belt	ENG	Adjusts the threshold day for the near end for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
034	Day Threshold: Cleaning Unit	ENG	
035	Day Threshold: Fusing Unit	ENG	
036	Day Threshold: Paper Transfer Unit	ENG	
037	Day Threshold: Toner Collection Bottle	ENG	
038	Rotation: PCU Bk	ENG	[0 to 999999999 / **0** / 1 mm/step]
039	Rotation: PCU M	ENG	
040	Rotation: PCU C	ENG	
041	Rotation: PCU Y	ENG	
042	Rotation: Development Unit: Bk	ENG	[0 to 999999999 / **0** / 1 mm/step]
043	Rotation: Development Unit: M	ENG	
044	Rotation: Development Unit: C	ENG	
045	Rotation: Development Unit: Y	ENG	
046	Rotation: Developer: Bk	ENG	[0 to 999999999 / **0** / 1 mm/step]
047	Rotation: Developer: M	ENG	
048	Rotation: Developer: C	ENG	
049	Rotation: Developer: Y	ENG	
050	Page: PCU: Bk	ENG	[0 to 999999 / **0** / 1 sheet/step]
051	Page: PCU: M	ENG	
052	Page: PCU: C	ENG	
053	Page: PCU: Y	ENG	

054	Page: Development Unit: Bk	ENG	[0 to 999999 / **0** / 1 sheet/step]
055	Page: Development Unit: M	ENG	
056	Page: Development Unit: C	ENG	
057	Page: Development Unit: Y	ENG	
058	Page: Developer: Bk	ENG	[0 to 999999 / **0** / 1 sheet/step]
059	Page: Developer: M	ENG	
060	Page: Developer: C	ENG	
061	Page: Developer: Y	ENG	
062	Day Threshold:Toner Supply Unit: Bk	ENG	[1 to 30 / **15** / 1 day/step]
063	Day Threshold:Toner Supply Unit: M	ENG	[1 to 30 / **15** / 1 day/step]
064	Day Threshold:Toner Supply Unit: C	ENG	[1 to 30 / **15** / 1 day/step]
065	Day Threshold:Toner Supply Unit: Y	ENG	[1 to 30 / **15** / 1 day/step]

7953	**[Operation Env. Log: PCU: Bk]**
	Displays the PCDU rotation distance in each specified operation environment. T: Temperature (°C), H: Relative Humidity (%)

001	T<=0	ENG	[0 to 99999999 / - / 1 mm/step]
002	0<T<=5:0<=H<30	ENG	
003	0<T<=5:30<=H<70	ENG	
004	0<T<=5:70<=H<=100	ENG	
005	5<T<15:0<=H<30	ENG	
006	5<T<15:30<=H<55	ENG	
007	5<T<15:55<=H<80	ENG	
008	5<T<15:80<=H<=100	ENG	
009	15<=T<25:0<=H<30	ENG	
010	15<=T<25:30<=H<55	ENG	
011	15<=T<25:55<=H<80	ENG	[0 to 99999999 / - / 1 mm/step]
012	15<=T<25:80<=H<=100	ENG	
013	25<=T<30:0<=H<30	ENG	
014	25<=T<30:30<=H<55	ENG	
015	25<=T<30:55<=H<80	ENG	
016	25<=T<30:80<=H<=100	ENG	
017	30<=T<35:0<=H<30	ENG	
018	30<=T<35:30<=H<55	ENG	
019	30<=T<35:55<=H<80	ENG	
020	30<=T<35:80<=H<=100	ENG	
021	35 <= T	ENG	

7954	[Operation Env. Log Clear]		
	Clears the operation environment log.		
001	Operation Env. Log Clear	ENG	[- / - / -] [Execute]

7955	**[Fusing Stop]**		
001	Near End: Page	ENG	[1 to 999999 / **318000** / 1 sheet/step]
	Displays the threshold sheet for the fusing sleeve belt near end.		
002	End: Page	ENG	[1 to 999999 / **330000** / 1 sheet/step]
	Displays the threshold sheet for the fusing sleeve belt end.		
003	Near End: Rotation	ENG	[0 to 999999999 / **P3c: 162390000, P3d: 180473000** / 1 mm/step]
	Displays the threshold distance for the fusing sleeve belt near end.		
004	End: Rotation	ENG	[0 to 999999999 / **P3c: 168518000, P3d: 187283000** / 1 mm/step]
	Displays the threshold distance for the fusing sleeve belt end.		

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

Printer

5803	Description	Reading	
		0	1
001	2nd Tray Size Detection	See table 2 following this table.	
002	1st Tray Set Detection		
003	1st Tray Paper Height Sensor1	See table 1 following this table.	
004	1st Tray Paper Height Sensor2	See table 1 following this table.	
005	2nd Tray Paper Height Sensor1	See table 1 following this table.	
006	2nd Tray Paper Height Sensor2	See table 1 following this table.	
007	1st Tray Paper End Detection		
008	2nd Tray Paper End Detection		
009	1st Tray Upper Limit Sensor		
010	2nd Tray Upper Limit Sensor		
011	Bypass Paper Width Detection	See table 3 following this table.	
012	Bypass Paper End Detection		
013	Bypass Paper Length Detection	See table 3 following this table.	
014	1st Paper Feed Sensor		
015	2nd Paper Feed Sensor		

016	Exit Sensor		
017	Tray Full Exit Sensor		
018	Fusing Exit Sensor		
019	Fusing Entrance Sensor		
020	1st Feed Sensor		
021	2nd Feed Sensor		
022	Duplex Exit Sensor		
023	Registration Sensor		
024	Duplex Entrance Sensor		
025	Junction Sensor		
026	2nd Tray Set Detection		
030	Toner End Sensor: Bk		
031	Toner End Sensor: M		
032	Toner End Sensor: C		
033	Toner End Sensor: Y		
034	Drum Phase Sensor: Bk		
035	Drum Phase Sensor: M		
036	Drum Phase Sensor: C		
037	Drum Phase Sensor: Y		
038	Interlock Release Detection 1		
039	Interlock Release Detection 2		
040	Right Door		
041	Duplex Cover		
042	Toner Collection Bottle Set		
043	Toner Collection Full Sensor		
044	Toner Cooling Fan: Lock		

045	2nd Duct Fan2: Lock		
046	ITB New Unit Detection		
049	Duplex Fan:Lock		
050	Airflow Fan: Front: Lock		
051	Airflow Fan: Rear: Lock		
052	Fusing Exit Fan: Lock		
053	2nd Duct Fan1: Lock		
054	3rd Duct Fan: Lock		
055	Paper Exit Fan:Lock		
056	QSU Heater Cooling Fan: Lock		
057	AC Control board Cooling Fan: Lock		
058	Airflow Fan: Middle 1: Lock		
059	Airflow Fan:Middle 2:Lock		
060	ITB Contact Motor Position		
061	Paper Transfer Contact Motor Position		
062	Toner Relay Motor: Lock		
063	ITB Drive Motor:Lock		
064	K Drum/Development Drive Motor: Lock		
065	M Drum/Development Drive Motor: Lock		
066	C Drum/Development Drive Motor: Lock		
067	Y Drum/Development Drive Motor: Lock		
068	Fusing Exit Motor:Lock		
080	PP:TTS:SC Detection		
081	PP:CB:SC Detection		
082	PP:D:SC Detection		
083	Fusing Destination Detection: 100V		

084	Fusing Destination Detection: 200V		
087	Fusing New Unit Detection		
090	Zero-cross Signal		
091	Shutter Position Sensor		
092	Fusing Pressue Release Sensor		
094	GAVD Open/Close Detection		
110	IOB Version		

Table 1: Paper Height Sensor

0: Deactivated, 1: Activated (actuator inside sensor)

Remaining paper	Paper height sensor 1	Paper height sensor 2
Full	0	0
Nearly full	1	0
Near end	1	1
Almost empty	0	1

Table 2: Paper Size Switch (Tray 2)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Switch Location		
North America	Europe/Asia	4 (bit0)	3 (bit1)	2 (bit2)
11" x 17" SEF*1 (A3 SEF)	A3 SEF*1 (11" x 17" SEF)	0	0	1
8.5" x 14" SEF*2 (B4 SEF)	B4 SEF*2 (8.5" x 14" SEF)	0	0	0
A4 SEF	A4 SEF	1	1	0

8.5" x 11" SEF	8.5" x 11" SEF	1	1	1
B5 SEF	B5 SEF	0	1	1
11" x 81/2" LEF*3 (A4 LEF)	A4 LEF*3 (11" x 81/2" LEF)	1	0	0
10.5" x 7.25" LEF*4 (B5 LEF)	B5 LEF*4 (10.5" x 7.25" LEF)	0	1	0
A5 LEF	A5 LEF	1	0	1

*1: The machine detects either 11" x 17" SEF or A3 SEF, depending on the setting of SP 5-181-003.

*2: The machine detects either 8.5" x 14" SEF or B4 SEF, depending on the setting of SP 5-181-004.

*3: The machine detects either 11" x 81/2" LEF or A4 LEF, depending on the setting of SP 5-181-002.

*4: The machine detects either B5 LEF or 10.5" x 7.25" LEF, depending on the setting of SP 5-181-005.

5

Table 3: Paper Size (By-pass Table)

0: ON, 1: OFF

By-pass Paper Size Sensor				Length Sensor	NA	EU/ASIA
bit3	Bit2	Bit1	Bit0			
1	1	1	1	1	HLT SEF	A6 SEF
0	1	1	1	1	HLT SEF	A6 SEF
0	0	1	1	1	HLT SEF	A5 SEF
1	0	1	1	1	HLT SEF	A5 SEF
1	0	0	1	0	LT/LG SEF*1	A4 SEF
1	0	0	1	1	LT/LG SEF*1	A5 LEF
1	1	0	1	0	LT/LG SEF*1	A4 SEF
1	1	0	1	1	LT/LG SEF*1	A5 LEF
1	1	0	0	0	DLT SEF	A3 SEF
1	1	0	0	1	LT LEF	A4 LEF

By-pass Paper Size Sensor				Length Sensor	NA	EU/ASIA
bit3	Bit2	Bit1	Bit0			
1	1	1	0	0	DLT SEF	A3 SEF
1	1	1	0	1	LT LEF	A4 LEF

*1: The paper size (LT or LG) can be selected with SP1-007-001.

[FIN (EUP) INPUT Check] Finisher (D636/ D637)

6140	Description	Reading	
		0	1
001	Entrance Sensor		
002	Proof Exit Sensor		
003	Proof Full Detection Sensor		
004	Trailing Edge Detection: Shift		
005	Staple Exit Sensor		
006	Shift HP Sensor		
007	Shift Exit Sensor		
008	Exit Guide Plate HP Sensor		
009	Paper Detection Sensor: Staple		
010	Paper Detection Sensor: Shift		
011	Paper Full Sensor: 2000-Sheet		
012	Oscillating Back Roller		
013	Jogger HP Sensor		
014	Junction Gate HP Sensor		
015	Staple Tray Paper Sensor		
016	Staple Moving HP Sensor		

017	Skew HP Sensor		
018	Limit SW		
019	Door SW		
020	Stapler 1 Rotation		
021	Staple Detection		
022	Staple Leading Edge Detection		
023	Punch Moving HP Sensor		
024	Punch Registration HP Sensor		
025	Punch Registration Detection Sensor		
026	Punch Chad Full Sensor		
027	Punch HP		
028	Punch Selection DIPSW 1	See *1	
029	Punch Selection DIPSW	See *1	
030	Junction Gate Open/Close HP Sensor		
031	Leading Edge Detection Sensor		
032	Drive Roller HP Sensor		
033	Arrival Sensor		
034	Rear Edge Fence HP Sensor		
035	Folder Cam HP Sensor		
036	Folder Plate HP Sensor		
037	Folder Pass Sensor		
038	Saddle Full Sensor: Front		
039	Saddle Full Sensor: Rear		
040	Saddle Stitch Stapler 1 Rotation: Front		
041	Saddle Stitch Detection: Front		

042	Saddle Stitch Leading Edge Detection: Front		
043	Saddle Stitch Stapler 1 Rotation: Rear		
044	Saddle Stitch Detection: Rear		
045	Saddle Stitch Leading Edge Detection: Rear		
046	Full Sensor: 3000-Sheet	Not Full	Full
047	Exit Jogger HP Sensor: Front		
048	Exit Jogger HP Sensor: Rear		
049	Exit Jogger HP Sensor: Upper		

*1: Combination of DIP SW 1 and SW 2

DIP SW 1	DIP SW 2	Punch Type
0	0	Japan
1	0	Europe
0	1	North America
1	1	North Europe

*2: Please refer to "Lower Tray (D637 Only)" in the Service Manual for the "2000/3000 (Booklet) Finisher".

[FIN (JAK) INPUT Check] 4bin Mail Box (M413)

6142	Description	Reading	
		0	1
001	Relay Sensor 1		
002	Relay Sensor 2		
003	Full Sensor 4		
004	Paper Sensor 4		

005	Full Sensor 3		
006	Paper Sensor 3		
007	Full Sensor 2		
008	Paper Sensor 2		
009	Full Sensor 1		
010	Paper Sensor 1		
011	Door Sensor		

Bridge Unit (D634)

6150	Description	Reading	
		0	1
001	Bridge/Left: Exit Sensor		
002	Bridge/Left: Feed Sensor		
003	Bridge/Left/Shift: Set Detection		
004	Bridge/Left: Exit Cover Detection		
005	Bridge/Left: Feed Cover Detection		
006	Left:Left Exit Sensor		

Two-Tray Paper Feed Unit (D580)/ LCT 2000 (D581)/ LCT 1200 (D631)

6160	Description	Reading	
		0	1
001	Bank: Tray3: Feed Sensor		
002	Bank: Tray4: Feed Sensor		
003	Bank: Tray5: Feed Sensor		
004	Bank: Tray3: Vertical Feed Sensor		

005	Bank: Tray4: Vertical Feed Sensor		
006	Bank: Tray5: Vertical Feed Sensor		
007	Bank: Feed Cover Detection		
011	Bank: LCT: Paper Replenishment		
012	Bank: LCT: Slide		

Output Check Table

Printer

5804	Display	Description
003	Drum/Dev Motor:K: HighSpeed	
004	Drum/Dev Motor:K: MiddleSpeed	
005	Drum/Dev Motor: K: LowSpeed	
010	Drum/Dev Motor:M:HighSpeed	
011	Drum/Dev Motor:M: MiddleSpeed	
012	Drum/Dev Motor: M: LowSpeed	
017	Drum/Dev Motor:C: HighSpeed	
018	Drum/Dev Motor:C: MiddleSpeed	
019	Drum/Dev Motor: C: LowSpeed	
024	Drum/Dev Motor:Y: HighSpeed	
025	Drum/Dev Motr:Y: MiddleSpeed	
026	Drum/Dev Motor: Y: LowSpeed	

031	Fusing Motor: High Speed (SSP)	Do the following procedure below to check the fusing motor output. 1. Do any of the following procedures; • Open the right cover of the paper bank. • Remove one toner bottle. • Remove the fusing unit. 2. Enter the SP mode. 3. Do the output check (SP5804-031 to 035). 4. Exit the SP mode or turn off the power switch. 5. Undo the step 1. 6. If the main power switch is turned off, turn the switch back on.
032	Fusing Motor: Middle Speed (SSP)	
033	Fusing Motor: Low Speed (SSP)	
035	Fusing Motor: Extra-low Speed (SSP)	
037	Toner Relay Motor	
040	Image Transfer Motor: HighSpeed	
041	Image Transfer Motor: MiddleSpeed	
042	Image Transfer Motor: LowSpeed	
050	Feed Motor: HighSpeed	
051	Feed Motor: IncreaseSpeed	
052	Feed Motor: MiddleSpeed	
053	Feed Motor: MiddleIncreaseSpeed	
054	Feed Motor: LowSpeed	
055	Feed Motor: LowIncreaseSpeed	
060	Regist Motor: HighSpeed	
061	Regist Motor: MiddleSpeed	
062	Regist Motor: LowSpeed	
067	Duplex Feed Motor: CW: HighSpeed	

068	Duplex Feed Motor: CW: MiddleSpeed	
069	Duplex Feed Motor: CW: LowSpeed	
074	Duplex Feed Motor: CCW: HighSpeed	
075	Duplex Feed Motor: CCW: MiddleSpeed	
076	Duplex Feed Motor: CCW: LowSpeed	
081	Duplex Reverse Motor: CW: HighSpeed	
082	Duplex Reverse Motor: CW: MiddleSpeed	
083	Duplex Reverse Motor: CW: LowSpeed	
088	Duplex Reverse Motor: CCW: HighSpeed	
089	Duplex Reverse Motor: CCW: MiddleSpeed	
090	Duplex Reverse Motor: CCW:LowSpeed	
095	ITB Contact Motor	
096	Paper Transfer Contact Motor	
097	1st Tray Lift Motor: Up	
098	1st Tray Lift Motor: Down	
099	2ndTray Lift Motor: Up	
100	2nd Tray Lift Motor: Down	
102	Fusing Pressue Release Motor	
104	Polygon Motor: LL	
105	Polygon Motor: LM	

106	Polygon Motor: LH	
107	Polygon Motor: HH	
110	Air Flow Fan:Front	
111	Air Flow Fan:Rear	
112	Fusing Fan:H	
113	Fusing Fan:L	
114	PSU Cooling Fan	
115	2nd Duct Fan1	
117	3rd Duct Fan	
119	Paper Exit Fan	
121	QSU Heater Cooling Fan	
122	AC Control board Cooling Fan	
126	Development Clutch: Bk	
127	Development Clutch: M	
128	Development Clutch: C	
129	Development Clutch: Y	
130	Toner Bottle Clutch: Bk	
131	Toner Bottle Clutch: M	
132	Toner Bottle Clutch: C	
133	Toner Bottle Clutch: Y	
134	Toner Supply Pump: Bk	
135	Toner Supply Pump: M	
136	Toner Supply Pump: C	
137	Toner Supply Pump: Y	
138	1st Paper Feed Clutch	
139	2nd Paper Feed Clutch	

140	Bypass Feed Clutch	
141	Bypass Pickup Solenoid	
143	TM Sensor Shutter Solonoid	
144	Exit Junction Solenoid	
145	1st Feed Pickup Solenoid	
146	2nd Feed Pickup Solenoid	
150	Duplex Fan: HighSpeed	
151	Duplex Fan: Lowspeed	
152	Check Air Flow Fan:Middle 1	
153	2nd Duct Fan2	
154	Air Flow Fan:Middle 2	
155	Toner Cooling Fan	
161	PCL:Bk	
162	PCL:M	
163	PCL:C	
164	PCL:Y	
165	HST Sensor Power Supply	
166	HST Sensor:Bk	
167	HST Sensor:M	
168	HST Sensor:C	
169	HST Sensor:Y	
170	Toner End Sensor: K	
171	Toner End Sensor: M	
172	Toner End Sensor: C	
173	Toner End Sensor: Y	
174	TM Sensor:F	

175	TM Sensor:C	
176	TM Sensor:R	
177	P Sensor:M	
178	P Sensor:C	
179	P Sensor:Y	-
181	ChargeAC: Y: HighSpeed	-
182	ChargeAC: Y: MiddleSpeed	-
183	ChargeAC: Y: LowSpeed	-
186	PP: Development: K	-
187	PP: Development: M	-
188	PP: Development: C	-
189	PP: Development: Y	-
190	PP:Separation	-
216	LD1: K	-
217	LD2: K	-
218	LD1: Ma	-
219	LD2: Ma	-
220	LD1: Cy	-
221	LD2: Cy	-
222	LD1: Ye	-
223	LD2: Ye	-
224	PP: ITB: K	-
225	PP: ITB: M	-
226	PP: ITB: C	-
227	PP: ITB: Y	
228	PP: PTR: +	

229	PP: PTR: -	
231	PP: ChargeDC: K	
232	PP: ChargeDC: M	
233	PP: ChargeDC: C	
234	PP: ChargeDC: Y	
237	PP: ChargeDC: K: HighSpeed	
238	PP: ChargeDC: K: MiddleSpeed	
239	PP: ChargeDC: K: LowSpeed	
244	PP: ChargeDC: M: HighSpeed	-
245	PP: ChargeDC: M: MiddleSpeed	-
246	PP: ChargeDC: M: LowSpeed	-
251	PP: ChargeDC: M: HighSpeed	-
252	PP: ChargeDC: M: MiddleSpeed	-
253	PP: ChargeDC: M: LowSpeed	-

[FIN (EUP) OUTPUT Check] (Booklet) Finisher (D636/D637)

6145	Display	Description
001	Entrance Motor	Finisher Entrance Motor
002	Upper Feed Motor	Upper Transport Motor
003	Lower Feed Motor	Lower Transport Motor
004	Exit Motor	Upper/Proof Tray Exit Motor
005	Knock Roller Motor	Clamp Roller Retraction Motor
006	Shift Motor	Shift Roller Motor
007	Exit Guide Plate Open/Close Motor	Exit Guide Plate Motor
008	Tray Lift Motor	Upper Tray Lift Motor

009	Oscillating Back Roller Motor	Stacking Sponge Roller Motor
010	Jogger Motor	Jogger Fence Motor
011	Stack Feed-out Motor	Feed Out Belt Motor
012	Staple Moving Motor	Corner Stapler Movement Motor
013	Staple Skew Motor	Corner Stapler Rotation Motor
014	Staple Motor	Corner Stapler EH530
015	Upper Junction Gate Solenoid	Proof Junction Gate Solenoid
016	Lower Junction Gate Solienoid	Stapling Tray Junction Gate Solenoid
017	Knock Solenoid	Stapling Edge Pressure Plate Solenoid
018	Trailing Edge Hold Solenoid	Positioning Roller Solenoid
019	Saddle Stitch Hold Solenoid	Booklet Pressure Roller Solenoid
020	Stack Junction Gate Open/Close Motor	Stack Junction Gate Motor
021	Trailing Edge Fence Moving Motor	Fold Unit Bottom Fence Lift Motor
022	Saddle Stitch Staple Motor: Front	Booklet Stapler EH185R: Front
023	Saddle Stitch Staple Motor: Rear	Booklet Stapler EH185R: Rear
024	Folder Plate Motor	Fold Plate Motor
025	Folder Roller Motor	Fold Roller Motor
026	Drive Roller Oscillating Motor	Positioning Roller Motor
027	Punch Motor	Punch Drive Motor
028	Punch Moving Motor	Punch Movement Motor
029	Punch Registration Detection Motor	Paper Position Sensor Slide Motor
030	Exit Jogger Motor: Front	
031	Exit Jogger Motor: Rear	
032	Exit Jogger Release Motor	

FIN(JAK)OUTPUT Check 4bin Mail Box (M413)

6147	Display	Description
001	Feed Motor	
002	Solenoid 1	
003	Solenoid 2	
004	Solenoid 3	

Bridge Unit (D634)

6151	Display	Description
001	Bridge/Left: Feed Motor: Current Switch	
002	Bridge/Left: Feed Motor: Reset	
003	Bridge/Left: Feed Motor: Enable	
006	Bridge/Left: Feed Motor: HighSpeed	
007	Bridge/Left: Feed Motor: MiddleSpeed	
008	Bridge/Left: Feed Motor: LowSpeed	
011	Bridge/Left: Junction Solenoid	

4bin Mail Box (M413)

6157	Display	Description
001	4 bin: Junction Solenoid	-

Two-Tray Paper Feed Unit (D580)/ LCT 2000 (D581)/ LCT 1200 (D631)

6161	Display	Description
005	Bank1: Feed Motor: HighSpeed/Fan	

006	Bank1: Feed Motor: IncreaseSpeed/Fan	
007	Bank1: Feed Motor: MiddleSpeed/Fan	
008	Bank1 Feed Motor: MiddleIncreaseSpeed/Fan	
009	Bank1: Feed Motor: LowSpeed/Fan	
010	Bank1: Feed Motor: LowIncreaseSpeed/Fan	
015	Bank2: Feed Motor: HighSpeed/Fan	
016	Bank2: Feed Motor: IncreaseSpeed/Fan	
017	Bank2: Feed Motor: MiddleSpeed/Fan	
018	Bank2 Feed Motor: MiddleIncreaseSpeed/Fan	
019	Bank2: Feed Motor: LowSpeed/Fan	
020	Bank2: Feed Motor: LowIncreaseSpeed/Fan	
030	Bank: Tray3: PU Solenoid	
031	Bank: Tray4: PU Solenoid	
032	Bank: Tray5: PU Solenoid	
035	Bank: Tray3: Feed Clutch	
036	Bank: Tray4: Feed Clutch	
037	Bank: Tray5: Feed Clutch	

Firmware Update

To update the firmware for this machine, you must have the new version of the firmware downloaded onto an SD (Secure Digital) Card. The SD Card is inserted into SD Card Slot 2 on the left rear side of the controller box.

Type of Firmware

Type of firmware	Function	Location of firmware	Message shown
Engine	Printer engine control	BCU Flash ROM	Engine
System	Operating system	Flash ROM on the controller board	System
Lcdc	Panel control	Operation Panel	Lcdc
NIB/DESS	Network interface/ Security control	Flash ROM on the controller board	Network Support
Security & Encryption	HDD encryption / Data Overwrite	Flash ROM on the controller board	Data Erase Onb
Language	Language firmware	Operation Panel	Language 1/ Language 2
RPCS	Page description Language (RPCS for XPS driver data process)	Flash ROM on the controller board	RPCS
PS3/ PDF Adobe	Page description language (PostScript3)	Flash ROM on the controller board	PS/PDF
PCL	Page description language (PCL)	Flash ROM on the controller board	PCL
PictBridge	PictBridge control	Flash ROM on the controller board	PictBridge
MediaPrint: JPEG/TIFF	MediaPrint control	Flash ROM on the controller board	MediaPrint: JPEG/ TIFF

Type of firmware	Function	Location of firmware	Message shown
Summary Font	Summary fonts	Flash ROM on the controller board	Font
PCL Font	PCL fonts	Flash ROM on the controller board	PCL Font
PS Font	PostScript3 fonts	Flash ROM on the controller board	PS Font
Netfile Application	Feature application	Flash ROM on the controller board	NetworkDocBox
Printer Application	Feature application	Flash ROM on the controller board	Printer
WebSys	Web Service application	Flash ROM on the controller board	Web Support
WebDocBox	Document server application	Flash ROM on the controller board	Web Uapl
Java VM	Java VM platform	Java VM card Option	SDK1

Before You Begin

An SD card is a precision device. Always observe the following precautions when you handle SD cards:

- Always switch the machine off before you insert an SD card. Never insert the SD card into the slot with the power on.
- Do not remove the SD card from the service slot after the power has been switched on.
- Never switch the machine off while the firmware is downloading from the SD card.
- Keep SD cards in a safe location where they are not exposed to high temperature, high humidity, or exposure to direct sunlight.
- Always handle SD cards with care. Do not bend or scratch them. Do not let the SD card get exposed to shock or vibration.
- Make sure that the write protection of an SD card is unlocked when you download an application to it. If not, downloading fails and a download error (e.g. Error Code 44) occurs during a firmware upgrade.
- Keep the following points in mind when you use the firmware update software:

- "Upload" means to send data from the machine to the SD card. "Download" means to send data from the SD card to the machine.
- To select an item on the LCD, touch the appropriate button on the soft touch-screen of the LCD.
- Disconnect the Ethernet interface cable, Gigabit Ethernet cable, IEEE1284 interface cable and remove the Wireless LAN interface board before you start the firmware update procedure. Make sure that the machine is disconnected from the network to prevent a print job for arriving while the firmware update is in progress.

Updating Firmware

Preparation

- If the SD card is blank, copy the entire "romdata" folder onto the SD card.
- If the card already contains the "romdata" folder, copy the "M125" folder onto the card.

If the card already contains folders up to " M125", copy the necessary firmware files (e.g. M125xxxx.fwu) into this folder.

Note

- Do not put multiple machine firmware programs on the same SD card. Copy the only model firmware you want.

Updating Procedure

1. Turn the main power switch off.
2. Remove the slot cover (x 1).
3. Insert the SD card into SD Card Slot 2. Make sure the label on the SD card faces the front side of the machine.
4. Slowly push the SD card into the slot so it locks in place. You will hear it click. Make sure the SD card locks in place.

   Note

   - To remove the SD, push it in to unlock the spring lock. Then release it so it pops out of the slot.
5. Disconnect the network cable if the machine is connected to a network.
6. Switch the main power switch on. After about 45 seconds, the initial version update screen appears on the LCD in English.
7. On the screen, touch the button or press the corresponding number key on the operation panel to select the item in the menu that you want to update.

ROM/NEW	What it means

ROM:	Tells you the number of the module and name of the version currently installed. The first line is the module number, the second line the version name.
NEW:	Tells you the number of the module and name version on the SD card. The first line is the module number, the second line the version name.

Note

- Controller, engine and operation panel firmware cannot be updated at the same time. It is recommended to update firmware modules one by one.

8. Touch "UpDate (#)" to start the update.

Note

- The progress bar appears on the operation panel.

9. The "Update is Done" message appears on the operation panel after completing the updating. The message differs depending on the firmware that has been updated.
10. Switch the machine main power switch off when you see the "Update is Done" message or follow the procedure that is displayed on the operation panel.
11. Press in the SD card to release it. Then remove it from the slot.
12. Switch the machine on for normal operation.

Error Messages

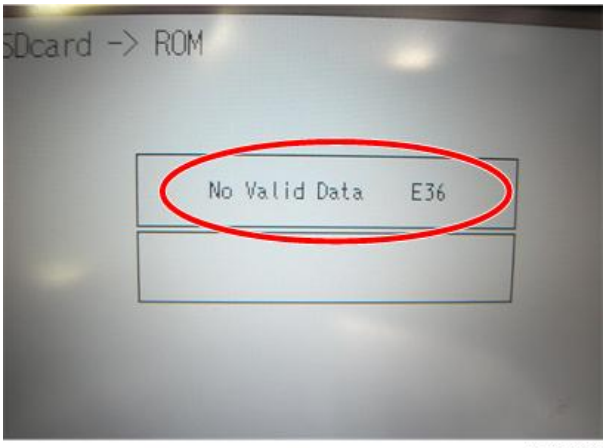
An error message shows in the first line if an error occurs during the download.

The error code consists of the letter "E" and a number. The example above shows error "E24" displayed. For details, refer to the Error Message Table. (☛ p.464 "Handling Firmware Update Errors" in this section)

Firmware Update Error

If firmware update fails, an error code appears.

The following example (E36) reports that the program which you wish to update is not in the machine or the data in the machine you wish to update does not correspond to the data in the card.



w_m1242089

Recovery after Power Loss

If the ROM update is interrupted as a result of accidental loss of power while the firmware is updating, then the correct operation of the machine cannot be guaranteed after the machine is switched on again. If the ROM update does not complete successfully for any reason, then in order to ensure the correct operation of the machine, the ROM update error will continue to show until the ROM is updated successfully.

In this case, insert the card again and switch on the machine to continue the firmware download automatically from the card without the menu display.

Updating the LCDC for the Operation Panel

Do the following procedure to update the LCDC (LCD Control Board).

1. Turn the machine main switch off.
2. Remove the SD slot cover (x 1).
3. Insert the SD card into SD Card Slot 2 (lower).
4. Switch the machine main switch on.
5. The initial screen opens in English after about 45 seconds.
6. Touch "Ope Panel.xx".
7. "xx" differs depending on the destination.
8. Touch "UpDate(#)" to start the update.
9. Downloading starts after about 9 seconds.

10. The progress bar appears. While updating, the power indicator lights in blue and the Home key flashes in blue. When the updating is completed, the Home key is lit off and the Simple Screen key lights.
11. Switch the machine main power switch off and remove the SD card. Then switch the machine on.

Handling Firmware Update Errors

An error message shows in the first line if an error occurs during a download. The error code consists of the letter "E" and a number ("E20", for example).

Error Message Table

Code	Meaning	Solution
20	Cannot map logical address	Make sure the SD card is inserted correctly.
21	Cannot access memory	HDD connection incorrect or replace hard disks.
22	Cannot decompress compressed data	Incorrect ROM data on the SD card, or data is corrupted.
23	Error occurred when ROM update program started	Controller program abnormal. If the second attempt fails, replace controller board.
24	SD card access error	Make sure SD card inserted correctly, or use another SD card.
30	No HDD available for stamp data download	HDD connection incorrect or replace hard disks.
31	Data incorrect for continuous download	Insert the SD card with the remaining data required for the download, the re-start the procedure.
32	Data incorrect after download interrupted	Execute the recovery procedure for the intended module download, then repeat the installation procedure.
33	Incorrect SD card version	Incorrect ROM data on the SD card, or data is corrupted.
34	Module mismatch - Correct module is not on the SD card)	SD update data is incorrect. Acquire the correct data (Japan, Overseas, OEM, etc.) then install again.

35	Module mismatch – Module on SD card is not for this machine	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.
36	Cannot write module – Cause other than E34, E35	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.
40	Engine module download failed	Replace the update data for the module on the SD card and try again, or replace the BCU board.
42	Operation panel module download failed	Replace the update data for the module on the SD card and try again, or replace the LCDC.
43	Stamp data module download failed	Replace the update data for the module on the SD card and try again, or replace the hard disks.
44	Controller module download failed	Replace the update data for the module on the SD card and tray again, or replace controller board.
50	Electronic confirmation check failed	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.

NVRAM Data Upload/Download

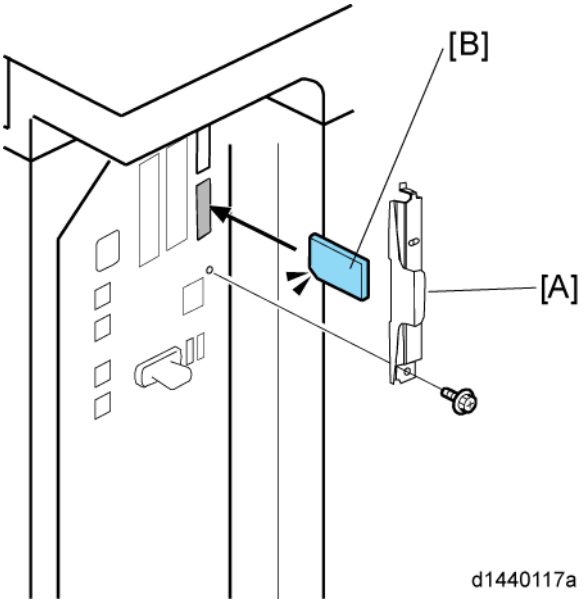
Uploading Content of NVRAM to an SD card

Do the following procedure to upload SP code settings from NVRAM to an SD card.

Note

- This data should always be uploaded to an SD card before the NVRAM is replaced.
- Make sure that the write protection of an SD card is unlocked

1. Do SP5990-001 (SMC Print) before you switch the machine off. You will need a record of the NVRAM settings if the upload fails.
2. Switch the machine main power switch off.



3. Remove the SD slot cover [A] (x 1).
4. Insert the SD card [B] into SD card slot 2 (lower). Then switch the machine on.
5. Execute SP5824-001 (NVRAM Data Upload) and then press the "Execute" key.
6. The following files are coped to an NVRAM folder on the SD card when the upload procedure is finished. The file is saved to the path and the following filename:

   NVRAM\<serial number>.NV

   Here is an example with Serial Number "K5000017114":

   NVRAM\K5000017114.NV

7. In order to prevent an error during the download, be sure to mark the SD card that holds the uploaded data with the number of the machine from which the data was uploaded.

Note

- You can upload NVRAM data from more than one machine to the same SD card.

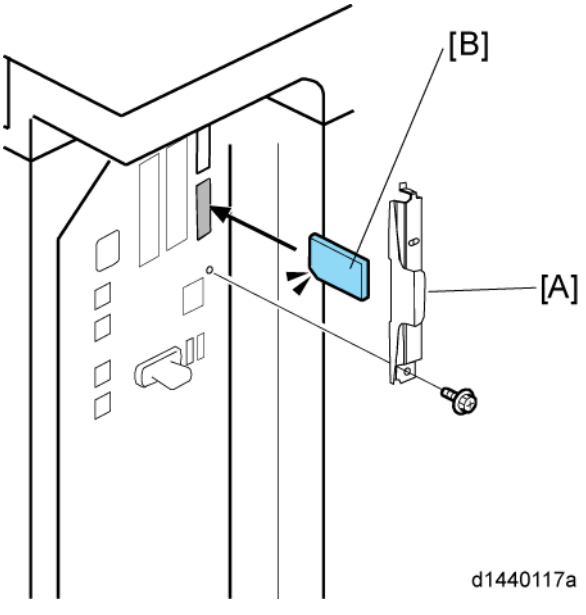
Downloading an SD Card to NVRAM

Do the following procedure to download SP data from an SD card to the NVRAM in the machine.

- The NVRAM data down load may fail if the SD card with the NVRAM data is damaged, or if the connection between the controller and BCU is defective.
- Do the download procedure again if the download fails.
- Do the following procedure if the second attempt fails:

  Enter the NVRAM data manually using the SMC print you created before uploading the NVRAM data.

1. Switch the machine main power switch off.



2. Remove the SD slot cover [A] (x 1).
3. Insert the SD card [B] with the NVRAM data into SD Card Slot 2 (lower).
4. Switch the machine main power switch on.
5. Do SP5825-001 (NVRAM Data Download) and press the “Execute” key.

Note

- The serial number of the file on the SD card must match the serial number of the machine for the NVRAM data to download successfully. The download fails if the serial numbers do not match.

This procedure does not download the following data to the NVRAM:

- Total Count
- C/O, P/O Count

Address Book Upload/Download

Information List

The following information is possible to be uploaded and downloaded.

Information	
• Registration No. • User Code • E-mail • Protection Code • Group Name • Key Display	• Select Title • User Code • Login User Name • Login Password • Account ACL • New Document Initial ACL

Download

1. Prepare a formatted SD card.
2. Make sure that the write-protection on the SD card is off.
3. Turn off the main power switch of the main machine.
4. Remove the SD slot cover at the left rear side of the machine (x 1).
5. Install the SD card into the SD card slot 2 (for service use).
6. Turn on the main power switch.
7. Enter the SP mode.
8. Do SP5-846-051 (Backup All Addr Book).
9. Exit the SP mode, and then turn off the main power switch.
10. Remove the SD card form the SD card slot 2.
11. Install the SD slot cover.

Note

- If the capacity of SD card is not enough to store the local user information, an error message is displayed.
- Carefully handle the SD card, which contains user information. Do not take it back to your location.

Upload

1. Turn off the main power switch of the main machine.
2. Remove the SD slot cover at the left rear side of the machine (x 1).
3. Install the SD card, which has already been uploaded, into the SD card slot 2.
4. Turn on the main power switch.
5. Enter the SP mode.
6. Do SP5-846-052 (Restore All Addr Book).
7. Exit the SP mode, and then turn off the main power switch.
8. Remove the SD card form the SD card slot 2.
9. Install the SD slot cover.

Note

- The counter in the user code information is initialized after uploading.
- The information of an administrator and supervisor cannot be downloaded nor uploaded.
- If there is no data of address book information in the SD card, an error message is displayed.

Using the Debug Log

Overview

This machine provides a Save Debug Log feature that allows the Customer Engineer to save and retrieve error information for analysis.

Every time an error occurs, debug information is recorded in volatile memory. But this information is lost when the machine is switched off and on.

To capture this debug information, the Save Debug Log feature provides two main features:

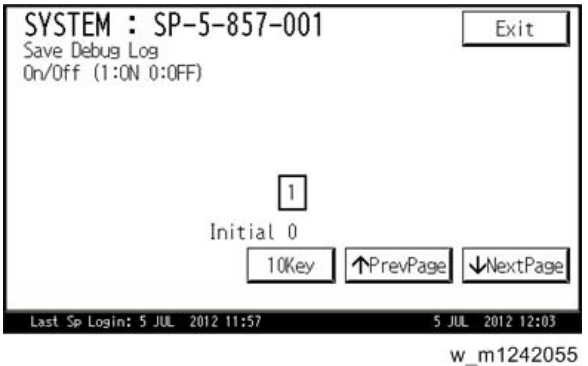
- Switching on the debug feature so error information is saved directly to the HDD for later retrieval.
- Copying the error information from the HDD to an SD card.

Do the following procedure below to set up the machine so the error information is saved automatically to the HDD when a user has problems with the machine. Then ask the user to reproduce the problem.

Switching ON and Setting UP Save Debug Log

The debug information cannot be saved until the "Save Debug Log" function has been switched on and a target has been selected.

1. Enter the SP mode and switch the Save Debug Log feature on.
    - Enter the SP mode.
    - Touch "Engine".
    - On the LCD panel, open SP5857.
2. Under "5857 Save Debug Log", touch "1 On/Off".

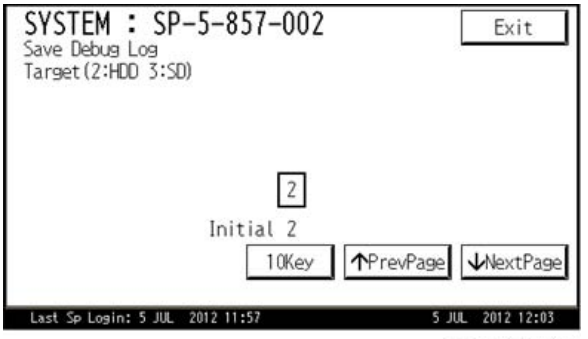


w_m1242055

3. Press "10 key" to display the number keys.
4. Enter "1", then press "OK". This switches the Save Debug Log feature on.

Note

- The default setting is “0” (OFF). This feature must be switched on in order for the debug information to be saved.



w_m1242056

5. Select the target destination where the debug information will be saved.
6. Under "5857" Save Debug Log”, touch “2 Target”.
7. Press "10 key" to display the number keys.
8. Enter "1", then press "OK". This switches the Save Debug Log feature on.

Note

- Select “3 SD Card” to save the debug information directly to the SD card if it is inserted in the service slot.

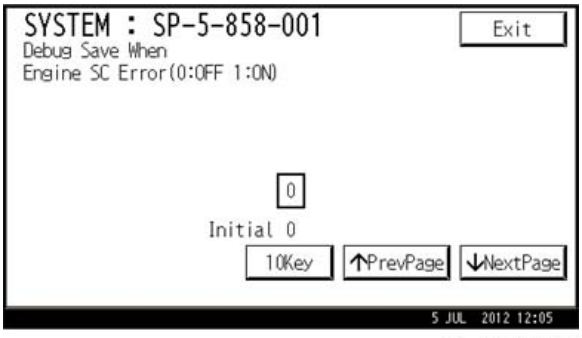
9. Now touch “5858” and specify the events that you want to record in the debug log. SP5858 (Debug Save When) provides the following items for selection.

1	Engine SC Error	Saves data when an engine-related SC code is generated.
2	Controller SC Error	Saves debug data when a controller-related SC Code is generated.
3	Any SC Error	Saves data only for the SC code that you specify by entering code number.
4	Jam	Saves data for jams.

Note

- More than one event can be selected.

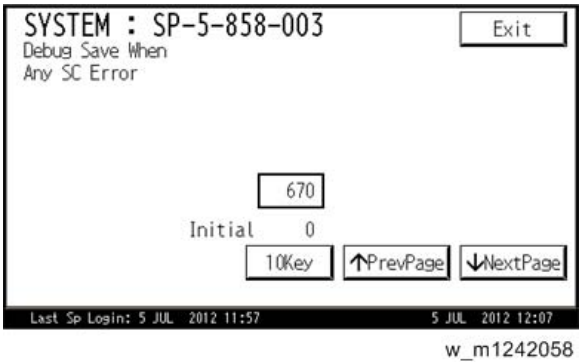
Example 1: To Select Items 1, 2, 4



w_m1242057

Touch the appropriate items(s). Press "1" for each selection. This example shows "Engine SC Error" selected.

Example 2: To Specify an SC Code



w_m1242058

Touch "3 Any SC Error", enter the 3-digit SC code number. This example shows an entry for SC670.

Note

- For details about SC code numbers, please refer to the SC tables in Section 4. "Troubleshooting".

10. Select one or more memory modules for reading and recording debug information. Touch "5859".

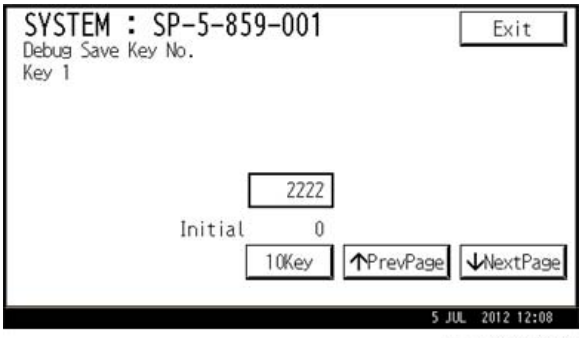
    Under "5859" press the necessary key item for the module that you want to record.

    Enter the appropriate 4-digit number. Then press "OK".

Note

- Refer to the two tables below for the 4-digit numbers to enter for each key.

The example below shows "Key 1" with "2222" entered.



w_m1242059

The following keys can be set with the corresponding numbers. (The initials in parentheses indicate the names of the modules.)

4-Digit Entries for Keys 1 to 10

Key No.	Printer	Web
1	2222 (SCS)	
2	14000 (SRM)	
3	256 (IMH)	
4	1000 (ECS)	
5	1025 (MCS)	
6	4400 (GPS)	5682 (NFA)
7	4500 (PDL)	6600 (WebDB)
8	4600 (GPS-PM)	3300 (PTS)
9	2000 (NCS)	6666 (WebSys)
10	2224 (BB)	2000 (NCS)

Note

- The default settings for Keys 1 to 10 are all zero ("0").

Key to Acronyms

Acronym	Meaning	Acronym	Meaning
ECS	Engine Control Service	NFA	Net File Application
GPS	GW Print Service	PDL	Printer Design Language

GSP-PM	GW Print Service – Print Module	PTS	Print Server
IMH	Image Memory Handler	SCS	System Control Service
MCS	Memory Control Service	SRM	System Resource Management
NCS	Network Control Service	WebDB	Web Document Box (Document Server)

11. The machine is now set to record the debugging information automatically on the HDD (the target selected with SP5857-002) for the events that you selected with SP5858 and the memory modules selected with SP5859.

Please keep the following important points in mind when you do this setting:

- Note that the number entries for Keys 1 to 5 are the same for the Printer, and Web memory modules.
- The initial settings are all zero.
- These settings remain in effect until you change them. Be sure to check all the settings, especially the settings for Keys 6 to 10. To switch off a key setting, enter a zero for that key.
- You can select any number of keys from 1 to 10 (or all) by entering the corresponding 4-digit numbers from the table.
- You cannot mix settings for the groups for 006 to 010. For example, if you want to create a PRINTER debug log you must select the settings from the 9 available selections for the "PRINTER" column only.
- One area of the disk is reserved to store the debug log. The size of this area is limited to 4 MB.

Retrieving the Debug Log from the HDD

Retrieve the debug log by copying it from the hard disk to an SD card.

1. Insert the SD card into slot 2 (service slot) of the machine.
2. Enter the SP mode and execute SP5857-009 (Copy HDD to SD Card (Latest 4 MB)) to write the debugging data to the SD card.
3. Use a card reader to copy the file and send it for analysis to your local Ricoh representative by email. You can also send the SD card by regular mail if you want.

Debug Log Codes

SP5857-015 Copy SD Card-to-SD Card: Any Desired Key

This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number. The copy operation is executed in the log directory of the SD card inserted in the same slot. (This function does not copy from one slot to another.) Each SD card can hold up to 4 MB of file data. Unique file names are created for the data during the copy operation to prevent overwriting files of the same name. This means that log data from more than one machine can be copied onto the same SD card. This command does not execute if there is no log on the HDD for the name of the specified key.

SP5857-016 Create a File on HDD to Store a Log

This SP creates a 32 MB file to store a log on the HDD. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the HDD when the first log is stored on the HDD (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the HDD. With the file already created on the HDD for the log file, the data only needs to be recorded. A new log file does not need to be created. To create a new log file, do SP5857-011 to delete the debug log data from the HDD. Then do SP5857-016.

SP5857-017 Create a File on SD Card to Store a Log

This SP creates a 4 MB file to store a log on an SD card. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the SD card when the first log is stored on the SD card (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the SD card. With the file already created on the SD card for the log file, the data only needs to be recorded; a new log file does not require creation. To create a new log file, do SP5857-012 to delete the debug log data from the SD card. Then do SP5857-017.

Card Save Function

Overview

Card Save:

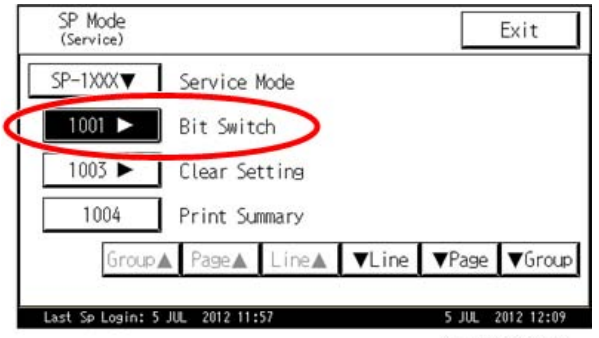
- The Card Save function is used to save print jobs received by the printer on an SD card with no print output. Card Save mode is toggled using printer Bit Switch #1 bit number 4. Card Save will remain enabled until the SD card becomes full, or until all file names have been used.
- Captures are stored 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.

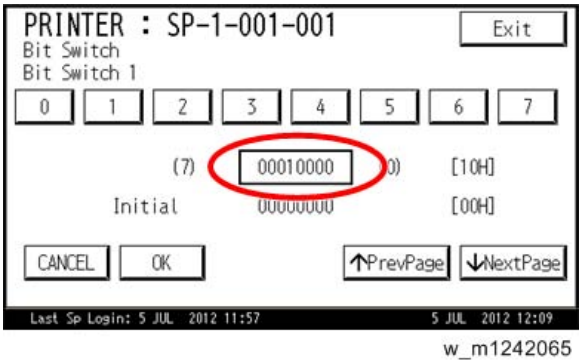
Procedure

1. Turn the main power switch OFF.
2. Insert the SD card into slot 2. Then turn the power ON.
3. Enter SP mode.
4. Select “Service".



w_m1242060

5. Select SP-1001 "Bit Switch".



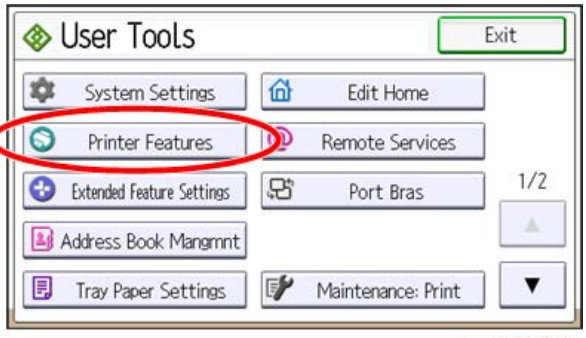
w_m1242065

6. Select “Bit Switch 1 Settings” and use the numeric keypad to turn bit 4 ON and then press the "OK” button to register the change. The result should look like: **00010000**. By doing this, Card Save option will appear in the “List/Test Print” menu.
7. Press “Exit” to exit SP Mode.



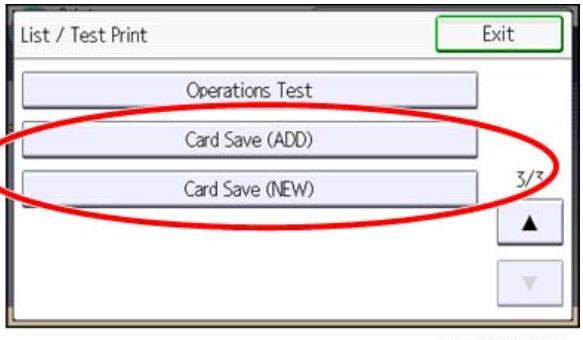
w_m1242066

8. Press the “User Tools” button.



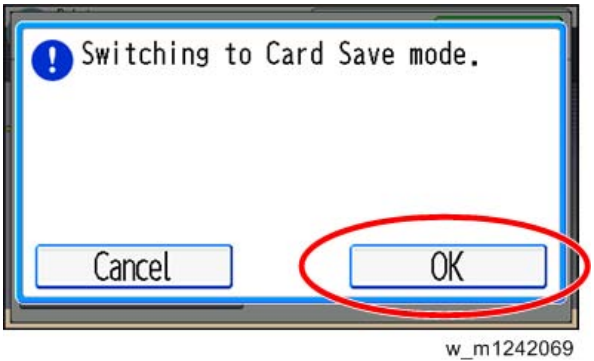
w_m1242067

9. Select “Printer Features”.



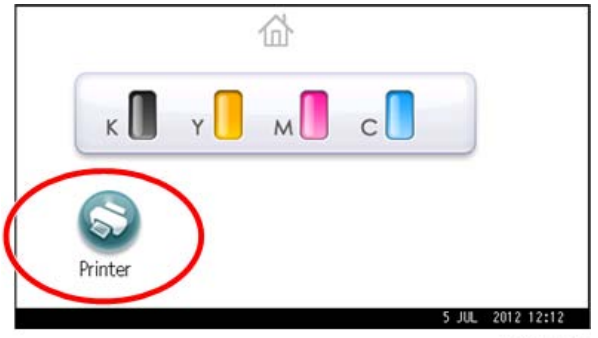
w_m1242068

10. Card Save (Add) and Card Save (New) should be displayed on the screen. Select Card Save (Add) or Card Save (New).



w_m1242069

11. Press “OK” and then exit the “User Tools” menu.



w_m1242070

12. Press the “Printer” button.



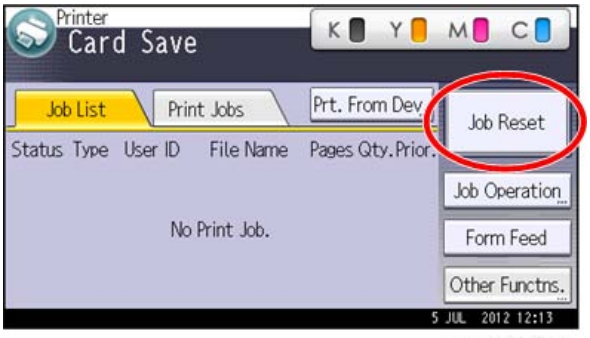
w_m1242071

13. Card Save should be displayed in the top left of the display panel.



w_m1242072

14. Send a job to the printer. The Communicating light should start blinking as shown below.
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.



w_m1242073

16. Press "Job Reset" to exit Card Save mode.
17. Change the Bit Switch Settings back to the default **00000000**. Press the "#" button in the numeric keypad to register the changes.
18. Remove the SD card after the main power switch is turned off.

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.

SMC List Card Save Function

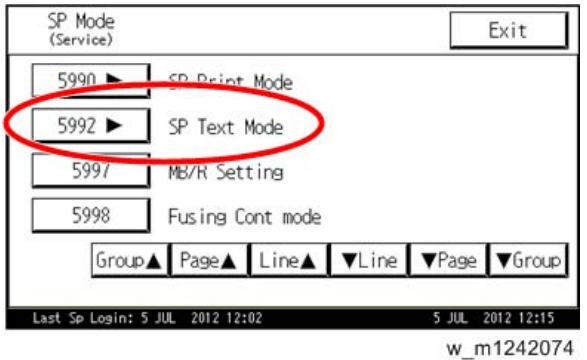
Overview

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 "Engine".



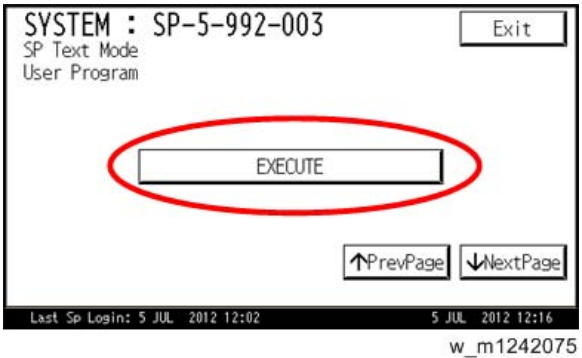
w_m1242074

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)

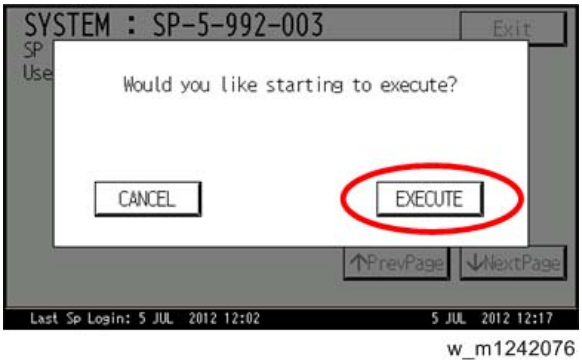
Detail No.	SMC Categories to Save
001	All (Data List)
002	SP (Mode Data List)
003	User Program
004	Logging Data

Detail No.	SMC Categories to Save
005	Diagnostic Report
006	Non-Default
007	NIB Summary
024	SDK/J Summary
025	SDK/J Application Info
026	Printer SP



w_m1242075

7. Press [EXECUTE].



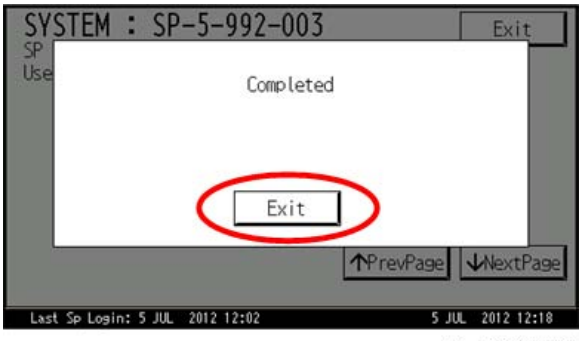
w_m1242076

8. Press [EXECUTE] again to start. Press [CANCEL] to cancel the saving.



w_m1242077

9. "It is executing it" is shown on the screen while executing.



w_m1242078

10. Wait for 2 to 3 minutes until "Completed" is shown.

Note

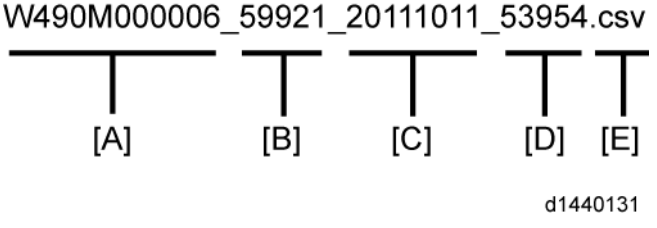
- The SMC list saving may take from 2 to 3 minutes to complete.
- Press [CANCEL] to abort executing.

11. Press [Exit] to exit from SP mode.

File Names of the Saved SMC Lists

The SMC list data saved on the SD-card will be named automatically. The file naming rules are as follows.

Example:



d1440131

A:

Machine serial number (fixed for each machine)

B:

SP number saved in this file.

First four digits (5992) in this part are fixed. The other one or two digits are the detail SP number(s). In this case, it is one digit. Therefore, this file is of SP5-992-001 (All data list). See the upper SP table for the correspondence between SP detail numbers and the contents.

C:

File creation date

Year/Month/Day ("Zero" will be omitted if each is one digit.)

D:

File creation time

Hour/Minute/Second ("Zero" will be omitted if each is one digit.)

E:

File Extension CSV (Comma Separated Value)

This part is fixed.

Note

- A folder named by the machine serial number will be created on the SD card when this function is executed.
- This function can save the SMC list data only to an SD card inserted into the operation panel SD card slot.

Error Messages

SMC List Card Save error message:

- **Failed:**

  FACTOR: Read-only file system, No space left on device.

If an error occurs, pressing "Exit" will cause the device to discard the job and return to the ready state.

6. Troubleshooting

Service Call

Service Call Conditions

The "SC Table" section shows the SC codes for controller errors and other errors. The latter (not controller errors) are put into four types. The type is determined by their reset procedures. The table shows the classification of the SC codes.

	Key	Definition	Reset Procedure
Controller errors	CTL	The error has occurred in the controller.	See "Troubleshooting Procedure" in the table.
Other errors	A	The error involves the fusing unit. The machine operation is disabled. The user cannot reset the error.	Turn the main switch off and on. Reset the SC (set SP5-810-1 or SP5-810-2). Turn the main switch off and on. **Note:** If fusing hardware errors (SC544/554/564/574) occur, replacing fusing unit is necessary to reset SC.
	B	The error involves one or some specific units. The machine operates as usual, excluding the related units.	Turn the operation switch off and on.
	C	The error is logged. The SC-code history is updated. The machine operates as usual.	The SC will not show. Only the SC history is updated.
	D	The machine operation is disabled. You can reset the machine by turning the operation switch or main switch off and on. If the error occurs again, the same SC code is displayed.	Turn the operation switch or main power switch off and on.

After you turn the main power switch off, wait for one second or more before you turn the main power switch on (See SC 672). All SCs are logged. The print log data (SP5-990-004) in SP mode can check the latest 10 SC codes detected and total counters when the SC code is detected.

Note

- If the problem concerns electrical circuit boards, first disconnect then reconnect the connectors before you replace the PCBs.
- If the problem concerns a motor lock, first check the mechanical load before you replace motors or sensors.

SC Code Classification

The table shows the classification of the SC codes:

Class 1	Section	SC Code	Detailed section
1XX	Scanning	100 -	Scanner
		190 -	Unique for a specific model
2XX	Laser exposure	200 -	Polygon motor
		220 -	Synchronization control
		230 -	FGATE signal related
		240 -	LD control
		280 -	Unique for a specific model
		290 -	Shutter
3XX	Image development 1	300 -	Charge
		330 -	Drum potential
		350 -	Development
		380 -	Unique for a specific model

Class 1	Section	SC Code	Detailed section
4XX	Image development 2	400 -	Image transfer
		420 -	Paper separation
		430 -	Cleaning
		440 -	Around drum
		460 -	Unit
		480 -	Others
5XX	Paper feed / Fusing	500 -	Paper feed
		515 -	Duplex
		520 -	Paper transport
5XX	Paper feed / Fusing	530 -	Fan motor
		540 -	Fusing
		560 -	Others
		570 -	Unique for a specific model
6XX	Communication	600 -	Electrical counters
		620 -	Mechanical counters
		630 -	Account control
		640 -	CSS
		650 -	Network
		670 -	Internal data processing
		680 -	Unique for a specific model
7XX	Peripherals	700 -	Original handling
		720 -	Two-tray finisher
		740 -	Booklet finisher

Class 1	Section	SC Code	Detailed section
8XX	Controller	800 -	Error after ready condition
		820 -	Diagnostics error
		860 -	Hard disk
		880 -	Unique for a specific model
9XX	Others	900 -	Counter
		920 -	Memory
		990 -	Others

SC Table

Service Call Tables - 1

SC1xx: Scanning

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
195	D	Serial Number Mismatch
		Checking if the serial number matches
		Serial numbers (11 digits) do not match.
		Input the serial number.

Service Call Tables - 2

SC 2xx: Exposure

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
202	D	Polygon motor error 1: ON timeout
		The polygon mirror motor does not reach the targeted operating speed within the specified time after turning on or changing speed.
		• Defective or disconnected harness to polygon motor driver board • Defective polygon motor driver board • Defective polygon motor • The polygon motor drive pulse is not released correctly. • The XSCRDY signal cannot be monitored.
		• Turn the main power switch off and then back on. • Replace the laser optics housing unit. • Replace the I/F harness. • Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
203	D	Polygon motor error 2: OFF timeout
		The polygon mirror motor does leave the READY status within 3 seconds after the polygon motor switches off.
		• Disconnected or defective harness to polygon motor driver board • Defective polygon motor driver board • Defective polygon motor • The polygon motor drive pulse is not released correctly. • The XSCRDY signal cannot be monitored.
		• Turn the main power switch off and on. • Replace the laser optics housing unit. • Replace the I/F harness. • Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
204	D	Polygon motor error 3: XSCRDY signal error
		The motor's unlocked status is detected by monitoring of the polygon motor ready signal during writing (during the polygon motor's steady rotation).
		• Disconnected or defective harness to polygon motor driver board • Defective polygon motor • Defective polygon motor driver board
		• Turn the main power switch off and on. • Replace the laser optics housing unit. • Replace the I/F harness. • Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
210 -01	C	Laser synchronizing detection error: end position [K]
-02	C	Laser synchronizing detection error: end position [C]

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-03	C	Laser synchronizing detection error: end position [M]
-04	C	Laser synchronizing detection error: end position [Y]
		The laser synchronizing detection signal for the end position of LDB [K], [C], [M], [Y] is not detected for 200 ms after the LDB unit turned on when detecting the main scan magnification.
		• Disconnected or defective I/F harness to laser synchronizing detection unit. • Defective laser synchronizing detection board • The laser fails to reach the photo detector. • Defective GAVD • Defective LD board or driver • Defective BCU
		• Turn the main power switch off and then back on. • Replace the laser optics housing unit. • Replace the harness. • Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
220 -01	D	Laser synchronizing detection error: start position [K]: LD1
-02	D	Laser synchronizing detection error: start position [C]: LD1
-03	D	Laser synchronizing detection error: start position [M]: LD1
-04	D	Laser synchronizing detection error: start position [Y]: LD1

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The laser synchronizing detection signal for the start position of the LDB [K], [C], [M], [Y] is not output for 600 ms after LDB unit turned on while the polygon motor is rotating normally.
		• Disconnected or defective I/F harness to laser synchronizing detection unit. • Defective laser synchronizing detection unit. • The laser fails to reach the photo detector. • Defective GAVD • Defective LD board or driver • Defective BCU
		• Turn the main power switch off and on. • Replace the laser optics housing unit. • Replace the I/F harness. • Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
221 -01	D	Laser synchronizing detection error: start position [K]: LD2
-02	D	Laser synchronizing detection error: start position [C]: LD2
-03	D	Laser synchronizing detection error: start position [M]: LD2
-04	D	Laser synchronizing detection error: start position [Y]: LD2

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The laser synchronizing detection signal for the start position of the LDB [K], [C], [M], [Y] is not output for 600 ms after LDB unit turns on while the polygon motor is rotating normally.
		• The laser fails to reach the photo detector. • Defective GAVD • Defective LD driver • Defective LDB • Defective BCU
		• Turn the main power switch off and on. • Replace the laser optics housing unit. • Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
230 -01	D	FGATE ON error: K
-02	D	FGATE ON error: C
-03	D	FGATE ON error: M
-04	D	FGATE ON error: Y
		The PFGATE ON signal does not assert within 600 ms after processing the image in normal job or MUSIC for start position [K], [C], [M], [Y].
		• Defective ASIC • Disconnected or defective harness between BCU and controller board • Disconnected or defective harness between BCU and LDB
		• Turn the main power switch off and on. • Replace the BCU. • Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
231 -01	D	FGATE OFF error: K
-02	D	FGATE OFF error: C
-03	D	FGATE OFF error: M
-04	D	FGATE OFF error: Y
		• The PFGATE ON signal still asserts within 600 ms after processing the image in normal job or MUSIC for end position [K], [C], [M], [Y]. • The PFGATE ON signal still asserts when the next job starts.
		• Defective ASIC • Defective GAVD
		• Turn the main power switch off and on. • Replace the BCU. • Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
240 -01	C	LD error: K
-02	C	LD error: C
-03	C	LD error: M
-04	C	LD error: Y

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		• The LD driver's error signal is detected after LD initialization. • An error is detected while initializing P-MAC, which detects Ith/In of the LD.
		• Worn-out LD • Defective LD drive component • Disconnected or broken harness of the LD
		• Turn the main power switch off and on. • Replace the laser optics-housing unit. • Replace the BCU. • Replace the harness.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
270	D	GAVD communication error
		On startup, Read/Write performed for the same register does not match.
		• Defective GAVD • Defective eSOC • Defective BCU • Defective harness
		• Turn the main power switch off and on. • Replace the laser optics-housing unit. • Replace the BCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
285	D	Line position adjustment (MUSIC) error
		Line position adjustment fails four consecutive times.
		• Pattern sampling error (insufficient image density) • Defective TD sensors for the line position adjustment • Defective image transfer belt unit • Defective PCDU(s) • Defective laser optics housing unit
		• Check and reinstall the image transfer belt unit and PCDUs. • Check if each toner bottle has enough toner. • Replace the TD sensor. • Replace the image transfer belt unit. • Replace the PCDU(s). • Replace the laser optics housing unit.

Service Call Tables - 3

SC3xx: Image Processing – 1

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
312 -01	D	Charge P.P. output error: K
-02	D	Charge P.P. output error: C
-03	D	Charge P.P. output error: M
-04	D	Charge P.P. output error: Y

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The feedback voltage of the charge AC for each color is 0.3 V or less for 200 ms after the charge AC has been turned on.
		• Disconnected or broken harnesses of the HVPS • Disconnected or broken PCU • Defective HVPS (C/B) • Loose connection • Broken harness
		• Reinstall or replace the harnesses of the HVPS. • Reinstall or replace the PCU. • Replace the HVPS (C/B). • Reconnect the connector.

SC3xx: Image Processing – 2

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
360 -01	D	TD sensor adjustment error: K
-02	D	TD sensor adjustment error: C
-03	D	TD sensor adjustment error: M
-04	D	TD sensor adjustment error: Y
		During TD sensor initialization, the output value of the black, cyan, magenta, or yellow TD sensor is not within the range of the specified value with SP3-238-001 to -004 (default: 2.5V) ±0.2V
		• A TD sensor-related part is faulty. • A TD sensor-related part's connection is loose. • The developer's toner thickness differs from that of the initial developer.
		• Turn the main power switch off and then back on. • Replace the PCU.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
361 -01	D	TD sensor (Vt high) error 1: K
-02	D	TD sensor (Vt high) error 1: C
-03	D	TD sensor (Vt high) error 1: M
-04	D	TD sensor (Vt high) error 1: Y
		• The Vt value of the black, magenta, cyan, or yellow TD sensor exceeds the specified value (default: 4.7V) with SP3-020-002 for twenty counts. • The [Vt - Vtref] value of the black, cyan, magenta, or yellow TD sensor exceeds the specified value (default: 5.0V) with SP3-020-001.
		• A TD sensor-related part is faulty. • A TD sensor-related part's connection is loose. • Toner density error
		• Turn the main power switch off and then back on. • Replace the AIT (development unit).

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
362 -01	D	TD sensor (Vt low) error 2: K
-02	D	TD sensor (Vt low) error 2: C
-03	D	TD sensor (Vt low) error 2: M
-04	D	TD sensor (Vt low) error 2: Y
		The Vt value of the black, magenta, cyan, or yellow TD sensor is below the specified value with SP3-020-004 (default: 0.5V) for 10 counts.
		• A TD sensor's connection is loose. • Toner density error
		• Turn the main power switch off and then back on. • Replace the AIT (development unit).

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
370	D	ID sensor adjustment error
		When the Vsg error counter reaches "3", the machine detects "SC370". The Vsg error counter counts "1" when the Vsg detected by ID sensor is more than the value (default: 4.5V) specified with SP3-324-005 or less than the value (default: 3.5V) specified with SP3-324-006.
		• The ID/TD sensor-related part is faulty. • The ID/TD sensor-related part's connection is loose. • The ID/TD sensor's optical path is dirty. • ID/TD sensor detection surface dirty
		• Replace the ID/TD sensor. • Replace the IOB. • Check the connection. • Clean the sensor parts. • Replace/repair the image transfer unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
390 -01	C	Drum gear position sensor error: K
-02	C	Drum gear position sensor error: C
-03	C	Drum gear position sensor error: M
-04	C	Drum gear position sensor error: Y

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The machine does not detect the drum position signal for 3 seconds at the drum phase adjustment.
		• Dirty sensor • Defective sensor • The connection is faulty. • Broken harness
		• Clean/replace the sensor. • Reconnect the connector. • Check the harness and other parts to solve the problem, and then turn the power on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
396 -01	D	Drum/Development motor error: K
-02	D	Drum/Development motor error: C
-03	D	Drum/Development motor error: M
-04	D	Drum/Development motor error: Y
		The machine detects a High signal from the drum/development motor for 100 ms after the drum/development motor turned on.
		• Overload on the drum/development motor • Defective drum/development motor • Loose connection • Defective harness • Shorted 24 V fuse on the PSU • Defective interlock system
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Shorted 24 V fuse on the PSU. • Repair the interlock system.

Service Call Tables - 4

SC4xx: Image Processing - 3

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
441	D	Image transfer unit motor error
		When the motor is ON, the machine monitors the lock signals every 100 ms. If the High status occurs 20 times consecutively, the machine judges that the motor is not rotating correctly.
		• Motor overload • Defective motor • Loose connection • Broken harness • Shorted 24 V fuse on the PSU • Defective interlock system
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Shorted 24 V fuse on the PSU. • Repair the interlock system.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
442	D	Image transfer belt contact motor error
		The image transfer belt contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.
		• Motor overload • Defective motor • Loose connection • Disconnected harness • Shorted 24 V fuse on the PSU • Defective interlock system • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Shorted 24 V fuse on the PSU. • Replace the interlock switch. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
443	C	Image transfer unit error
		The machine detects the encoder sensor error.
		• Defective encoder sensor • Defective image transfer unit motor • Image transfer unit installation error • Loose connection • Broken harness
		• Replace the image transfer unit. • Replace the image transfer unit motor. • Reinstall the image transfer unit. • Replace the encoder sensor. • Reconnect the connector. • Replace the harness.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
452	D	Paper transfer unit contact error
		The paper transfer unit contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.
		• Motor overload • Defective motor • Loose connection • Disconnected harness • Shorted 24 V fuse on the PSU • Defective interlock system • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Shorted 24 V fuse on the PSU. • Repair the interlock system. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
460	D	Separation power pack output error
		An interrupt checks the status of the power pack every 20 ms. This SC is issued if the BCU detects a short in the power pack 10 times at D(ac).
		• High-voltage leak • Loose connection • Broken harness • Defective-high voltage supply unit
		• Turn the main power switch off and on. • Reattach/replace the harness and parts on the high voltage power supply route. • Replace/reinstall the high-voltage supply unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
490	D	Toner transport motor error
		When the motor is ON, the machine monitors the lock signals every 100 ms. If the High status occurs 20 times consecutively, the machine judges that the motor is not rotating correctly.
		• Defective motor • Loose connection • Broken harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
491	D	High voltage power: Drum / development bias output error
		An error signal is detected for 200 ms when charging the drum or development.
		• High voltage leak • Loose connection • Broken harness • Defective drum unit or development unit • Defective high voltage supply unit
		• Turn the main power switch off and on. • Reattach/replace the harness and parts on the high voltage power supply route. • Replace the drum unit or development unit. • Replace the high voltage supply unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
492	C	High voltage power: Image transfer / paper transfer bias output error
		An error signal is detected for 200 ms when charging the separation, image transfer bet or paper transfer roller.
		• High voltage leak • Broken harness • Defective image transfer belt unit or paper transfer unit • Defective high voltage supply unit
		• Turn the main power switch off and on. • Reattach/replace the harness and parts on the high voltage power supply route. • Replace/reinstall the high-voltage supply unit. • Replace the high voltage supply unit.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
497	C	Temperature sensor error
		If the output value of the thermal sensor is 0.5 V or lower or 2.8 V or higher, it is judged as a sensor error and the presumptive temperature, 23 °C, is applied. If the thermal sensor is judged to have encountered a sensor error three times consecutively, the machine issues SC497-00, stops using the sensor, and feeds back the presumptive value. * However, if the power is switched off and then back on, the machine resumes its attempt to use the sensor.
		• Loose connection/Disconnected connector • Defective sensor
		• Clean/Replace the sensor. • Reconnect the connector. • Check the harness.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
498	C	Temperature and humidity sensor error 2
		• Thermal sensor output error: If the output value is 0.5 V or lower or 3.0 V or higher, it is judged as a sensor error and the presumptive temperature, 23 °C, is applied. • Humidity sensor output error: If the output value is 2.4V or higher, it is judged as a sensor error and the presumptive humidity, 50 % RH, is applied. • If a sensor error is judged to have occurred to the thermal sensor or humidity sensor three times consecutively, the machine issues SC498-00. * However, if the power is switched off and then back on, the machine resumes its attempt to use the sensor. * If the thermal sensor or humidity sensor remains capable of normal operation even after the SC is issued, the capable sensor will keep operating.
		• Loose connection/harness disconnected • Defective sensor
		• Clean/replace the sensor. • Reconnect to the connector. • Check the harness.

Service Call Tables - 5

SC5xx: Paper Feed and Fusing

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
501	B	Paper Tray 1 error
502	B	Paper Tray 2 error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		• When the tray lift motor rotates counterclockwise, (if the upper limit is not detected within 10 seconds), the machine asks the user to reset the tray. • When the tray lift motor rotates clockwise, (if the upper limit is not detected within 1.5 seconds), the machine asks the user to reset the tray. If one of these conditions occurs three consecutive times, the SC is generated.
		• Defective tray lift motor or connector disconnection • Defective upper limit sensor or connector disconnection • Motor overload • Defective motor • Loose connection • Broken harness • Defective IOB • Too much paper in the tray • Paper or other material is jammed in the parts between the tray and motor.
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
503	B	Tray 3 error (Paper Feed Unit or LCT)
		An error code is issued from the paper bank unit.
		<A model other than D581> • Defective tray lift motor or connector disconnection • Defective upper limit sensor or connector disconnection **<D581>** • Defective stack transport clutch or connector disconnection • Transfer motor error/disconnection • Defective end fence home position sensor or connector disconnection • Defective tray lift motor or connector disconnection • Defective upper limit sensor or connector disconnection • Pickup SOL error/disconnection • Right tray sensor error/disconnection
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
504	B	Tray 4 error (Paper Feed Unit or LCT)
		An error code is issued from the paper bank unit.
		The 2nd tray of D580, 1st tray of D580 when D579 and D580 are attached, the bottom D579 when two units of D579 are attached, or D631 when D581 and D631 are attached> • Defective tray lift motor or connector disconnection • Defective upper limit sensor or connector disconnection **D581 when D579 and D581 are attached** • Defective stack transport clutch or connector disconnection • Transfer motor error/disconnection • Defective end fence home position sensor or connector disconnection • Defective tray lift motor or connector disconnection • Defective upper limit sensor or connector disconnection • Pickup SOL error/disconnection • Right tray sensor error/disconnection
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
505	B	Tray 5 error (Optional Paper Feed Unit or LCT)
		An error code is issued from the paper bank unit.
		The 2nd tray of D580 when D579 and D580 are attached, or D631 when D580 and D631 are attached • Defective tray lift motor or connector disconnection • Defective upper limit sensor or connector disconnection
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
520 -01	C	Registration motor error
-02	C	Paper feed motor error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		A registration error is detected 50 times consecutively at intervals of 10 ms.
		• Motor overload • Defective motor • Loose connection • Broken harness • Defective IOB • Defective encoder
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
530	D	Fusing fan error
		The lock sensor value is monitored every 100 ms when the motor is ON. If the retrieval of the lock signal fails 100 times consecutively, it is determined as a failure to rotate properly.
		• Motor overload • Defective motor • Loose connection • Broken harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
531	D	QSU fan error
		The lock sensor value is monitored every 100 ms when the motor is ON. If the retrieval of the lock signal fails 100 times consecutively, it is determined as a failure to rotate properly.
		• Motor overload • Defective motor • Loose connection • Disconnected harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
532 -01	D	Ventilation fan (at the left side of the machine) motor error: front end
-02	D	Ventilation fan (at the left side of the machine) motor error: rear end
-03	D	Ventilation fan (at the left side of the machine) motor error: front in the middle
-04	D	Ventilation fan (at the left side of the machine) motor error: rear in the middle

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The lock sensor value is monitored every 100 ms when the motor is ON. If the retrieval of the lock signal fails 100 times consecutively, it is determined as a failure to rotate properly.
		• Motor overload • Defective motor • Loose connection • Broken harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
533 -01	D	Second duct fan error 1
-02	D	Second duct fan error 2
		The lock sensor value is monitored every 100 ms when the motor is ON. If the retrieval of the lock signal fails 100 times consecutively, it is determined as a failure to rotate properly.
		• Motor overload • Defective motor • Loose connection • Disconnected harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
534 -01	D	Third duct fan error
-02	D	Tube cooling fan error
		The lock sensor value is monitored every 100 ms when the motor is ON. If the retrieval of the lock signal fails 100 times consecutively, it is determined as a failure to rotate properly.
		• Motor overload • Defective motor • Loose connection • Broken harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
535	D	Paper exit fan error
		The lock sensor value is monitored every 100 ms when the motor is ON. If the retrieval of the lock signal fails 100 times consecutively, it is determined as a failure to rotate properly.
		• Motor overload • Defective motor • Loose connection • Broken harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
538	D	AC controller board fan error
		The lock sensor value is monitored every 100 ms when the motor is ON. If the retrieval of the lock signal fails 100 times consecutively, it is determined as a failure to rotate properly.
		• Defective motor • Loose connection • Disconnected harness • Defective IOB
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Replace the IOB.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
540	D	Fusing/Paper exit motor error
		At the fusing delivery brushless motor, the lock signal is monitored every 100 ms. If the High status occurs consecutively 20 times, it is determined as a failure to rotate properly.
		• Motor overload • Defective motor • Loose connection • Broken harness • Shorted 24 V fuse on the PSU • Defective interlock system
		• Replace the motor. • Reconnect the connector. • Replace the harness. • Shorted 24 V fuse on the PSU. • Repair the interlock system.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
541	A	Fusing sleeve belt thermopile error
		The temperature detected by the fusing sleeve belt thermopile does not reach -50°C for 0.1 seconds.
		• Defective thermopile • Defective thermistor • Loose connection
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
542	A	Fusing sleeve belt warm-up error 1
		• The fusing sleeve belt temperature does not reach 81°C for 7 seconds after the inverter turned on.
		• Dirty thermopile lenses. • Defective thermistor. • Loose connection of the thermistor. • The input voltage is outside the prescribed ratings. • This is determined after the device for preventing excessive temperature rise operates.
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
543	A	Fusing sleeve belt overheat: Center (software error)
		The detected fusing temperature stays at 240°C for 1 second for 10 consecutive times.
		• The triac switch has shorted out. • Defective IOB. • Defective BCU.
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
544	A	Fusing sleeve belt overheat: Center (hardware error)
		During stand-by mode or a print job, the detected fusing sleeve belt temperature reaches 250°C.
		• Defective PSU • Defective BCU • Defective AC control board • Defective IOB • Defective fusing control system
		• Replace the PSU. • Replace the BCU. • Replace the AC controller board. • Replace the IOB. Replace the fusing unit and reset the counter of the fusing unit using SP3-902-014. **Important:** • The fusing unit cannot be used because an abnormal high temperature was detected. After this SC occurs, the counter reset of the fusing unit should be done manually using SP3-902-014 because the counter reset is not done automatically. • After replacing fusing unit, to set SP5-810-2 is necessary to reset this SC.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
545	A	Fusing Heater error: Center
		The fusing heater keeps full power for 9 seconds or more.
		• Defective thermistors • Broken heater cables • This is determined after the device for preventing excessive temperature rise operates.
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
547	D	Zero cross error
		• After the zero-crossing interrupt setting is enabled, the machine waits for 50 ±20 ms. • If a request for zero-crossing interrupt is received while waiting, the machine retries the search after the waiting time is completed. • The detection occurs consecutively 3 times.
		• Defective fusing relay • Defective fusing relay circuit
		• Turn the main power switch off and on. • If the fusing relay is damaged, replace the PSU. • Check the connection between the PSU and control board, and then replace the harness and board if necessary.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
549	A	Fusing heater connection error
		The fusing sleeve belt rotation sensor detects the target temperature as 50°C for 5 seconds or more after the fusing/paper exit motor has turned on.
		• Broken heater cables • Loose connection
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
551	A	Fusing sleeve belt thermistor error
		The temperature at the end of the fusing sleeve belt measured by the fusing sleeve belt thermistor does not reach -50°C for 0.1 seconds.
		• Defective thermopile • Defective thermistor • Loose connection
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
552	A	Fusing sleeve belt warm-up error 2
		• The fusing sleeve belt temperature does not reach 81°C for 6 seconds after the inverter turned on.
		• Dirty thermopile lenses • Deformed thermistor
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
553	A	Fusing sleeve belt overheat: End (software error)
		The detected fusing sleeve belt temperature stays at 240°C or more for 1 second for 10 consecutive times.
		• The triac switch has shorted out. • Defective IOB • Defective BCU
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
554	A	Fusing sleeve belt overheat: End (hardware error)
		The fusing sleeve belt thermistor detects 250°C or more.
		• Defective PSU • Defective BCU • Defective AC control board • Defective IOB • Defective fusing control system
		• Replace the PSU. • Replace the BCU. • Replace the AC controller board. • Replace the IOB. • Replace the fusing unit and reset the counter of the fusing unit using SP3-902-014. **Important:** The fusing unit cannot be used because an abnormal high temperature was detected. • After this SC occurs, the counter reset of the fusing unit should be done manually using SP3-902-014 because the counter reset is not done automatically. • After replacing fusing unit, to set SP5-810-2 is necessary to reset this SC.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
555	A	Fusing Heater error: End
		The fusing heater keeps full power for 9 seconds or more.
		• Defective thermistors • Broken heater cables
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
557	C	Zero cross frequency error
		When the zero cross signal is 66 or more and it is detected 10 times or more in 11 detections, the machine determines that input 60 Hz and SC557 occurs.
		• The frequency of the power supply from the wall socket is unstable. • Caused by noise
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
559	A	Consecutive fusing jam
		The paper jam counter for the fusing unit reaches 3 times. The paper jam counter is cleared if the paper is fed correctly. This SC is activated only when SP1142-001 is set to "1" (default "0").
		Paper jam in the fusing unit
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
561	A	Pressure roller thermistor error: End
		The temperature at the end of the pressure roller measured by the thermistor does not reach 0°C for 20 seconds.
		• Defective thermopile • Defective thermistor • Loose connection
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
562 -04	A	Pressure roller thermistor warm-up error: End
		The fusing sleeve belt rotation sensor does not reach 51°C for 100 seconds after the fusing/paper exit motor has turned on with sheets of 257 mm or more in width.
		• Dirty thermopile lenses • Defective thermistor
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
563	A	Pressure roller overheat: End (software error)
		The detected pressure roller temperature stays at 230°C or more for 1 second for 10 consecutive times.
		• The triac has shorted out. • Defective IOB • Defective BCU
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
564	A	Pressure roller overheat: End (hardware error)
		The thermistor detects 240°C or more.
		• Defective PSU • Defective BCU • Defective AC control board • Defective IOB • Defective fusing control system
		• Replace the PSU. • Replace the BCU. • Replace the AC controller board. • Replace the IOB. • Replace the fusing unit and reset the counter of the fusing unit using SP3-902-014. **Important:** • The fusing unit cannot be used because an abnormal high temperature was detected. • After this SC occurs, the counter reset of the fusing unit should be done manually using SP3-902-014 because the counter reset is not done automatically. • After replacing fusing unit, to set SP5-810-2 is necessary to reset this SC.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
569 -00	D	Pressure roller contact sensor error
		Pressure roller contact sensor does not detect the pressure roller position three times.
		• Broken or defective pressure roller contact motor • Deformed or broken pressure roller contact sensor feeler • Defective fusing unit
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
569 -01	D	Fusing shutter sensor error
		Fusing shutter plate home position sensor error is detected three consecutive times.
		• Defective fusing shutter plate • Defective photo interrupter • Defective connectors
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
571	A	Pressure roller thermistor error: Center
		The center temperature of the pressure roller measured by the thermistor does not reach 0°C for 8 seconds.
		• Defective thermopile • Defective thermistor • Loose connection
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
572 -02	A	Pressure roller thermistor warm-up error: Center
		The center temperature of the pressure roller measured by the thermistor does not reach 41°C within 8 seconds after the heater turns on.
		• Dirty thermopile lenses • Deformed thermistor
		-

SC573
RTB 20

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
573	A	Pressure roller overheat : Center (software error)
		The detected pressure roller temperature stays at 230°C or more for 1 second for 10 consecutive times.
		• The triac has shorted out. • Defective IOB • Defective BCU
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
574	A	Pressure roller overheat : Center (hardware error)
		The thermistor detects 240°C or more.
		• Defective PSU • Defective BCU • Defective IOB • Defective fusing control system
		• Replace the PSU. • Replace the BCU. • Replace the IOB. • Replace the fusing unit and reset the counter of the fusing unit using SP3-902-014. **Important:** The fusing unit cannot be used because an abnormal high temperature was detected. • After this SC occurs, the counter reset of the fusing unit should be done manually using SP3-902-014 because the counter reset is not done automatically. • After replacing fusing unit, to set SP5-810-2 is necessary to reset this SC.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
581	A	NC sensor broken: Center
		The sensor detects -17°C or less for 6 seconds.
		• Defective thermopile • Defective thermistor • Loose connection
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
591	A	NC sensor broken: End
		The sensor detects -17°C or less for 6 seconds.
		• Broken cables of thermopile • Broken cables of thermistor • Loose connection
		-

Service Call Tables - 6

SC6xx: Device Communication

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
621	D	Finisher/Mail box communication error
		• An error occurs during line connection. • A communication error report is received from the UART.
		• The finisher's control board is faulty. • Defective BCU/IOB • The finisher's connection is faulty.
		• Reconnect the finisher/mail box cables. • Replace the BCU. • Replace the finisher/mail box. • Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
622	D	Paper Bank communication error
		• An error occurs during line connection. • A communication error report is received from the UART.
		• The paper bank's control board is faulty. • Defective BCU/IOB • The paper bank's connection is faulty.
		• Reconnect the paper bank cables. • Replace the BCU. • Replace the paper bank. • Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
623	D	2nd Paper Bank communication error
		An error code is issued from the paper bank unit.
		• Loose connection • Defective paper bank
		• Reconnect the connector. • Replace the paper bank. • Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
636	D	IC Card Error
-01	-	Expanded authentication module error
		There is no expanded authentication module in the machine. The SD card or the file of the expanded authentication module is broken. There is no DESS module in the machine.
		• No expanded authentication module • Defective SD card • Defective file of the expanded authentication module • No DESS module
		1. Install the expanded authentication module. 2. Install the SD card. 3. Install the DESS module. 4. Set the super service SP as follows and turn the main switch off and on. 1. User limitation: Set SP5-401-160 (expanded authentication management setting) to 0. 2. User limitation: Set SP5-401-161 (expanded authentication management detailed setting) to 0. 5. Execute SP5-876-1 (security all clear). If this is a mass-produced machine, replace the NV.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-02	-	Version error
		The version of the expanded authentication module is not correct.
		Incorrect module version
		Install the correct file of the expanded authentication module.
-11	-	OSM user code file error
		The correct "usercode" file could not be found in the root folder of the SD card because the file is not present, or the existing file is corrupted or the wrong type file.
		Create the usercode files with the User Setting Tool "IDissuer.exe" and store the files in the root folder of the SD card. **Note:** Make sure the eccm.mod file is in the root folder of the SD card.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
637	D	Tracking information notice error (Tracking application error)
-01	-	Tracking information is lost.
		The machine failed to give notice of the tracking information to the tracking SDK application.
		Turn the main power switch off and on.
-02	-	Tracking information notice error (Management server error)
		Tracking information is lost.
		The machine failed to give notice of the tracking information to the management server.
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
650	B	Communication error of the remote service modem (1)

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-01	-	• In @Remote, a communication-related error (such as that related to dial-up or modem board) occurs, or an error hindering @Remote operation is detected. • Appears only if an error occurs during @Remote operation. • Errors that occur during @Remote installation will not be handled as SCs.
		Dial-up authentication failed
		Check the following SPs. • SP5-816-156 (Dial up user name) • SP5-816-517 (Dial up password)
-04	-	Communication error of the remote service modem (2)
		• In @Remote, a communication-related error (such as that related to dial-up or modem board) occurs, or an error hindering @Remote operation is detected. • Appears only if an error occurs during @Remote operation. • Errors that occur during @Remote installation will not be handled as SCs.
		Dial up fails due to an incorrect modem setting.
		SP5-816-160: Check if the AT command is appropriate, when the SP above is appropriate, it is caused by a software bug.
-05	-	Communication error of the remote service modem (3)
		• In @Remote, a communication-related error (such as that related to dial-up or modem board) occurs, or an error hindering @Remote operation is detected. • Appears only if an error occurs during @Remote operation. • Errors that occur during @Remote installation will not be handled as SCs.
		The supplied voltage is not sufficient (due to a defective communication line or defective connection).
		No possible solutions, because the line is not supported.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-13	-	Communication error of the remote service modem (4)
		• In @Remote, a communication-related error (such as that related to dial-up or modem board) occurs, or an error hindering @Remote operation is detected. • Appears only if an error occurs during @Remote operation. • Errors that occur during @Remote installation will not be handled as SCs.
		@Remote is configured, but the modem board is not attached.
		• Install the modem board if it is not installed. • Check correct setting value for modem driver (SP5-816-160, SP5-816-165 to 171, SP5-816-188 and 189). • Replace the modem board.
-14	-	Communication error of the remote service modem (5)
		• In @Remote, a communication-related error (such as that related to dial-up or modem board) occurs, or an error hindering @Remote operation is detected. • Appears only if an error occurs during @Remote operation. • Errors that occur during @Remote installation will not be handled as SCs.
		The modem board is installed even though the setting at @Remote or the wired/wireless LAN is not working normally.
		• Uninstall the modem board if it is installed. • Check that the wired/wireless LAN is working properly.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
651	C	The remote dial-up service is not valid.
-01	-	Chat program parameter error
-02	-	Chat program execution error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		An unexpected error occurs when the modem (Cumin-M) tries to call the center with a dial up connection.
		Caused by a software bug
		No action required because this SC does not interfere with operation of the machine.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
652	D	Remote service ID2 mismatching
		ID2 for @Remote certification is mismatching between the controller board and NVRAM.
		• Used controller board installed • Used NVRAM installed An unexpected error occurs when the modem (Embedded RCG-M) tries to call the center with a dial up connection.
		If this occurs during the @Remote installation • Check the NVRAM's validity and serial number, write the common certificate, and then retry the installation. If this occurs after the @Remote installation • Clear the current @Remote setting, check the NVRAM's validity and serial number, write the common certificate, and then retry the installation.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
653	D	Incorrect remote service ID2
		If one of the following applies to the ID2 recorded in the NVRAM: • The character string is not 17 characters long. • Unprintable characters are included. • It contains spaces only. • It is blank.
		-
		• Replace the NVRAM • Clear the current @Remote setting, write the common certificate, and then retry the installation.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
669	D	EEPROM communication error
-01	D	Open error: ID error
-02	D	Open error: Channel error
-03	D	Open error: Device error
-04	D	Open error: Communication failed error
-05	D	Open error: Timeout error
-06	D	Open error: Communication suspended error
-07	D	Open error: Buffer full error
-08	D	Open error: No error code
-09	D	Close error: ID error
-10	D	Close error: No error code
-11	D	Data write error: ID error
-12	D	Data write error: Channel error
-13	D	Data write error: Device error
-14	D	Data write error: Communication failed error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-15	D	Data write error: Timeout error
-16	D	Data write error: Communication suspended error
-17	D	Data write error: Buffer full error
-18	D	Data write error: No error code
-19	D	Data read error: ID error
-20	D	Data read error: Channel error
-21	D	Data read error: Device error
-22	D	Data read error: Communication failed error
-23	D	Data read error: Timeout error
-24	D	Data read error: Communication suspended error
-25	D	Data read error: Buffer full error
-26	D	Data read error: No error code
-27	D	Device detection error: ID error
-28	D	Device detection error: Channel error
-29	D	Device detection error: Device error
-30	D	Device detection error: Communication failed error
-31	D	Device detection error: Timeout error
-32	D	Device detection error: Communication suspended error
-33	D	Device detection error: Buffer full error
-34	D	Device detection error: No error code
		Retry of EEPROM communication fails three times after the machine has detected the EEPROM error.
		Caused by noise
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
670	D	Engine start up error
		The BCU fails to respond within the prescribed time when the machine is turned on.
		• Connections between BCU and controller board are loose, disconnected, or damaged. • The engine board fails to start up. • The engine board was reset at an inappropriate time.
		• Check the connection/contact between the engine board and controller board. • Replace the engine board. • Replace the controller board or the relay board.

SC672
RTB 22a

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672 -00	D	The controller fails to start up.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		This occurs only in models with the CPU control panel. When the power is switched on, the communication line between the controller and control panel fails to open properly. Or, after the start up, the communication with the controller stops. • After the control panel's power is switched on, the Attention Code (FDH) or Attention Acknowledge Code (FEH) from the controller fails to arrive. • The control panel issues a command to the controller to check the communication line at intervals of 30 seconds, and the response to the command does not come back to the control panel. Since this is detected by the control panel, SC logging or CSS report cannot be performed for this.
		• Controller stalling • Faulty board installation • Defective controller board • Faulty connections of the harness at the control panel • Controller delay
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
681	D	Toner bottle ID: Communication error
-01	D	Device ID is not identified: K
-02	D	Device ID is not identified: M
-03	D	Device ID is not identified: C
-04	D	Device ID is not identified: Y
-06	D	Channel error: K
-07	D	Channel error: M
-08	D	Channel error: C
-09	D	Channel error: Y
-11	D	Device error: K

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-12	D	Device error: M
-13	D	Device error: C
-14	D	Device error: Y
-16	D	Communication interruption (an error during communication): K
-17	D	Communication interruption (an error during communication): M
-18	D	Communication interruption (an error during communication): C
-19	D	Communication interruption (an error during communication): Y
-21	D	Communication time-out: K
-22	D	Communication time-out: M
-23	D	Communication time-out: C
-24	D	Communication time-out: Y
-26	D	Device operation suspended (logically suspended): K
-27	D	Device operation suspended (logically suspended): M
-28	D	Device operation suspended (logically suspended): C
-29	D	Device operation suspended (logically suspended): Y
-31	D	The requested buffer is full: K
-32	D	The requested buffer is full: M
-33	D	The requested buffer is full: C
-34	D	The requested buffer is full: Y
-36	D	No error code: K
-37	D	No error code: M
-38	D	No error code: C
-39	D	No error code: Y

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Communication error occurs when the toner bottle ID starts to communicate with the toner bottle ID receptor. Retry of toner bottle ID communication fails three times after the machine has detected the toner bottle ID communication error.
		• 01-04 Damaged memory chip data • 06-09 Disconnected interface • 11-14 No memory chip on the toner cartridge • 16-9, 21-24, 26-39 Caused by noise • 31-34, 36-39 Software problem
		• Replace the toner bottle detection board. • Replace the toner cartridge. • Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
682	D	Memory chip at TD sensor: Communication error
-01	D	Device ID is not identified: K
-02	D	Device ID is not identified: M
-03	D	Device ID is not identified: C
-04	D	Device ID is not identified: Y
-06	D	Channel error: K
-07	D	Channel error: M
-08	D	Channel error: C
-09	D	Channel error: Y
-11	D	Device error: K

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-12	D	Device error: M
-13	D	Device error: C
-14	D	Device error: Y
-16	D	Communication interruption (an error during communication): K
-17	D	Communication interruption (an error during communication): M
-18	D	Communication interruption (an error during communication): C
-19	D	Communication interruption (an error during communication): Y
-21	D	Communication time-out: K
-22	D	Communication time-out: M
-23	D	Communication time-out: C
-24	D	Communication time-out: Y
-26	D	Device operation suspended (logically suspended): K
-27	D	Device operation suspended (logically suspended): M
-28	D	Device operation suspended (logically suspended): C
-29	D	Device operation suspended (logically suspended): Y
-31	D	The requested buffer is full: K
-32	D	The requested buffer is full: M
-33	D	The requested buffer is full: C
-34	D	The requested buffer is full: Y
-36	D	No error code: K
-37	D	No error code: M
-38	D	No error code: C
-39	D	No error code: Y

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Retry of memory chip communication fails three times after the machine has detected the memory chip communication error.
		• 01-04 Damaged memory chip data • 06-09 Disconnected interface • 11-14 No memory chip on the toner cartridge • 16-19, 21-24, 26-39 Caused by noise • 31-34, 36-39 Software problem
		• Replace the PCU. • Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
687	D	Memory address command error
		• Among the I/F commands with the controller, the image transfer available report (for each command) cannot be received. • The image data cannot be prepared at the controller due to a problem.
		• Communication error • An error has occurred inside the controller.
		Turn the main power switch off and on.

Service Call Tables - 7

SC7xx: Peripherals

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -24	B	Finisher exit guide plate motor error
		After moving away from the guide plate position sensor, the exit guide is not detected at the home position within the prescribed time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Guide plate motor disconnected, defective • Guide plate motor overloaded due to obstruction • Guide plate position sensor disconnected, defective
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -25	B	Finisher punch motor error
		The punch HP sensor is not activated within the specified time after the punch motor turned on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Punch HP sensor disconnected, defective • Punch motor disconnected or defective • Punch motor overload due to obstruction
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -30	B	Finisher jogger motor error
		The jogger fences move out of the home position but the HP sensor output does not change within the specified number of pulses. The 1st failure issues an original jam message, and the 2nd failure issues this SC code.
		• Jogger HP sensor disconnected, defective • Jogger motor disconnected, defective • Jogger motor overloaded due to obstruction • Finisher main board and jogger motor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -41	B	Stack feed-out motor error
		• The stack feed-out HP sensor does not detect the home position of the stack feed-out belt within the specified time after the stack feed-out belt has moved to its home position. • The stack feed-out HP sensor does not turn off 200 ms after the stack feed-out belt has moved from its home position. • The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		• Defective motor • HP sensor disconnected, defective • Motor harness disconnected, loose, defective • Motor overload
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -42	B	Finisher stapler movement motor error
		• The stapler does not return to its home position within the specified time after stapling. • The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		• Motor overload • Loose connection of the stapler home position sensor • Loose connection of the stapler movement motor • Defective stapler home position sensor • Defective stapler movement motor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -43	B	Finisher corner stapler rotation motor error
		The stapler does not return to its home position within the specified time after stapling. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective stapler rotation motor • Loose connection of the finisher corner stapler rotation motor • Overload to the stapler rotation motor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -44	B	Finisher corner stapler motor error
		• The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Staple movement is not finished after a certain time.
		• Staple jam • Loose connection • An overload has occurred due to staples applied to sheets exceeding the maximum number. • Defective home position sensor • Defective stapler motor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -52	B	Finisher folder plate motor error
		The folder plate moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Folder plate HP sensor disconnected, defective • Folder plate motor disconnected, defective • Folder plate motor overloaded due to obstruction.
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -53	B	Fold unit bottom fence motor error
		The bottom fence of the fold unit moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Motor harness disconnected, loose, defective • Motor overload • Defective motor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -55	B	Clamp roller retraction motor error
		The clamp roller retraction motor moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective motor • Loose connection • Motor overload
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -57	B	Stack junction gate motor error
		The stack junction gate moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective motor • Loose connection • Motor overload
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -60	B	Booklet stapler motor error 1
		The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. The front stapler unit saddle-stitch motor does not start operation within the specified time.
		• Staple jam • Defective motor • Loose connection • An overload has occurred due to staples applied to sheets exceeding the maximum number. • Defective home position sensor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -61	B	Booklet staple motor error 2
		The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. The rear stapler unit saddle-stitch motor does not start operation within the specified time.
		• Staple jam • Defective motor • Disconnected connector • An overload has occurred due to staples applied to sheets exceeding the maximum number. • Defective home position sensor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -70	B	Tray lift motor error
		The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers.
		• Defective motor • Loose connection • Motor overload • Defective upper tray paper height sensor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -71	B	Finisher Tray 1 shift motor error
		The shift roller HP sensor of the upper tray does not activate within the prescribed time after the shift tray starts to move toward or away from the home position. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective motor • Loose connection • Motor overload • Defective home position sensor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -72	B	Exit jogger motor 1 error
		The Exit jogger motor 1 moves but is not detected at the home position within the specified time. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		• Exit jogger motor sensor disconnected, defective • Exit jogger motor is disconnected, defective • Exit jogger motor overloaded due to obstruction
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -73	B	Exit jogger motor 2 error
		The Exit jogger motor 2 moves but is not detected at the home position within the specified time. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		• Exit jogger motor sensor disconnected, defective • Exit jogger motor is disconnected, defective • Exit jogger motor overloaded due to obstruction
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -74	B	Exit jogger evacuate motor error
		The Exit jogger evacuate motor moves but is not detected at the home position within the specified time. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		• Exit jogger evacuate motor sensor disconnected, defective • Exit jogger evacuate motor is disconnected, defective • Exit jogger evacuate motor overloaded due to obstruction
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -75	B	Stacking sponge roller motor
		Occurs during the operation of the stacking sponge roller motor.
		• Defective motor • Motor harness disconnected, loose, defective • Motor overloaded • Defective stacking roller HP sensor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -80	B	Punch movement motor error
		The punch unit moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective motor • Motor harness disconnected, loose, defective • Motor overloaded
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
720 -81	B	Paper position sensor slide motor error
		The paper position sensor moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective motor • Disconnected, loose or defective harness • Motor overloaded
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
770	B	Shift motor error
		The shift motor HP sensor does not detect any change for 1.86 seconds after the shift motor has turned on at power on or during its operation.
		• Defective shift motor • Defective shift motor HP sensor
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
791	D	Bridge unit error
		The machine recognizes the finisher, but does not recognize the bridge unit.
		• The bridge unit is not installed. • Defective bridge unit
		• Re-install the bridge unit. • Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
792	B	Finisher error
		The machine does not recognize the finisher, but recognizes the bridge unit.
		• The finisher's connection is faulty. • The finisher is not attached to a device equipped with the bridge unit. • Defective finisher
		Reconnect the finisher or bridge unit, and then turn the main power switch off and then back on.

Service Call Tables - 8

SC8xx: Overall System

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
816		Energy saving I/O sub-system error
-01	D	sub-system error
-02	D	Sysarch(LPUX_GET_PORT_INFO) error
-03	D	STR TRANSITION DENIED
-04	D	An interrupt has occurred during kernel driver communication.
-05	D	An error has occurred in the preliminary process for STR transition
-07	D	Sysarch(LPUX_GET_PORT_INFO)error
-08	D	Sysarch(LPUX_ENGINE_TIMERCTRL)error
-09	D	Sysarch(LPUX_RETURN_FACTOR_STR)error
-10	D	Sysarch(LPUX_GET_PORT_INFO)error
-11	D	Sysarch(LPUX_GET_PORT_INFO)error
-12	D	Sysarch(LPUX_GET_PORT_INFO)error
-13	D	Open () error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-14	D	Memory address command error
-15	D	Open () error
-16	D	Open () error
-17	D	Open () error
-18	D	Open () error
-19	D	Concurrent opening error
-20	D	Open () error
-22	D	Parameter error
-23	D	Read () error
-24	D	Read () error
-25	D	write () error
-26	D	Communication error in writing retry
-27	D	Communication error in writing retry
-28	D	Communication error in writing retry
-29	D	Communication error in reading retry
-30	D	Communication error in reading retry
-35	D	Read () error
-36	D	Sub-system error
-37	D	Sub-system error
-38	D	Sub-system error
-39	D	Sub-system error
-40	D	Sub-system error
-41	D	Sub-system error
-42	D	Sub-system error
-43	D	Sub-system error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-44	D	Sub-system error
-45	D	Sub-system error
-46	D	Sub-system error
-47	D	Sub-system error
-48	D	Sub-system error
-49	D	Sub-system error
-50	D	Sub-system error
-51	D	Sub-system error
-52	D	Sub-system error
-53	D	Sub-system error
-54	D	Sub-system error
-55	D	Sub-system error
-56	D	Sub-system error
-57	D	Sub-system error
-58	D	Sub-system error
-59	D	Sub-system error
-60	D	Sub-system error
-61	D	Sub-system error
-62	D	Sub-system error
-63	D	Sub-system error
-64	D	Sub-system error
-65	D	Sub-system error
-66	D	Sub-system error
-67	D	Sub-system error
-68	D	Sub-system error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-69	D	Sub-system error
-70	D	Sub-system error
-71	D	Sub-system error
-72	D	Sub-system error
-73	D	Sub-system error
-74	D	Sub-system error
-75	D	Sub-system error
-76	D	Sub-system error
-77	D	Sub-system error
-78	D	Sub-system error (Energy saving I/O sub-system error)
-79	D	Sub-system error
-80	D	Sub-system error
-81	D	Sub-system error
-82	D	Sub-system error
-83	D	Sub-system error
-84	D	Sub-system error
-85	D	Sub-system error
-86	D	Sub-system error
-87	D	Sub-system error
-88	D	Sub-system error
-89	D	Sub-system error
-90	D	Sub-system error
-91	D	Sub-system error
-92	D	Sub-system error
-93	D	Sub-system error

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-94	D	Sub-system error
		The energy saving I/O sub-system detects an error.
		• Defective energy saving I/O sub-system • The energy saving I/O sub-system detects a controller board error (No response).
		• Turn the main power switch off and on. • Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
817	D	Monitor error
		This is a file detection and electronic file signature check error when the boot loader attempts to read the self-diagnostic module, system kernel, or root system files from the OS Flash ROM, or the items on the SD card in the controller slot are false or corrupted.
		• OS Flash ROM data defective • SD card data defective
		• Change the controller firmware. • Use another SD card.

SC819
RTB 22a

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
840	D	EEPROM access error
		During the I/O processing, reading error is occurred. The 3rd reading failure issues this SC code. During the I/O processing, writing error is occurred.
		Defective EEPROM
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
841	D	EEPROM read error
		Mirrored data of the EEPROM is different from the original data in EEPROM.
		Data in the EEPROM is overwritten for some reason.
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
842	C	Nand-Flash updating verification error
		A writing error for the module written in Nand-Flash occurs when the remote ROM and ROM are updating.
		Damaged Nand-Flash
		Turn the main switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
853	B	Bluetooth device connection error (The Bluetooth interface unit was installed while the machine was turned on.)
		The Bluetooth interface unit was installed while the machine was turned on.
		Turn off the main power switch, and then confirm that the Bluetooth interface unit was installed correctly. And then, turn on the main power switch again.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
854	B	Bluetooth device removed (The Bluetooth interface unit was removed while the machine was turned on.)
		The Bluetooth interface unit was removed while the machine was turned on.
		Turn off the main power switch, and then confirm that the Bluetooth interface unit was installed correctly. And then, turn on the main power switch again.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
855	B	Hardware Problem: wireless LAN board
		The wireless LAN board can be accessed, but an error was detected.
		• Loose connection • Defective wireless LAN card
		• Make sure that the Wireless LAN connection is good. • Replace the wireless LAN card.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
857	B	USB IF error
		USB I/F cannot be used due to a driver problem.
		• An error has occurred to the USB driver.
		• Make sure that the USB connection is good. • Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
858-01	A	Data encryption conversion error (1)
		A serious error has occurred during the data conversion performed for updating the key for data encryption.
		• The data in the USB flash drive is damaged. • A communication error has occurred due to electromagnetic waves or other noise.
		• Replace the controller board. * However, if it is "-30", the machine may recover by turning the main power switch off and then back on.
-02	A	Data encryption conversion error (2)
		A serious error occurs when data is encrypted to update an encryption key.
		Defective NVRAM
		Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-30	A	Data encryption conversion error (3)
		A recoverable error has occurred before starting data conversion.
		Defective NVRAM
		• Turn the main switch off and on. • If the error reoccurs, replace the controller board.
-31	A	A serious error occurs while the data is encrypted.
		Same as SC991
		Same as SC991

No	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
859	B	HDD data encryption error
-01	B	HDD check error
		• Hard disk data conversion has been selected, but the hard disk is not installed. • The hard disk is not mounted properly.
		• No HDD installed • Hard disk formatting is not completed. • The encryption key on the board and the actual encryption key in the hard disk do not match.
		• Install the HDD correctly. • Initialize the HDD with SP5-832-001.
-02	B	Power failure during data encryption.
		The data conversion in the NVRAM or hard disk has not completed successfully.
		Power interruption has occurred during the conversion of the data in the NVRAM or hard disk
		Initialize the HDD with SP5-832-001.

No	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-10	B	Data Read/Write command error
		Due to time-out, serial communication error, or other problems in DMAC, an irregular DMAC return value has occurred consecutively two or more times
		Noise or other problems in the SATA connection
		Same as SC863

No	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
860	D	HDD startup error at main power on
		HDD is connected but a driver error is detected. The driver does not respond with the HDD within 30 seconds.
		• HDD not initialized • Label data is corrupted • Defective HDD
		Initialize the HDD with SP5-832-001.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
863	D	HDD: Read error
		The data stored in the HDD cannot be read correctly.
		A bad sector has been generated during operation.
		• Turn the main switch off and on. • Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
864	D	HDD: CRC error
		While reading data from the HDD or storing data in the HDD, data transmission fails.
		While reading data from the HDD or storing data in the HDD, data transmission fails.
		• Turn the main switch off and on. • Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
865	D	HDD: Access error
		An error is detected while operating the HDD.
		• Defective HDD
		• Turn the main switch off and on. • Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
866	B	SD card authentication error
		A correct license is not found in the SD card.
		SD-card data is corrupted.
		Store correct data in the SD card.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
867	D	SD card removal has been detected.
		The SD card is ejected from the slot.
		The SD card for launching the application has been removed from the slot.
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
868	D	SD card access error
		An error occurs while an SD card is used.
		• SD card defective • Defective SD controller.
		• Format the SD card. • Check the SD card is inserted correctly. • Replace the SD card. • Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
870		Address book error
-00	B	Any time: Address book error
-01	B	On startup: The media required for storing the address book is missing.
-02	B	On startup: Encryption is enabled, but the module (DESS) required for encryption is missing.
-03	B	During initialization: The attempt to create files for storing the address book in the device has failed.
-04	B	During initialization: The attempt to create files for storing the sender has failed.
-05	B	During initialization: The attempt to create files for storing the recipient has failed.
-06	B	During initialization: The attempt to create files for storing the data required for LDAP search has failed.
-07	B	During initialization: The attempt to format the entry data required for the system has failed.
-08	B	Device setting: The hard disk is installed, but the area for storing the address book cannot be used.
-09	B	Device setting: Inconsistencies have occurred in the NVRAM area where settings required for forming the address book are stored.
-10	B	Device setting: It is not possible to create the directory for storing the address book in the SD card or USB flash drive.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-11	B	During initialization: Inconsistencies have occurred concerning the number of entries in the address book.
-20	B	File I/O: An attempt to delete data has failed.
-21	B	File I/O: An attempt to add data has failed.
-22	B	File I/O: An attempt to check the size of a file has failed.
-23	B	File I/O: An attempt to read a file has failed.
-24	B	File I/O: An attempt to write on a file has failed.
-25	B	File I/O: An attempt to open a file has failed.
-26	B	File I/O: An attempt to create a file has failed.
-27	B	File I/O: An attempt to format a file has failed.
-30	B	Search: While searching for the address book or recipient/sender in the device, an attempt to retrieve data from a cache has failed.
-31	B	Search: During LDAP search, an attempt to retrieve data from a cache has failed.
-41	B	Cache: An attempt to retrieve data from a cache has failed.
-50	B	On startup: An error in the encrypted address book has been detected.
-51	B	Encryption setting: An attempt to create the directory required for the conversion between encrypted and plain text has failed.
-52	B	Encryption setting: An attempt to convert data from plain to encrypted text has failed.
-53	B	Encryption setting: An attempt to convert data from encrypted to plain text has failed.
-54	B	Encryption setting: While reading the encrypted address book, data inconsistencies have been detected.
-55	B	Encryption setting: While changing the encryption settings, an attempt to delete a file has failed.
-56	B	Encryption setting: While changing the encryption settings, an attempt to delete the file for keeping the key has failed.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-57	B	Encryption setting: While changing the encryption settings, an attempt to move a file has failed.
-58	B	Encryption setting: While changing the encryption settings, an attempt to delete a directory has failed.
-59	B	Encryption setting: While changing the encryption settings, lack of resources has been detected.
-60	B	Settings: An attempt to retrieve the setting for determining whether or not to enable administrator authentication has failed.
		Address book data stored on the hard disk was detected as abnormal when it was accessed from either the operation panel or the network.
		• Defective software program • Inconsistencies in the address book data links (device settings / delivery server settings / LDAP settings) • Incorrect encryption setting or encryption key • Temporary removal of the SD card or hard disk. Device configuration not matching the configuration on the application. • Damaged address book data
		• Replace the HDD. • Format the address data / configuration data (SP5-846-046). • Initialize the partition for the HDD address book (Turn the main power switch off and on) (SP5-832-006).

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
872	B	An error concerning the received e-mail data in the hard disk
		A hard disk error is detected while switching the device on
		• Defective HDD • The device was switched off while the hard disk was being accessed.
		• Perform SP5832-007 to format the hard disk. • Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
873	B	An error concerning the transmitted e-mail data in the hard disk
		A hard disk error is detected while switching the device on
		• Defective HDD • The device was switched off while the hard disk was being accessed.
		• Perform SP5832-007 to format the hard disk. • Replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
875		Delete All error: HDD
-01	D	hddcheck -i error
-02	D	Data deletion has failed.
		• The logical format for the HDD fails. • The deletion of the data in a module has failed.
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
876	D	Log Data Error
-01	D	Log Data Error 1
		An error was detected in the handling of the log data at power on or during machine operation.
		Damaged log data file in the HDD
		Initialize the HDD with SP5-832-004.
-02	D	Log Data Error 2
		An error was detected in the handling of the log data at power on or during machine operation.
		A controller board not installed
		• Replace or set again the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-03	D	Log Data Error 3
		An error was detected in the handling of the log data at power on or during machine operation.
		Invalid log encryption key due to defective NVRAM data
		• Initialize the HDD with SP5-832-007.
-04	D	Log Data Error 4
		An error was detected in the handling of the log data at power on or during machine operation.
		• The log data is encrypted, even though the log encryption setting is set to inactive. • The log data is not encrypted, even though the log encryption setting is set to active.
		Initialize the HDD with SP5-832-004.
-05	D	Log Data Error 5
		An error was detected in the handling of the log data at power on or during the machine operation.
		• Only the NVRAM was replaced to that of another model. • Only the hard disk was replaced to that of another model.
		• Reinstall the previous NVRAM. • Reinstall the previous HDD. • Initialize the HDD with SP5-832-004.
-99	D	Log Data Error 99
		An error was detected in the handling of the log data at power on or during machine operation.
		Other than the above causes
		-

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
877	B	HDD Data Overwrite Security SD card error
		The Data Overwrite Security Unit's function to delete the data one by one is enabled, but the present situation prevents one-by-one data deletion.
		• Defective SD card for Overwrite Security Unit • SD card for Data Overwrite Security Unit is not installed
		• If the SD card is damaged, prepare another SD card for Data Overwrite Security, and then replace the NVRAM on the device. • If the SD card is removed, switch the device off, and then insert a normal SD card for Data Overwrite Security.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
878 -00	D	TPM electronic recognition error
		The system firmware is not authenticated by TPM. The system hash value registered in the TPM at the machine's system startup does not match that registered in the USB flash drive.
		• The system module was updated without going through the formal update process. • Incorrect operating of the USB flash.
		Replace the board.
-01	D	USB Flash error
		An error has occurred in the file system in the USB flash drive.
		The file system of the USB flash drive is damaged.
		Replace the controller board.
-02	D	TPM error
		An error has occurred in the TPM or TPM driver.
		Defective TPM
		Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-03	D	TCSD error
		An error has occurred in the TPM software stack.
		• The TPM software stack cannot be launched. • The file required for the TPM software stack is missing.
		Replace the controller board.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
881 -01	D	Authentication area error
		This detects a problem with the software.
		• This is issued due to the accumulation of abnormal authentication data in the software. • This is issued during authentication.
		Turn the main power switch off and on.

Service Call Tables - 9

SC9xx: Miscellaneous

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
900	D	Electric counter error
		The total count contains something that is not a number.
		• NVRAM incorrect type • Defective NVRAM. • NVRAM data scrambled • Unexpected error from external source • If the requested count has not completed during PRT reception for SRM
		• Replace the NVRAM.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
920		Printer application error (The printer cannot be used.)
-00	B	No response when starting up the PM
		An error is detected in the printer application program and operation cannot continue.
		• Defective software • Unexpected hardware resource (e.g., memory shortage)
		Turn the main power switch off and on.
-01	B	Timeout error during the PM operation
		An error is detected in the printer application program and operation cannot continue.
		• Defective software • Unexpected hardware resource (e.g., memory shortage)
		Turn the main power switch off and on.
-02	B	The WORK memory cannot be retrieved.
		An error is detected in the printer application program and operation cannot continue.
		• Defective software • Unexpected hardware resource (e.g., memory shortage)
		• Turn the main power switch off and on. • Add memory.
-03	B	Cannot start-up the filtering process
		An error is detected in the printer application program and operation cannot continue.
		• Defective software • Unexpected hardware resource (e.g., memory shortage)
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-04	B	Abnormal exit from the filtering process
		An error is detected in the printer application program and operation cannot continue.
		• Defective software • Unexpected hardware resource (e.g., memory shortage)
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
921		Printer font error
-00	B	The resident font is missing.
		A necessary font is not found when starting up the printer application.
		The font file supplied for standard installation is missing.
		Turn the main power switch off and on.
-01	B	The optional font is missing.
		A necessary font is not found when starting up the printer application.
		Optional emulation font file is not found.
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
925	B	NetFile function error
		The NetFile file management on the HDD cannot be used, or a NetFile management file is corrupted and operation cannot continue.
		• Defective HDD • Hard disk data inconsistencies due to power interruption during writing to the hard disk • Defective software

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		• Turn the main power switch off and on. • Initialize the NetFile partition on the HDD (SP5-832-002). • Initialize all partition on the HDD (SP5-832-001). • Replace the HDD.

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

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

If the machine does not show one of the five HDD errors (SC860 to SC865), turn the machine power off and on. If this is not the solution for the problem, then initialize the NetFile partition on the HDD with SP5832-011 (HDD Formatting – Ridoc I/F).

NetFiles: Jobs printed from the document server using a PC and DeskTopBinder

- Before you initialize the NetFile partition on the HDD, tell the customer that:
- Received faxes on the delivery server will be erased
- All captured documents will be erased
- DeskTopBinder/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).

Before you initialize the Netfile partition with SP5832-011, do these steps:

1. Go into the User Tools mode and do "Delivery Settings" to print all received fax documents that are scheduled for delivery. Then erase them.
2. In the User Tools mode, do Document Management> Batch Delete Transfer Documents.
3. Do SP5832-011, then turn the machine power off and on.

Procedure 3

If "Procedure 2" is not the solution for the problem, do SP5832-001 (HDD Formatting – All), then turn the machine power off and on.

SP5832-001 erases all document and address book data on the hard disks. Ask the customer before you do this SP code.

Procedure 4

If "Procedure 3" is not the solution for the problem, replace the HDD.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
990	D	Software performance error
		The software makes an unexpected operation.
		• Argument error • Internal parameter incorrect • Insufficient working memory • Abnormal operation due to an error that cannot be detected by the hardware according to the regular SC detection
		Logging only.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
991	C	Software continuity error
		The software has attempted to perform an unexpected operation. However, unlike SC 990, the object of the error is continuity of the software.
		• Argument error • Internal parameter incorrect • Insufficient working memory • Abnormal operation due to an error that cannot be detected by the hardware according to the regular SC detection
		Logging only.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
992	D	Undefined error
		If an SC not managed by the system is issued
		• In cases such as using a tool for the previous model • Software problem
		Turn the main power switch off and on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
995	D	CPM setting error
-01	D	• Defective BCU • NVRAM Replacement error
		• Install the previous NVRAM • Input the serial number with SP5-811-004, and turn the main power switch off and on.
-02	D	• Defective NVRAM • Defective controller
		Perform SP5-825 to download the appropriate data to the NVRAM, and then turn the main power switch off and then back on.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
-03	D	The serial number cannot be identified due to a mistake during controller replacement or mechanical failure.
		Replace the controller with the correct type.
-04	D	-
		Place all parts in the initial state, and then replace the parts according to the procedures described in the manuals.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
997	B	Application function selection error
		The application selected by the operation panel key works abnormally (No response, abnormal ending).
		Defective software
		• Check the devices (e.g., RAM, DIMM and board) necessary for the application programs. • Check that downloaded application programs are correctly configured.

No.	Type	Details (Symptom, Possible Cause, Troubleshooting Procedures)
998	D	Application start error
		• No applications start within a specified time after the power is turned on. • If all applications do not operate normally due to a problem even after launching the applications
		• Defective software • The optional RAM, DIMM, and boards required for the applications are not installed properly.
		• Turn the main power switch off and on. • Check if the RAM-DIMM and ROM-DIMM are correctly connected. • Reinstall the controller system firmware. • Replace the controller board.

Note 1

If a problem always occurs in a specific condition (for example. printer driver setting, image file), the problem may be caused by a software error. In this case, the following data and information needs to be sent back to your product specialist. Please understand that it may take some time to get a reply on how to solve the problem, because in some cases the design staff in Japan must analyze the data.

- Symptom / Possible Causes / Action taken
- Summary sheet (SP mode "Printer SP", SP1-004 [Print Summary])
- SMC - All (SP5-990-001)
- SMC - Logging (SP5-990-004)
- Printer driver settings used when the problem occurs
- All data displayed on the screen (SC code, error code, and program address where the problem is logged.)
- Image file which causes the problem, if possible

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.	• A cover was opened or the main switch was turned off during the initialization. 1. Do the developer initialization again when done in SP mode. Reinstall the engine main firmware if the result is the same. 2. Turn the main switch off and on when done at unit replacement.
6	Vt error	Vt is more than 0.7V when Vcnt is 4.3V.	1. Make sure that the heat seal on the development unit is not removed. 2. Defective TD sensor
7	Vcnt error 1	Vcnt is less than 4.7V when Vcnt is Vt target ±0.2V.	1. Defective TD sensor 2. Vt target settings are not correct. 3. Toner density error
8	Vcnt error 2	Vt is more than 0.7V when Vcnt is 4.3V and Vcnt is less than 4.7V when Vcnt is Vt target ±0.2V.	1. Make sure that the heat seal on the development unit is not removed. 2. Defective TD sensor
9	Vcnt error 3	Vcnt is less than 4.7V.	1. Make sure that the heat seal on the development unit is not removed 2. Defective TD sensor 3. Vt target settings are not correct. 4. Toner density error

Note

- The machine starts developer initialization after you set “Enable” in SP3-902-005, 006, 007, or 008. Developer initialization automatically resumes when you open and close the front door or turn the main switch off and on if an error other than Error 8 occurs.

Process Control Self-Check Result

Displayed number shows results of each color sensor check.

00000000 = YYCCMMKK

SP3-012-001 to -010 (Process Control Self-check Result)

No.	Result	Description	Possible Causes/Action
11	Successfully completed	Process control self-check successfully completed.	Check the Vsg adjustment. See the "Vsg Adjustment Result" following this table.
41	Vt error	Vt maximum or minimum error is detected.	• Defective development unit Vt maximum error and an image is faint: 1. Replace the toner supply pump unit. Vt maximum error and an image is O.K: 1. Replace the development unit. 2. Replace the IOB board. Vt minimum error: 1. Replace the development unit. 2. Replace the IOB board.
53	ID sensor coefficient (K5) detection error	Not enough data can be sampled.	• Solid image is not sufficient density: 1. Retry the process control. 2. Replace the ID sensors. 3. Replace the IOB board. • Solid image is O.K. 1. Replace the ID sensors. 2. Replace the IOB board. • ID sensor is dirty: 1. Clean the ID sensors. 2. Retry the process control.

No.	Result	Description	Possible Causes/Action
54	ID sensor coefficient (K5) maximum/ minimum error	When the K5 is more than the value of SP3-362-003 or less than the value of SP3-362-004, the error 54 is displayed.	• ID sensor pattern density is too high or low. • ID sensor or shutter is defective. Same as 53
55	Gamma error: Maximum	Gamma is out of range. 5.0 < Gamma	• ID sensor pattern density is too high. • Hardware defective. Same as 53
56	Gamma error: Minimum	Gamma is out of range. Gamma < 0.15	• ID sensor pattern density is too low. • Hardware defective. 1. Same as 53 2. Replace the toner supply pump unit.
57	Vk error: Maximum	Vk is out of range. 150 < Vk	• ID sensor pattern density is too low. • Hardware defective. Same as 53
58	Vk error: Minimum	Vk is out of range. Vk < –150	• ID sensor pattern density is too high. • Background dirty • Hardware defective Same as 53
59	Sampling data error during gamma correction	Not enough data can be sampled during the gamma correction.	• ID sensor pattern density is too high or low. • Hardware defective Same as 53
99	Unexpected error	Process control fails.	• Power Failure Check the power source.

Vsg Adjustment Result

SP3-325-001 to -010 (Vsg Adjustment Result)

No.	Result	Description	Possible Causes/Action
1	O.K	Vsg adjustment is correctly done.	-
2	ID sensor adjustment error	Vsg cannot be adjusted within 4.0 ±0.5V.	• Dirty ID sensor (toner, dust, or foreign material) • Dirty transfer belt • Scratched image transfer belt • Defective ID sensor • Poor connection • Defective IOB 1. Clean the ID sensor. 2. Check the belt cleaning. Clean or replace the transfer belt. 3. Replace the image transfer belt. 4. Replace the ID sensor. 5. Check the connection. 6. Replace the IOB board.
3	Vsg Adjustment error	ID sensor output is more than "Voffset Threshold" (SP3-324-004)	• Defective ID sensor • Poor connection • Defective IOB 1. Replace the ID sensor. 2. Check the connection. 3. Replace the IOB board.
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 (MUSIC Execution Result Error Result: M, C, Y)

This SP shows the number as a line position adjustment result on the LCD. It shows which color has an error (M, Y or C).

No.	Result	Description	Note
0	Not done	Line position adjustment has not been done.	-
1	Completed successfully	Line position adjustment has correctly been done,	-
2	Cannot detect patterns	ID sensors have not detected the patterns for line position adjustment.	See Note
3	Fewer lines on the pattern than the target	The patterns, which ID sensors have detected, are not enough for line position adjustment.	See Note
4	More lines on the pattern than the target	Not used in this machine.	-
5	Out of the adjustment range	ID sensors have correctly detected the patterns for line position adjustment, but a shift of patterns is out of adjustable range.	See Note
6-9	Not used	-	-

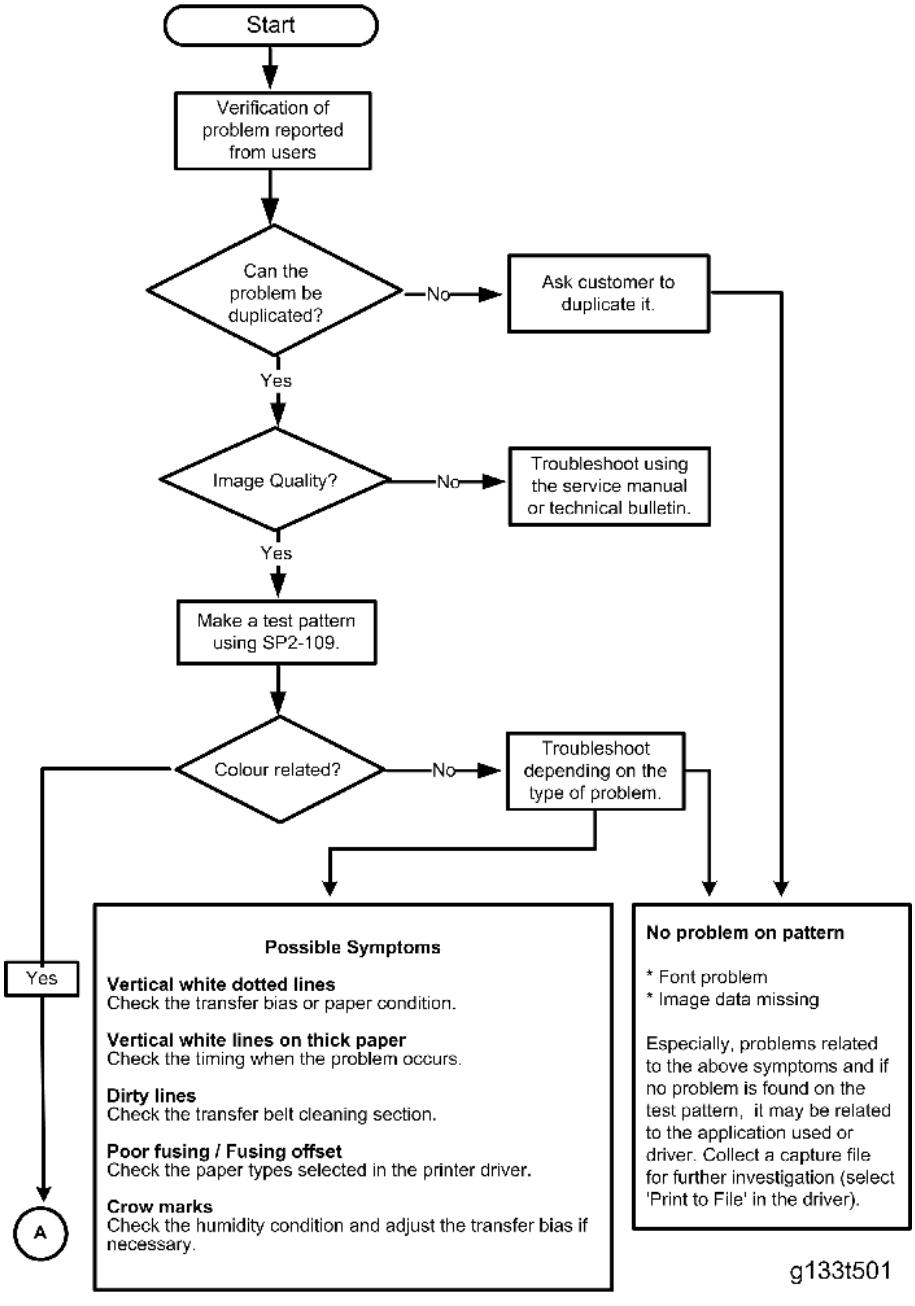
Note

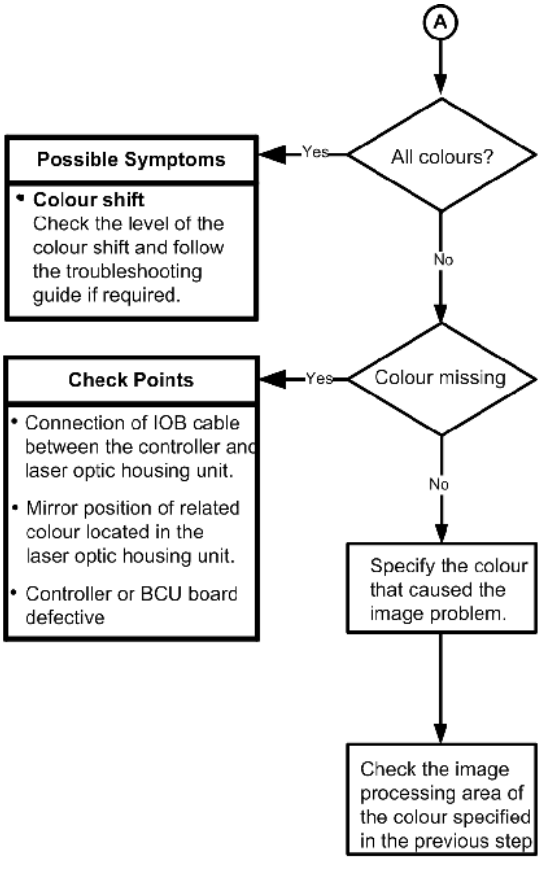
- For details, see the "Troubleshooting Guide - Line Position Adjustment" section.

Troubleshooting Guide

Image Quality

The following work-flow shows the basic troubleshooting steps for the image quality problems on this product.


Start
Verification of problem reported from users
Can the problem be duplicated?
No
Ask customer to duplicate it.
Yes
Image Quality?
No
Troubleshoot using the service manual or technical bulletin.
Yes
Make a test pattern using SP2-109.
Colour related?
No
Troubleshoot depending on the type of problem.
Yes
A
Possible Symptoms
Vertical white dotted lines
Check the transfer bias or paper condition.
Vertical white lines on thick paper
Check the timing when the problem occurs.
Dirty lines
Check the transfer belt cleaning section.
Poor fusing / Fusing offset
Check the paper types selected in the printer driver.
Crow marks
Check the humidity condition and adjust the transfer bias if necessary.
No problem on pattern
* Font problem
* Image data missing
Especially, problems related to the above symptoms and if no problem is found on the test pattern, it may be related to the application used or driver. Collect a capture file for further investigation (select 'Print to File' in the driver).
g133t501



Considerable Symptoms
• **Toner blasting** Check which colour is blasting and adjust the toner limit or transfer bias. • **Image density change** Check when the problem is reported and follow the necessary steps. • **Dirty Background** Check in which condition the problem is reported, and follow the required procedure. • **Colour vertical bands/lines/dirty background** Check the OPC drum and/or development unit. • **Colour shift** Check the level of the colour shift and follow the troubleshooting guide if required. • **Colour lines/bands/dirty background** When the PCU unit is close to its life end, the developer or the cleaning blade of the PCU wears out, causing vertical colour lines, bands, or dirty background. Check the related colour unit and replace it if necessary.

g188t502

Line Position Adjustment

When there are color registration errors on the output, do the line position adjustment as follows.

Note

- Use A3/DLT size paper for this adjustment.

Test

1. Do SP2-111-003 (Mode c: rough adjustment).
2. Use SP2-194-007 to check if the result of the line position adjustment is correct (0: Completed successfully, 1: Not completed). If the result is "1", refer to 'Countermeasure list for color registration errors'.
3. Do SP2-111-001 (Mode a: fine adjustment twice).
4. Use SP2-194-007 to check if the result of the line position adjustment is correct (0: Completed successfully, 1: Not completed). If the result is "1", refer to 'Countermeasure list for color registration errors'.
5. Put some A3/DLT paper on the by-pass tray.

   Note

   - When you print a test pattern, use the by-pass tray to feed the paper.
6. Print out test pattern "7" with SP2-109-003.
7. Check the printed output with a loupe.
8. If there are no color registration errors on the output, the line position adjustment is correctly done. If not, refer to the countermeasure list for color registration errors.

Countermeasure list for color registration errors

After Executing SP2-111-003

- Result: "1" in SP2-194-007
- Result: "2" or "3" (Line pattern detection failure) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
White image, Abnormal image, Low density	• Defective laser optics housing unit shutter • Defective image processing unit • Low density of test pattern • Defective BB 1. Replace the shutter motor. 2. Replace the high voltage power supply unit. 3. Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx). 4. Replace the BB.
Normal image, but with color registration errors	• Defective ID sensor shutter • Defective ID sensor • Defective BB 1. Replace the ID sensor shutter solenoid. 2. Replace the ID sensor. 3. Replace the BB.

After Executing SP2-111-003

- Result: "1" in SP2-194-007
- One of results: "5" (Out of adjustable range) in SP2-194-010, -011, -012.

Test pattern check	Possible cause/Countermeasure
The main scan registrations of Y, M, C are shifted by more than ±15 mm from the main scan registration of K.	• Defective laser optics housing unit • Defective BB 1. Replace the laser optics housing unit. 2. Replace the BB.
The sub scan registrations of Y, M, C are shifted by more than ±20 mm from the sub scan registration of K.	• Defective image transfer belt • Defective drive units • Defective BB 1. Replace the image transfer belt. 2. Replace the drum motor. 3. Replace the BB.

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.	• Defective ID sensor at center • Deformed center area on the image transfer belt • Defective BB 1. Replace the ID sensor. 2. Replace the image transfer belt. 3. Replace the BB.
The skew for Y, M, C is more than ±0.75 mm from the main scan registration of K	• Defective PCDU • Defective laser optics housing unit • Defective BB 1. Reinstall or replace the PCDU. 2. Replace the laser optics housing unit. 3. Replace the BB.
Others	• Skew correction upper limit error • Defective BB • Defective laser optics housing unit 1. Replace the BB. 2. Replace the laser optics housing unit.

After Executing SP2-111-003

- Result: "1" in SP2-194-007
- Result: "0" in SP2-194-010, -011, -012.

Test pattern check	Possible cause/Countermeasure
	Do SP2-111-001 or -002.

After Executing SP2-111-001

- Result: "1" in SP2-194-007
- Result: "2" or "3" (Line pattern detection failure) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
White image, Abnormal image, Low density	• Defective laser optics housing unit shutter • Defective image processing unit • Low density of test pattern • Defective BB 1. Replace the shutter motor. 2. Replace the high voltage power supply unit. 3. Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx). 4. Replace the BB.
Normal image, but with color registration errors	• Defective ID sensor shutter • Defective ID sensor • Defective BB 1. Replace the ID sensor shutter solenoid. 2. Replace the ID sensor. 3. Replace the BB.

After Executing SP2-111-001

- Result: "1" in SP2-194-007
- Result: "5" (Out of adjustable range) in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
Low image density on the output	• Low pattern density Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx).
The main scan registrations of Y, M, C are shifted by more than ±1.4 mm from the main scan registration of K.	• No defective component • Defective laser optics housing unit • Defective BB 1. Do SP2-111-003 again. 2. Replace the laser optics housing unit. 3. Replace the BB.

Test pattern check	Possible cause/Countermeasure
The sub scan registrations of Y, M, C are shifted by more than ±1.4mm from the sub scan registration of K.	• No defective component • Defective image transfer belt • Defective drive units • Defective BB 1. Do SP2-111-003 again. 2. Replace the image transfer belt. 3. Replace the drum motor. 4. Replace the BB.
The main scan registration is shifted by more than ±0.66 mm, but only at the central area of the image on the output.	• Defective ID sensor at center • Deformed center area on the image transfer belt • Defective BB 1. Replace the ID sensor. 2. Replace the image transfer belt. 3. Replace the BB.
The skew for Y, M, C is more than ± 0.75 mm from the main scan registration of K. – at the end of the scan line?	• Defective PCDU • Defective laser optics housing unit • Defective BB 1. Reinstall or replace the PCDU. 2. Replace the laser optics housing unit. 3. Replace the BB.
Others	• Skew correction upper limit error • Defective BB • Defective laser optics housing unit 1. Replace the BB. 2. Replace the laser optics housing unit.

After Executing SP2-111-001

- Result: "0" in SP2-194-007
- Result: No color registration errors in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
The main scan registration of K is shifted.	• Abnormal SP setting value of main scan: K Adjust the value with SP2-101-001.
The main scan length of K is shifted.	• Abnormal SP setting value of main scan length detection: K Adjust the value with SP2-185-001.

After Executing SP2-111-001

- Result: "0" in SP2-194-007
- Result: Color registration errors in SP2-194-010, -011, -012

Test pattern check	Possible cause/Countermeasure
Low image density on the output	• Low pattern density Do the forced process control (SP3-011-001) or supply some toner (SP3-015-xxx).
The main scan registration is shifted, but only at the central area of the image on the output.	• Defective ID sensor at center • Deformed center area on the image transfer belt • Defective BB 1. Replace the ID sensor. 2. Replace the image transfer belt. 3. Replace the BB.
The main scan registrations of Y, M, C are shifted.	• Defective laser optics housing unit • Defective ID sensor • Defective BB • Incorrect SP value 1. Replace the laser optics housing unit. 2. Replace the ID sensor. 3. Replace the BB. 4. Adjust the value with SP2-182-004 to -021.

Test pattern check	Possible cause/Countermeasure
The sub scan registrations of Y, M, C are shifted.	• Defective image transfer belt • Defective drive units • Defective ID sensor • Defective BB • Incorrect SP value 1. Replace the image transfer belt. 2. Replace the ID sensor. 3. Replace the drum motor. 4. Replace the BB. 5. Adjust the value with SP2-182-022 to -039.
The skew of Y, M, C is different.	• Defective PCDU • Defective laser optics housing unit • Defective IOB 1. Reinstall or replace the PCDU. 2. Replace the laser optics housing unit. 3. Replace the IOB.
The sub scan lines are shifted. Shifted lines appear cyclically.	• Defective PCDU • Defective drive unit • Drum phase adjustment error 1. Do SP1-902-001 (Drum phase adjustment); see Replacement and Adjustment – Drive Unit – Gear Unit for details. 2. Reinstall or replace the PCDU. 3. Check or replace the drive unit.

Stain on the Outputs

If a stain appears at the edge of the output, do the following procedure.

1. Execute the fusing cleaning mode with SP1123-002.

Note

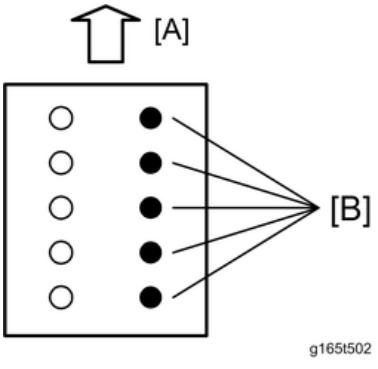
- It takes 160 seconds to complete the fusing cleaning mode.

2. Make a sample copy, and then check if a stain appears on the output.

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

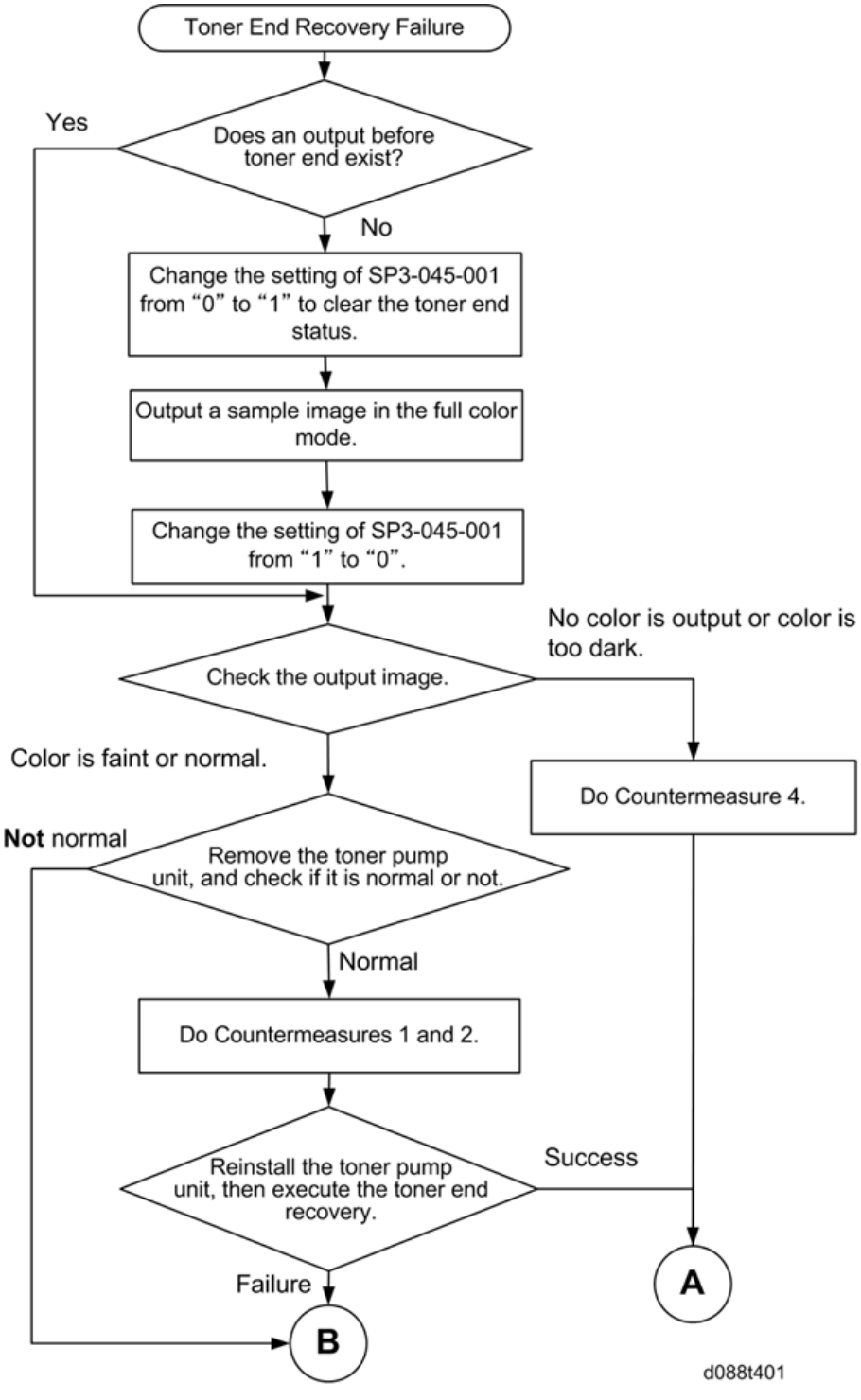
- Colored spots at 47-mm intervals: Development roller
- Abnormal image at 51-mm intervals: ITB drive or bias roller
- Abnormal image at 85-mm intervals: Paper transfer roller
- Colored spots at 119-mm intervals: Drum roller
- Abnormal image at 126-mm intervals: Fusing unit (Fusing sleeve belt or Pressure roller)

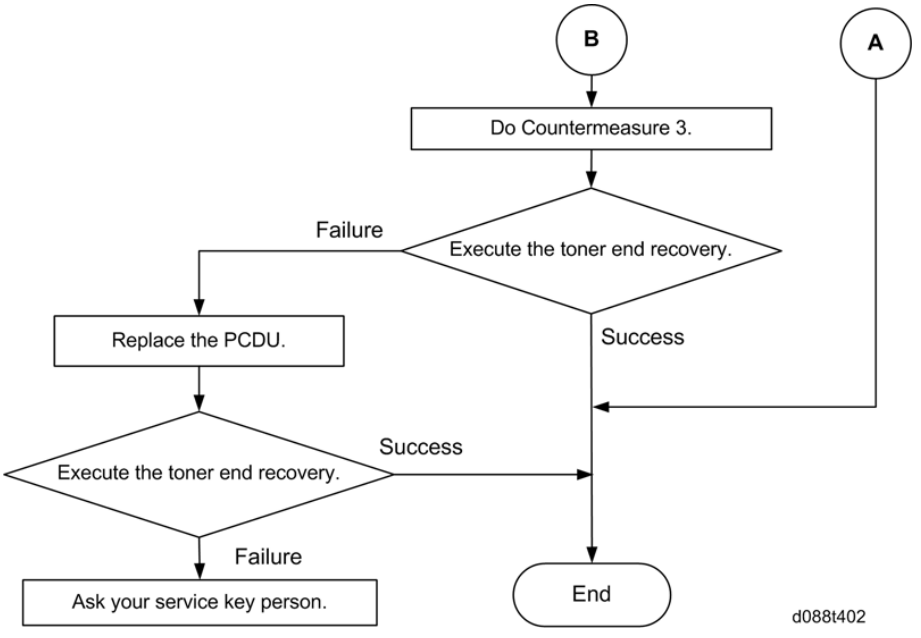
Toner End Recovery Error

If the toner end message on the LCD is displayed in the following conditions, there are some possible causes. Check the machine referring to the flow chart for the toner end recovery error.

- After a new toner bottle has been installed in the machine
- When a displayed color toner bottle still has toner inside

Flow Chart for the Toner End Recovery Error





Countermeasure 1

1. Check if the toner supply tube is bent or disconnected.
2. Straighten the toner supply tube or connect it correctly.

Countermeasure 2

1. Remove the target color toner bottle.
2. Disconnect the toner supply tube from the toner pump unit.
3. Remove the blocked toner in the toner supply tube with a vacuum cleaner.

Countermeasure 3

- Replace the toner pump unit (☛ p.146).

Countermeasure 4

- Replace the PCDU (☛ p.137).

Toner Bottle Detection Error

If the no toner bottles message is displayed on the LCD when turning on the main power switch, or SC 681-11 to 14 occurs during operation, deformed detection terminals of toner bottles may have caused a toner bottle ID communication error. If this occurs, follow the countermeasure below.

Countermeasure 1

- Replace the toner bottles.

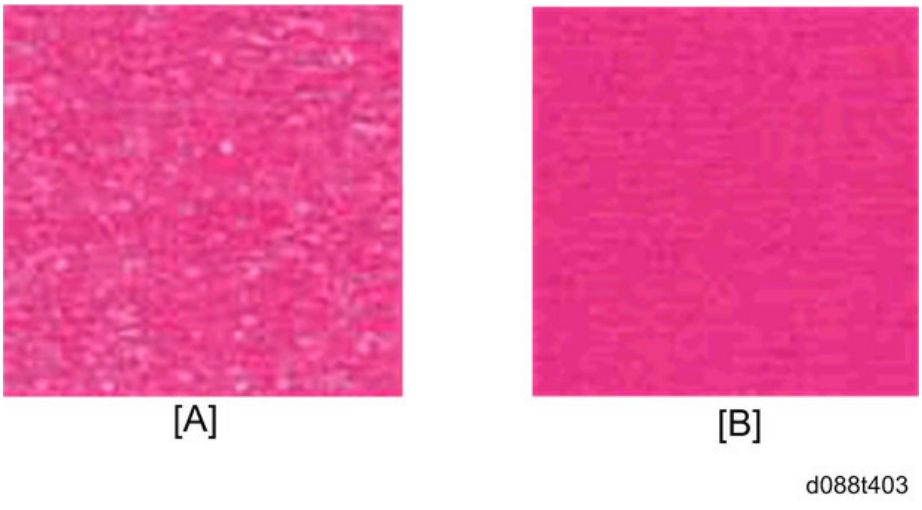
Countermeasure 2

- Replace the toner bottle detection board (p.260).

Note

- When replacing the toner bottle detection board, be sure not to deform the toner bottle detection terminals. This error does not occur if the toner bottles are replaced correctly.

Solid Image or Halftone Image Error



The toner density of a solid image or halftone image may not be uniform ([A]: problem output, [B]: normal output) if a large amount of sheets is printed at low coverage. If this occurs, follow the countermeasure below.

Recovery Procedure

1. Enter the SP mode.
2. Set SP3-044-xxx (Toner Supply Type) to "1: PID (Vref Fixed)".
    - Chose a target color SP number from -001 (Bk), -002 (Magenta), -003 (Cyan), and -004 (Yellow).
3. Set SP3-222-xxx (Vtref: Display/Set) to "4V".
    - Chose a target color SP number from -001 (Bk), -002 (Magenta), -003 (Cyan), and -004 (Yellow).
4. Set SP2-109-003 (Test Pattern; Pattern Selection) to "23: Full Dot Pattern".
5. Set SP2-109-005 (Test Pattern; Color Selection) to "1: All Color", "2: Magenta", "3: Yellow", or "4: Cyan".
    - Chose a target color selection number.

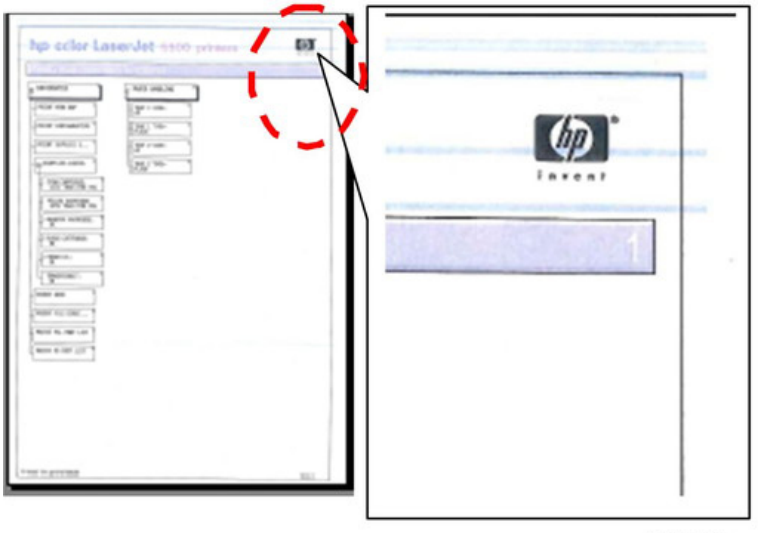
6. Press "Copy Window" on the LCD.
7. Copy 20 sheets for A4 size or 30 sheets for A3 size, and then check the setting of SP3-222-xxx (Vtref: Display/Set).
    - If the setting of this SP is more than 4V, go to next step. If not, copy again until the setting of this SP is more than 4V.
8. Return the setting of SP3-044-xxx (Toner Supply Type) to "4: MBD (Vref_Control)".
    - Return the setting of the SP which you have changed in step 2 before.
9. Execute SP3-015-xxx (Forced Toner Supply: Execute) twice.
    - Chose a target color SP number from -003 (Bk), -004 (Magenta), -005 (Cyan) and -006 (Yellow).
10. Execute the SP3-011-002 (Process Cont. Manual Execution; Density Adjustment).

Problem Prevention Procedure

- Set the setting of SP3-516-025 (Refresh Mode; Job End Area Coefficient) to "0.5".

Faulty Cleaning

Black or color lines (2-3mm)



d088t404

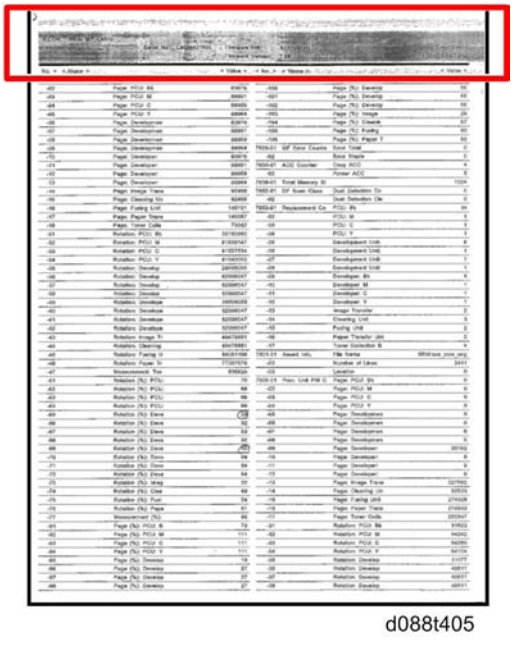
Possible Cause:

Wear of the cleaning blade at a specific point by image creation in the same place many times.

Solution:

Replace the drum unit.

Band Image Between 20mm and 30mm



d088t405

Possible Cause:

Developer wear with time

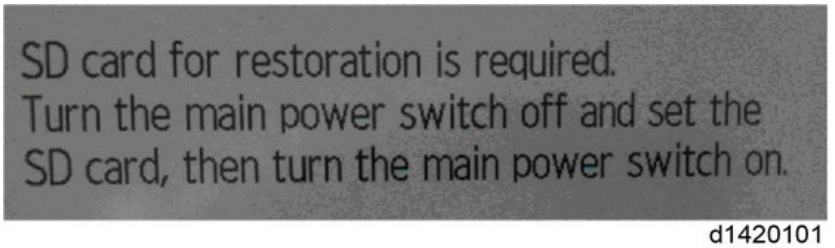
Solution:

Replace the developer or the development unit.

Encryption Key Restoration for NVRAM

How to restore the old encryption key to the machine

The following message appears after the controller board is replaced, or after the hard disk and controller board are replaced. In such cases, it is necessary to restore the encryption key to the new controller board.



d1420101

To do this, follow the procedure below.

1. Prepare an SD card that has been initialized in FAT16 format.
2. Using a PC, create a folder in the SD card and name it "restore_key".
3. Create a folder in the “restore_key” folder and name it the same as machine’s serial number, “xxxxxxxxxx” (11 digits).
4. Create a text file called "key_xxxxxxxxxx.txt" and save it in the "xxxxxxxxxx“ folder. Write the encryption key in the text file.

   /restore_key/xxxxxxxxxx/key_xxxxxxxxxx.txt

   Note

   - Ask an Administrator to enter the encryption key. The key has already been printed out by the user and may have been saved in the "key_xxxxxxxxxx.txt" file. (The function of back-up the encryption key to the SD card directly is provided 11A products or later.)
5. Turn on the machine’s main power switch.
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 switch.
8. Insert the SD card that contains the encryption key into Slot 2 (the lower slot).
9. Turn on the main power switch.

   Note

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

How to do a forced start up with no encryption key

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

Important

- **The HDD will be formatted after the forced start-up.**

- **Encrypted data will be deleted.**
- **User settings will be cleared.**

1. Prepare an SD card.
2. Create a directory named “restore_key” inside the root directory of the SD card. Then, save the “nvram_key.txt” file using the following name:

   /restore_key/nvram_key.txt
3. Create a text file and write "nvclear".

   Important

   - **Write this string at the head of the file.**
   - **Use all lower-case letters.**
   - **Do not use quotation marks or blank spaces.**
   - **It is judged that a forced start has been selected when the content of "nvclear" is executed and the machine shifts to the alternate system (forced start).**
4. Confirm that a message is displayed on the LCD telling to insert the SD card that contains the encryption key.
5. Turn off the main power switch.
6. Insert the SD card that contains the encryption key into Slot 2 (the lower slot).
7. Turn on the main power switch.
8. Turn on the main power switch, the machine automatically clear the HDD encryption.
9. Turn off the main power switch when the machine has returned to normal status.
10. Remove the SD card from Slot 2.
11. Turn on the main power switch.
12. 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.
13. Set necessary user settings in User Tools key.

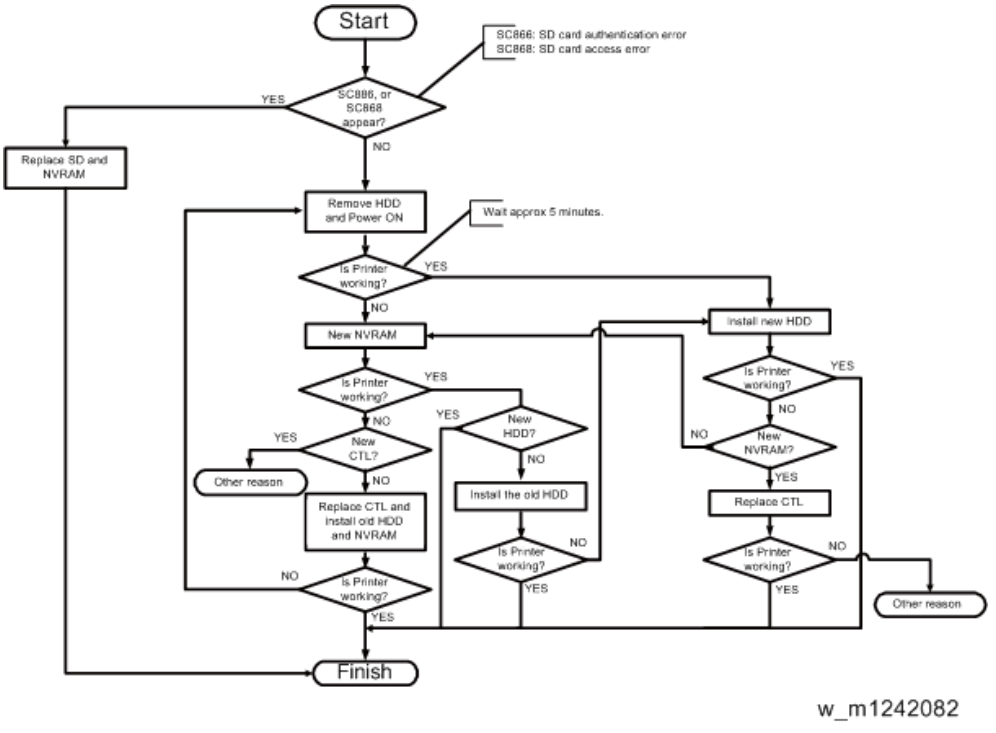
Other Symptoms

The following pages explain troubleshooting for the following symptoms:

- SC 861(HDD reboot error) to 865 (HDD access error)
- Any SC that indicates a defective controller board
- “Please wait” remains on display

Flowchart for the error

Test the machine using the flow chart below, to determine which parts are causing the problem.



Countermeasure list for the error

The following table shows what to do in each case: For example, if only the controller and HDD were found to be defective, then it is No 4 in the table below.

HDD Encryption OFF *1

CTL	HDD	NVRAM	SD Card	Action	No
R	R	R	R	Replace CTL / HDD / SD card / NVRAM	1
R	R	R	(R)	Replace CTL / HDD / SD card / NVRAM	2
R	R	-	R	Replace CTL / HDD / SD card	3
R	R	-	-	Replace CTL / HDD	4
R	-	R	R	Replace CTL / SD card / NVRAM	5
R	-	R	(R)	Replace CTL / SD card / NVRAM	6

CTL	HDD	NVRAM	SD Card	Action	No
R	-	-	R	Replace CTL / SD card	7
R	-	-	-	Replace CTL	8
-	R	R	R	Replace HDD / SD card / NVRAM	9
-	R	R	(R)	Replace HDD / SD card / NVRAM	10
-	R	-	R	Replace HDD / SD card	11
-	R	-	-	Replace HDD	12
-	-	R	R	Replace SD card / NVRAM	13
-	-	R	(R)	Replace SD card / NVRAM	14
-	-	-	R	Replace SD card	15

HDD Encryption ON *1

CTL	HDD	NVRAM	SD Card	Action	No
R	R	R	R	Replace CTL / HDD/SD card / NVRAM.	1
R	R	R	(R)	Replace CTL / HDD/SD card / NVRAM.	2
R	R	-	R	Replace CTL / HDD/SD card.	3
R	R	-	-	Replace CTL / HDD.	4
R	-	R	R	Replace CTL / SD Card/NVRAM, then the HDD is automatically formatted.	5
R	-	R	(R)	Replace CTL / SD Card/NVRAM, then the HDD is automatically formatted.	6
R	-	-	R	Replace CTL, then restore the old encryption key, then replace SD card.	7
R	-	-	-	Replace CTL, then restore the old encryption key.	8
-	R	R	R	Replace HDD / SD card / NVRAM.	9
-	R	R	(R)	Replace HDD / SD card / NVRAM.	10

CTL	HDD	NVRAM	SD Card	Action	No
-	R	-	R	Replace HDD / SD card.	11
-	R	-	-	Replace HDD.	12
-	-	R	R	Replace SD card / NVRAM.	13
-	-	R	(R)	Replace SD card / NVRAM.	14
-	-	-	R	Replace SD card.	15

(legends)

- : Not defective parts

R: Defective parts, must replace

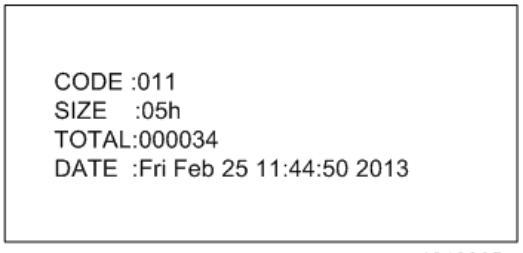
(R): Not defective parts but must be replaced

*1: Data Overwrite Security (ON/OFF) does not affect the combination table.

Jam Detection

Paper Jam Display

SP7-507 shows the paper jam history.



w_m1242085

- 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

SP7-504 shows how many jams occurred at each location.

Jam Code SP	Display	Description	LCD Display
7504 1	At Power On	Paper jam has been detected while the machine's power is on. The displayed paper jam location depends on the part where the paper jam is detected.	
7504 3	Tray 1: ON	Paper is not fed from tray 1.	A
7504 4	Tray 2: ON	Paper is not fed from tray 2.	A
7504 5	Tray 3: ON	Paper is not fed from tray 3 (LCT).	Y
7504 6	Tray 4: ON	Paper is not fed from tray 4.	Y
7504 7	LCT: ON	Paper is not fed from LCT.	U

Jam Code SP	Display	Description	LCD Display
7504 8	Registration Sn:On (Bypath)	Paper is not fed from the by-pass tray.	A
7504 9	Registration Sn:On (Duplex)	Paper is jammed at the duplex unit.	Z
7504 10	-	-	-
7504 11	Vertical Trans. 1: On	Vertical transport sensor 1 does not detect paper from tray 1.	A
7504 12	Vertical Trans. 2: On	Vertical transport sensor 2 does not detect paper from tray 2.	A
7504 13	Vertical Trans. 3:On	Vertical transport sensor 3 or relay sensor does not detect paper from tray 3 (LCT).	Y
7504 14	Vertical Trans. 4:On	Vertical transport sensor 4 or relay sensor does not detect paper from tray 4 (LCT).	Y
7504 15	-	-	-
7504 16	-	-	-
7504 17	Registration: ON (Tray)	Registration sensor does not detect paper.	B
7504 18	Fusing Entrance: ON	Fusing entrance sensor does not detect paper.	B
7504 19	Fusing Exit: ON	Fusing exit sensor does not detect paper.	B
7504 20	Paper Exit: ON	Paper exit sensor does not detect paper.	C
7504 21	Bridge Tray Exit: On	Tray exit sensor (bridge unit) does not detect paper.	D
7504 22	Bridge Relay: On	Relay sensor (bridge unit) does not detect paper.	D
7504 23	-	-	-
7504 24	Junction Gate Sensor: ON	Junction gate jam sensor does not detect paper.	C
7504 25	Duplex Exit: ON	Duplex exit sensor does not detect paper.	Z

Jam Code SP	Display	Description	LCD Display
7504 26	Duplex Entrance: ON (In)	Duplex entrance sensor does not detect paper.	Z
7504 27	Duplex Entrance: ON (Out)	Duplex entrance sensor does not detect paper again after paper has passed this sensor.	Z
7504 28	-	-	-
7504 51	Vertical Trans. 1:Off	Vertical transport sensor 1 does not turn off.	A
7504 52	Vertical Trans. 2:Off	Vertical transport sensor 2 does not turn off.	A
7504 53	Vertical Trans. 3:Off	Vertical transport sensor or relay sensor 3 does not turn off.	Y
7504 54	Vertical Trans. 4:Off	Vertical transport sensor 4 does not turn off.	Y
7504 55	-	-	-
7504 56	-	-	-
7504 57	Registration Sensor:Off	Registration sensor does not turn off.	B
7504 58	LCT Feed Sensor:Off	LCT sensor does not turn off.	U
7504 59	-	-	-
7504 60	Paper Exit:Off	Paper exit sensor does not turn off.	C
7504 61	Bridge Tray Exit:Off	Tray exit sensor (bridge unit) does not turn off.	D
7504 62	Bridge Relay:Off	Relay sensor (bridge unit) does not turn off.	D
7504 63	-	-	-
7504 64	Junction Gate Sensor: OFF	Junction gate jam sensor does not turn off.	C
7504 65	Duplex Exit:Off	Duplex exit sensor does not turn off.	Z
7504 66	Duplex Entrance: OFF (In)	Duplex entrance sensor does not turn off.	Z
7504 67	Duplex Entrance: OFF (Out)	Duplex entrance sensor does not turn off after paper has passed this sensor.	Z

Jam Code SP	Display	Description	LCD Display
7504 68	-	-	-
7504 191	Finisher Entrance: EUP (D637/D636)	Paper does not reach the finisher entrance sensor or stays at the finisher entrance sensor.	R1-R4
7504 192	Finisher Proof Exit: EUP (D637/D636)	Paper does not reach the proof tray exit sensor or stays at the proof tray exit sensor.	R1-R4
7504 193	Finisher Shift Tray Exit: EUP (D637/D636)	Paper does not reach the upper tray exit sensor or stays at the upper tray exit sensor.	R1-R4
7504 194	Finisher Stapler Exit: EUP (D637/D636)	Stapling tray paper sensor does not turn on after the finisher entrance sensor has turned on. Stapling tray paper sensor does not turn off after it has turned on.	R5-R7
7504 195	Finisher Exit: EUP (D637/D636)	Upper tray exit sensor does not turn on while the stack feed-out belt is turned on. Upper tray exit sensor does not turn off after the stack feed-out belt has returned to its home position.	R8-R12
7504 196	-	-	-
7504 197	-	-	-
7504 198	Finisher Folder: EUP D637 only)	Fold bottom fence HP sensor does not turn on after the fold roller motor has stopped. Fold unit exit sensor does not turn on after the fold rollers have stopped. Fold unit exit sensor does not turn off after the fold rollers have stopped.	R8-R12
7504 199	Finisher Tray Motor: EUP (D637/D636)	Upper tray limit sensor does not turn on after the upper tray has lifted up. Upper tray limit sensor does not turn off after the upper tray has moved down.	R1-R4

Jam Code SP	Display	Description	LCD Display
7504 200	Finisher Jogger Motor: EUP D637/D636)	Jogger fence HP sensor does not turn on/off after the jogger motor has turned on. Stack feed out belt HP sensor does not turn on/off after the feed out belt motor has turned on.	R8-R12
7504 201	Finisher Shift Motor: EUP (D637/D636)	Shift roller HP sensor does not turn on/off after the shift roller motor has turned on. Exit guide plate HP sensor does not turn on/off after the exit guide plate motor has turned on. Stacking roller HP sensor does not turn on/off after the stacking sponge roller motor has turned on.	R1-R4
7504 202	Finisher Staple Moving Motor: EUP (D637/D636)	Corner stapler HP sensor does not turn on/off after the corner stapler movement motor has turned on. Stapler rotation HP sensor does not turn on/off after the corner stapler rotation motor has turned on.	R8-R12
7504 203	Finisher Staple Motor: EUP (D637/D636)	Corner stapler does not finish stapling after a specified time. Booklet stapler does not finish stapling after a specified time.	R8-R12
7504 204	Finisher Folder Motor: EUP (D637 only)	Fold plate HP sensor does not turn on/off after the fold plate motor has turned on. Clamp roller HP sensor does not turn on/off after the clamp roller retraction motor has turned on. Fold bottom fence HP sensor does not turn on/off after the fold unit bottom fence lift motor has turned on. Stack junction gate HP sensor does not turn on/off after the stack junction gate motor has turned on.	R8-R12

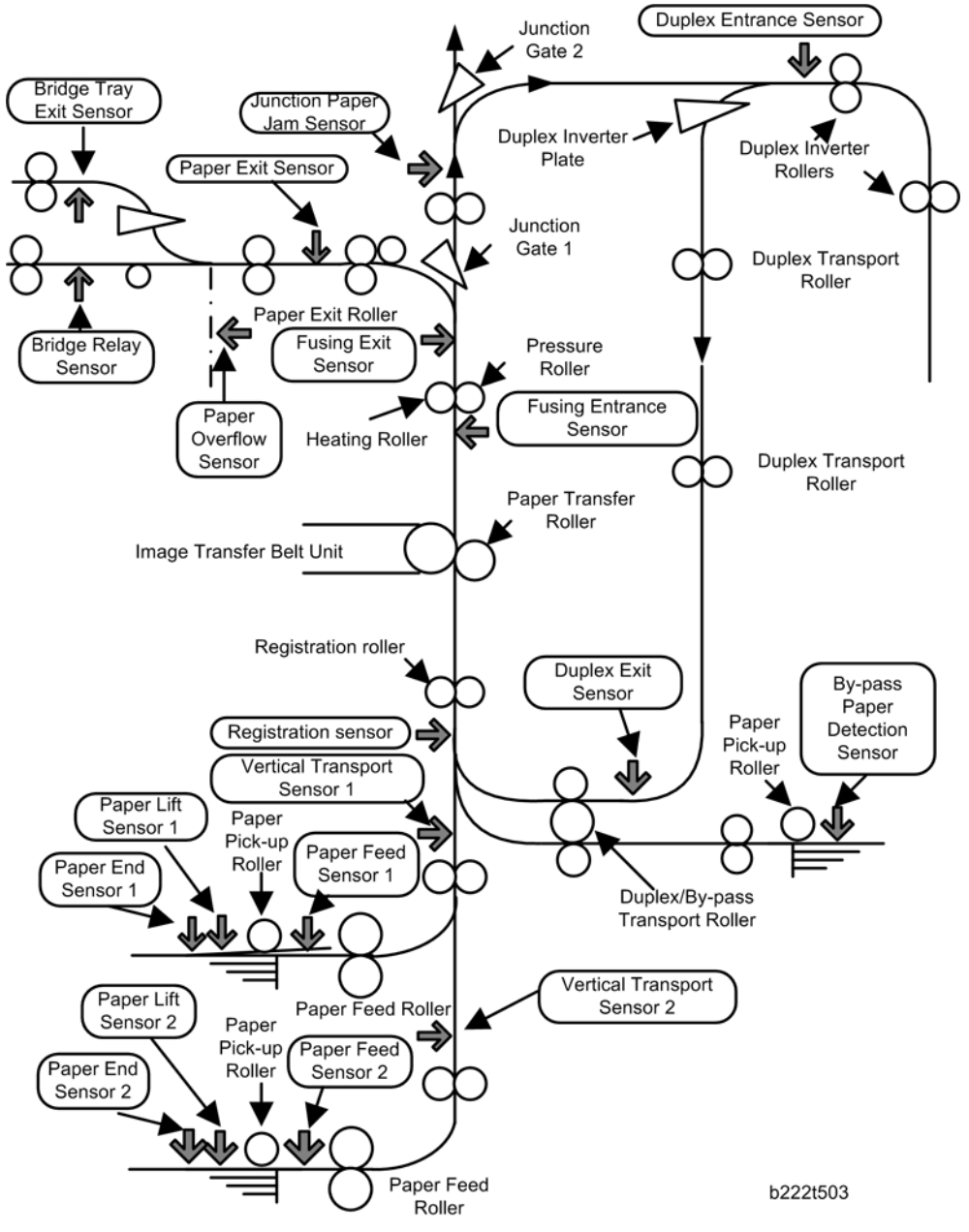
Jam Code SP	Display	Description	LCD Display
7504 205	-	-	-
7504 206	Finisher Punch Motor: EUP (D637/D636)	Punch encoder sensor does not turn on/off after the punch drive motor has turned on. Punch movement HP sensor does not turn on/off after the punch movement motor has turned on. Paper position slide HP sensor does not turn on/off after the paper position sensor slide motor has turned on.	R1-R4
7504 220	Transport 1:On	Mail bin transport sensor 1 does not detect paper.	W
7504 221	Transport 1:Off	Mail bin transport sensor 1 does not turn off after paper has passed this sensor.	W
7504 222	Transport 2:On	Mail bin transport sensor 2 does not detect paper.	W
7504 223	Transport 2:Off	Mail bin transport sensor 2 does not turn off after paper has passed this sensor.	W
7504 230	Fin Exit	The finisher does not respond even after the sheet delivery has completed.	R1-R3
7504 231	Insufficient Data	The finisher does not accept sheets due to an error concerning the data/commands from the machine.	R1

Paper Size Code

Size Code	Paper Size	Size Code	Paper Size
05	A4 LEF	141	B4 SEF
06	A5 LEF	142	B5 SEF
14	B5 LEF	160	DLT SEF
38	LT LEF	164	LG SEF

Size Code	Paper Size	Size Code	Paper Size
44	HLT LEF	166	LT SEF
132	A3 SEF	172	HLT SEF
133	A4 SEF	255	Others
134	A5 SEF	-	-

Sensor Locations



Electrical Component Defects

Sensors

Note

- The CN numbers in the following table are the connector numbers on the IOB.

No.	Sensor Name/ Sensor Board Name	Active	CN	Condition	Symptom
SW1	Right Door Open Switch	L	CN204/1	Open	"Open Cover" is displayed.
				Shorted	"Open cover" cannot be detected.
S9	Duplex Door	L	CN232/B11	Open	"Open Cover" is displayed.
				Shorted	"Open cover" cannot be detected.
S1	ID Sensor: Front	A	CN219/1	Open/ Shorted	SC370
	ID Sensor: Center and K	A	CN219/2	Open/ Shorted	SC370
	ID Sensor: Rear	A	CN219/3	Open/ Shorted	SC370
S12	Registration Sensor	L	CN224/A2	Open	Jam A (Jam8, 17)
				Shorted	Jam A, B (Jam1)
S30	Drum Gear Position Sensor-K	H	CN222/A2	Open/ Shorted	SC390-01/SC396-01
S31	Drum Gear Position Sensor-C	H	CN222/ A5	Open/ Shorted	SC390-02/SC396-02
S32	Drum Gear Position Sensor-M	H	CN222/ A8	Open/ Shorted	SC390-03/SC396-03

No.	Sensor Name/ Sensor Board Name	Active	CN	Condition	Symptom
S33	Drum Gear Position Sensor-Y	H	CN222/ A11	Open/ Shorted	SC390-04/SC396-04
S26 S27 S28 S29	Toner End Sensor - K Toner End Sensor - Y Toner End Sensor - C Toner End Sensor - M	L	CN207/B14 CN207/B3 CN207/ B9 CN207/ B6	Open	Toner end cannot be detected.
				Shorted	Toner end is detected when there is enough toner.
S34	Image Transfer Belt Rotation Sensor	H/L	CN206/3	Open/ Shorted	SC443
S19	Vertical Transport Sensor 1	L	CN230/A7	Open	Jam A (Jam3, 11)
				Shorted	Jam A, B (Jam1)
S20 S24	Paper End Sensor 1, 2	L	CN230/ A10, B10	Open	Paper end is not detected when there is no paper in the paper tray.
				Shorted	Paper end is detected when there is paper in the paper tray.
S21 S25	Paper Lift Sensor 1, 2	H	CN230/ A13, B13	Open/ Shorted	SC501, SC502
S23	Vertical Transport Sensor 2	L	CN230/B7	Open	Jam A (Jam4, 12)
				Shorted	Jam A, B (Jam1)
S14 S15	Tray 1 Paper Height Sensor 1, 2	L	CN224/ B2, B5	Open/ Shorted	Remaining paper volume on the LCD is wrong.
S16 S17	Tray 2 Paper Height Sensor 1, 2	L	CN224/ B10, B13	Open/ Shorted	Remaining paper volume on the LCD is wrong.
S18	Tray 1 Paper Feed Sensor	L	CN230/A4	Open/ Shorted	Jam A, B

No.	Sensor Name/ Sensor Board Name	Active	CN	Condition	Symptom
S22	Tray 2 Paper Feed Sensor	L	CN230/B4	Open/ Shorted	Jam A, B
SW4	Tray 1 Set Switch	L	CN224/A9	Open	Tray 1 is not detected when tray 1 is set.
				Shorted	Tray 1 is detected when tray 1 is not set.
S11	By-pass Paper Size Sensor	L	CN232/ B16, B17, B19, B20	Open/ Shorted	Paper size error
SW2	By-pass Paper Detection	L	CN232/ A10	Open	Paper on the by-pass tray is not detected when paper is set.
				Shorted	Paper on the by-pass tray is detected when paper is not set.
S10	By-pass Paper Length Sensor	L	CN232/ B14	Open	Paper size error
				Shorted	
S8	Fusing Entrance Sensor	L	CN232/B2	Open	Jam C (Jam 18)
				Shorted	Jam C (Jam 1)
S6	Duplex Entrance Sensor	L	CN232/A2	Open	Jam Z (Jam 26/27)
				Shorted	Jam Z (Jam 1)
S7	Duplex Exit Sensor	L	CN232/ B8	Open	Jam Z (Jam 25)
				Shorted	Jam Z (Jam 1)
S39	TD Sensor - K	A	CN227/A7	Open/ Shorted	SC360-01
S40	TD Sensor - C	A	CN227/ A15	Open/ Shorted	SC360-02

No.	Sensor Name/ Sensor Board Name	Active	CN	Condition	Symptom
S41	TD Sensor - M	A	CN227/B7	Open/ Shorted	SC360-03
S42	TD Sensor - Y	A	CN227/ B15	Open/ Shorted	SC360-04
S4	Fusing Exit Sensor	L	CN204/12	Open	Jam C (Jam 19)
				Shorted	Jam C (Jam 1)
S13	Waste Toner Sensor	H	CN224/A5	Open	Waste toner near full indicated when it is not near full.
				Shorted	Waste toner near full cannot be detected when the waste toner bottle is nearly full.
SW3	Waste Toner Bottle Set Switch	L	CN224/A7	Open	Waste toner bottle is not detected when the waste toner bottle is set.
				Shorted	Waste toner bottle is detected when the waste toner bottle is not set.
SW5	Tray 2 Paper Size Switch	L	CN224/ A11, A12, A13, A15	Open/ Shorted	Paper size error
S35	Temperature/ Humidity Sensor	A	CN234/ 6, 8	Open/ Shorted	SC498 Printed image has some problems such as rough image, dirty background, weak image or poor fusing.
S36	Thermopile Center, Edge	A	CN212/3, 6	Open/ Shorted	SC541, SC551

No.	Sensor Name/ Sensor Board Name	Active	CN	Condition	Symptom
TH1	Thermistor • Pressure Roller Center, Edge	A	CN212/21,19	Open/ Shorted	SC561, SC571
S3	Paper Exit Sensor	L	CN204/9	Open	Jam C (Jam 20)
				Shorted	Jam C (Jam 1)
S2	Junction Paper Jam Sensor	L	CN204/6	Open/ Shorted	Jam C (Jam 24/64)
-	NC Sensor Center, Edge	A	CN212/14,9	Open/ Shorted	SC581, SC591
S5	Paper Overflow Sensor	L	CN204/15	Open	Paper overflow message is not displayed when the paper overflow condition still remains.
				Shorted	Paper overflow message is displayed when the paper overflow condition does not remain.
S37	Fusing Sleeve Belt Rotation Sensor	H/L	CN210/2	Open/ Shorted	SC584
S38	Pressure Roller HP Sensor	L	CN210/5	Open/ Shorted	SC569
S2	Junction Paper Jam Sensor	L	CN204/6	Open/ Shorted	Jam C (Jam 24/64)

Blown Fuse Conditions

Power Supply Unit

Fuse	Rating		Symptom when turning on the main switch
	115V	220V - 240V	
FU1	15A/250V	8A/250V	No response. (5V power to the PSU is not supplied.
FU2	15A/250V	6.3A/250V	No response. (5V power to the BB and controller is not supplied.)
FU3*1	2A/250V	2A/250V	5V power to the tray heater is not supplied.
FU4*1	5A/250V	5A/250V	5VE power to the IOB is not supplied.
FU5*1	5A/250V	5A/250V	5V power to the IOB is not supplied.
FU6*1	5A/250V	5A/250V	5V power to the BB is not supplied.
FU7	8A/250V	8A/250V	24VS power to the IOB is not supplied.
FU8	8A/250V	8A/250V	24VS power to the IOB is not supplied.
FU9	8A/250V	8A/250V	24V power to the IOB and BB are not supplied.
FU10	8A/250V	8A/250V	Not used.
FU11	8A/250V	8A/250V	24V power to the PFU or LCT and finisher are not supplied.

AC Drive Board

Fuse	Rating		Symptom when turning on the main switch
	115V	220V - 240V	
FU1	15A/250V	8A/250V	SC574 occurs.
FU2*1	1A/250V	1A/250V	No Voltage detection

⚠CAUTION

- For continued protection against risk of fire, replace only with same type and rating of fuse.

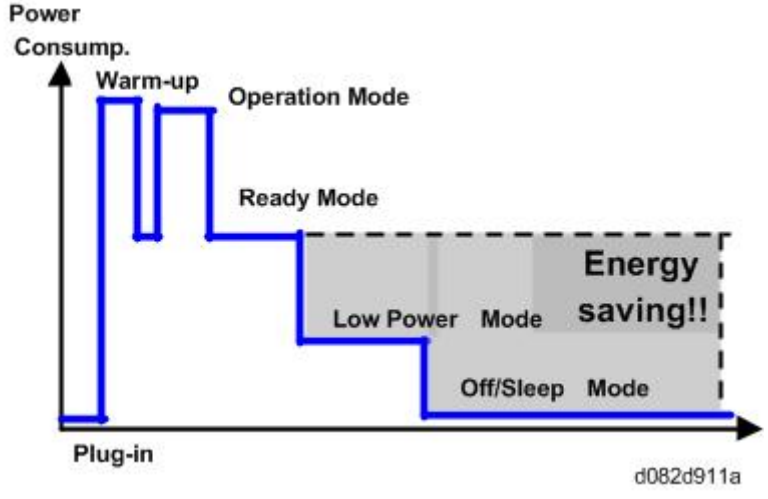
*1 Replace the whole board or unit if this fuse blows, because it is soldered.

7. Energy Saving

Energy Save

Energy Saver Modes

Customers should use energy saver modes properly, to save energy and protect the environment.



The area shaded grey in this diagram represents the amount of energy that is saved when the timers are at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 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)

- **Energy saver timer (1 – 240 min):**

  Low Power Mode. Default setting: 1 min.

- **Auto off timer (1 – 240 min):**

  Off/Sleep Mode. Default setting: 1 min.

Normally, Energy Saver timer < Auto Off timer. But, for example, if Auto Off timer < or = Energy Saver timer, the machine goes immediately to Off mode when the Auto Off timer expires. It skips the Energy Saver mode.

Example

- Low power: 15 min.
- Auto Off: 1 min.
- The machine goes to Off mode after 1 minute. Low Power mode is not used.

Return to Stand-by Mode

Low Power Mode

The recovery time depends on the model and the region.

- P3c: 15 sec. or less
- P3d: 20 sec. or less

Off/Sleep Mode

Recovery time.

- P3c: 15 sec. or less
- P3d: 20 sec. or less

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
- 8941-004: Low power mode
- 8941-005: Off/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)

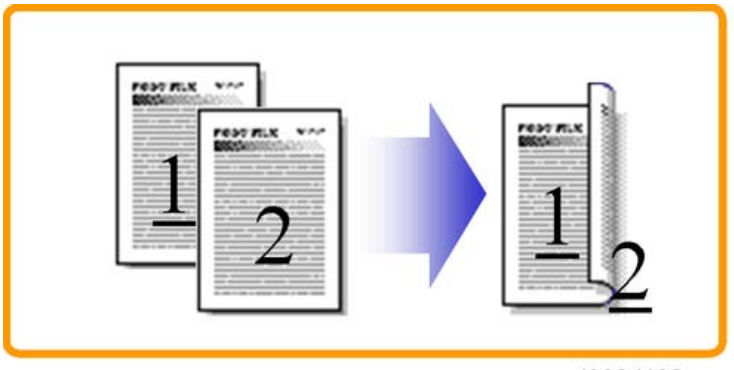
Paper Save

Effectiveness of Duplex/Combine Function

Duplexing and the combine functions reduce the amount of paper used. This means that less energy overall is used for paper production, which improves the environment.

1. Duplex:

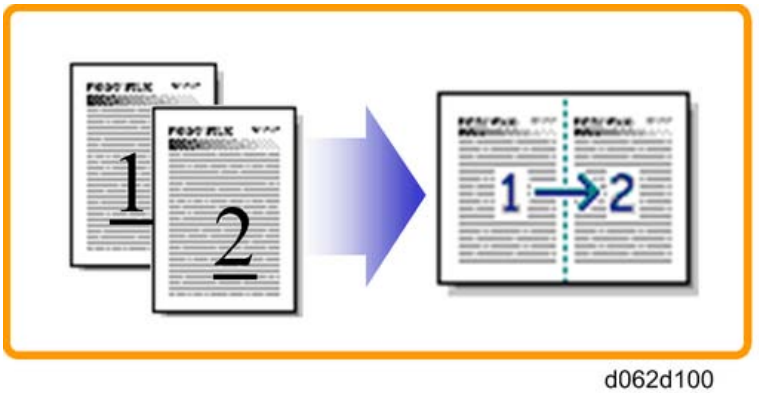
Reduce paper volume in half!



d062d102

2. Combine mode:

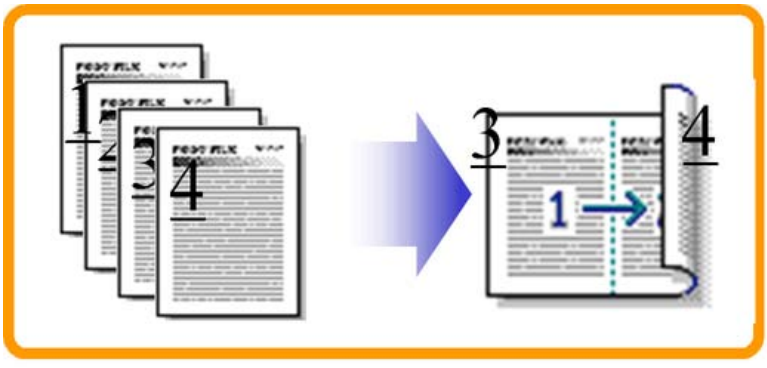
Reduce paper volume in half!



d062d100

3. Duplex + Combine:

Using both features together can further reduce paper volume by 3/4!



d062d101

To check the paper consumption, look at the total counter and the duplex counter.

The total counter counts all pages printed.

- For one duplex page, the total counter goes up by 2.
- For a duplex job of a three-page original, the total counter goes up by 3.

The duplex counter counts pages that have images on both sides.

- For one duplex page, the duplex counter goes up by 1.
- For a duplex job of a three-page original, the duplex counter will only increase by 1, even though two sheets are used.

How to calculate the paper reduction ratio

How to calculate the paper reduction ratio, when compared with Single-sided copying, with no 2-in-1 combine mode

Paper reduction ratio (%) = Number of sheets reduced: A/Number of printed original images: B x 100

- Number of sheets reduced: A

  = Output pages in duplex mode/2 + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode x 3/2
  A = ((2) + (3) + (4))/2 + (5) + (6) x 3/2

- Number of printed original images: B

  = Total counter6 + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode
  B = (1) + (5) + (6)

- (1) Total counter: SP 8581 001 (pages)
- (2) Single-sided with duplex mode: SP 8421 001 (pages)

- (3) Double-sided with duplex mode: SP 8421 002 (pages)
- (4) Book with duplex mode: SP 8421 003 (pages)
- (5) Single-sided with combine mode: SP 8421 004 (pages)
- (6) Duplex with combine mode: SP 8421 005 (pages)

Model AP-P3
Machine Code: M124/M125

Appendices

14 September, 2012
Subject to change

TABLE OF CONTENTS

1. Appendix: General Specifications

General Specifications....5
Main Frame....5
Printer....7
Supported Paper Sizes....10
Paper Feed....10
North America....10
Europe/ Asia....12
Paper Exit....13
2000/3000 Sheet Booklet Finisher (D637/D636)....13
Software Accessories....17
Printer Drivers....17
Utility Software....17
Optional Equipment....19
1-Tray Paper Feed Unit (D579)....19
2-Tray Paper Feed Unit (D580)....19
LCT 2000-sheet (D581)....20
LCT 1200-sheet (D631)....20
3000-Sheet Finisher (D636)....20
2000-Sheet Booklet Finisher (D637)....22
Punch Unit (D570) for 2000-Sheet (Booklet) / 3000-Sheet Finisher....24
Bridge Unit (D634)....25
4-bin Mail Box (M413)....25
Output Jogger Unit (B703)....26

2. Appendix: PM Tables

Maintenance Tables....27
Preventive Maintenance Items....27
User Maintenance....27
Service Maintenance....27
Two-tray Paper Feed Unit (D580)....29
1200-sheet LCT (D631)....29
2000-sheet LCT (D581)....30
2000 Sheet Finisher / 3000 Sheet Booklet Finisher (D637 / D636)....30

2000/3000-Sheet (Booklet) Finisher Punch Unit (D570)....30
Bridge Unit (D634)....31
Shift Tray (D633)....31
Side tray (D635)....31
Mail Box (M413)....31
Output Jogger Unit (M413)....31
Other Yield Parts....31
Mainframe....32

3. Appendix: Service Program Mode Tables

Service SP Tables....33
SP1-XXX....33
Engine SP Tables-1....49
SP1-XXX (Feed)....49
Engine SP Tables-2....107
SP2-XXX (Drum)....107
Engine SP Tables-3....202
SP3-XXX (Process)....202
Engine SP Tables-4....257
SP4-XXX (Scanner)....257
Engine SP Tables-5....258
SP5-XXX (Mode)....258
Engine SP Tables-6....326
SP6-XXX (Peripherals)....326
Engine SP Tables-7....335
SP7-XXX (Data Log)....335
Engine SP Tables-8....379
SP8-XXX (Data Log2)....379
Input and Output Check....408
Input Check Table....408
Copier....408
Table 1: Paper Height Sensor....411
Table 2: Paper Size Switch (Tray 2)....411
Table 3: Paper Size (By-pass Table)....412

[FIN (TIG) INPUT Check]....413
[FIN (KIN) INPUT Check] Finisher (B804/B805)....415
[FIN (EUP) INPUT Check] Finisher (B804/B805)....415
[FIN (ELB) INPUT Check] Finisher (B804/B805)....418
[FIN (JAK) INPUT Check] 4bin Mail Box (M413)....418
Bridge Unit (D386) / Side Tray (D542)....419
Shift Tray (D388)....419
1 Bin Tray (D536)....420
Two-Tray Paper Feed Unit (D537)/ LCT 2000 (D538)/ LCT 1200 (D539)....420
Output Check Table....420
Copier....420
[FIN (TIG) OUTPUT Check]....426
[FIN (KIN) OUTPUT Check]....427
[FIN (EUP) OUTPUT Check] (Booklet) Finisher (D804/D805)....428
[FIN (ELB) OUTPUT Check]....429
FIN(JAK)OUTPUT Check....430
Bridge Unit (D386)/ Side Tray (D542)....430
Shift Tray (D388)....430
1 Bin Tray (D536)....431
-....431
Two-Tray Paper Feed Unit (D537)/ LCT 2000 (D538)/ LCT 1200 (D539)....431
Test Pattern Printing....433

1. Appendix: General Specifications

General Specifications

Main Frame

Configuration:	Desktop
Print Process:	Laser beam scanning and electro-photographic printing 4 drums tandem method
Resolution:	Print: 200dpi / 300dpi / 400dpi / 600dpi / 1200dpi
Gradation:	Print: 200dpi, 300dpi, 400dpi, 1200dpi : 1 bit / pixel 600dpi : 4bit / pixel 600dpi : 2bit / pixel 600dpi : 1 bit / pixel
First print (normal mode):	P3c: Color: 5.7 seconds or less (A4/LT LEF) Black & white: 3.7 seconds or less (A4/LT LEF) P3d: Color: 5.1 seconds or less (A4/LT LEF) Black & white: 3.4 seconds or less (A4/LT LEF)
Warm-up time:	P3c: 29 seconds or less (23°C) P3d: 25 seconds or less (23°C)
Print Paper Capacity: (80 g/m^2, 20 lb)	Standard tray: 550 sheets x 2 By-pass tray: 100 sheets (Normal), 40 sheets (Thick 1: 106 – 169 g/m^2), 20 sheets (Thick 2/3: 170 - 256 g/m^2), 16 sheets (Thick 4:), 35 sheets (Postcard) Optional paper feed tray: 550 sheets x 2 2000-sheet LCT: 2000 sheets 1200-sheet LCT: 1200 sheets

Print Paper Size:	(Refer to "Supported Paper Sizes".)		
	-	Minimum	Maximum
	Tray 1	A4 (LEF) / LT (LEF)	
	Tray 2	A5 (LEF)	A3 / DLT / 11" x 17"
	By-pass	90 x 148 mm	305 x 1260 mm
	Optional Tray	A5 (LEF)	A3 / DLT / 11" x 17"
	2000-sheet LCT	A4 (LEF) / LT (LEF)	
	1200-sheet LCT	A4 (LEF) / B5 (LEF) / LT (LEF)	
	Envelope feeder	A6(SEF) / Postcard	A4 / LT(SEF)
Printing Paper Weight:	Standard tray: 52 to 256 g/m^2 (- to 68 lb.) Optional paper tray: 52 to 256 g/m^2 (- to 68 lb.) 1200-sheet LCT : 60 to 216 g/m^2 (- to 57lb) Duplex unit: 52 to 169 g/m^2 (- to 45 lb.) By-pass tray: 52 to 300 g/m^2 (- to 79.8 lb.)		
Output Paper Capacity:	Standard exit tray: 500 sheets (A4 / LT) 2000-sheet booklet finisher: 250 + 2000 sheets (80 g/m^2) 3000-sheet finisher: 250 + 3000 sheets (80 g/m^2) 4-bin Mail Box: 1000 (250 x 4) sheets (80 g/m^2)		
Memory:	Standard: 512 MB Maximum: 1.5 GB		
CPU	P3c: Intel Celeron-M Processor 600MHz P3d: Intel Celeron-M Processor 1.0GHz		
HDD	250GB		
ECO Night Sensor	Light Detect Ver.1.0		

Power Source:	120 V – 127 V, 60 Hz: More than 12A (for North America) 110 V, 60 Hz: More than 20A (for Taiwan) 220 V – 240 V, 50/60 Hz: More than 8A (for Europe / Asia / China)		
Power Consumption:	-	110 - 120V	220 - 240V
	Maximum	1584 W or less	1700 W or less
	Sleep Mode	1.2 W or less	1.6 W or less
Noise Emission: (Sound Power Level)	P3c • Standby: • Operating: 71.8 dB(A) (Color) / 71.5 dB(A) (B/W) P3d • Standby: • Operating: 72 dB(A) (Color) / 72 dB(A) (B/W)		
Dimensions (W x D x H): Printer: 670 x 684 x 640 mm (26.4" x 26.9" x 25.2") or less Printer + PFU or LCT*1: 670 x 766 x 902 mm (26.4" x 30.2" x 35.5") or less (*1) with the two tray paper feed unit with the stabilizers			
Weight:	Less than 97 kg (213.8 lb.)		

Printer

Printer Languages:	Standard • RPCS (Refined Printing Command Stream) • PCL 6(XL)/5c • PDF Direct • Adobe PostScript 3 • MediaPrint: JPEG/TIFF Option • IPDS • PictBridge

Resolution and Gradation:	PCL 5c: • 300 x 300 dpi : Available only in Grayscale mode • 600 x 600 dpi : Fast (1 bit), Standard (2 bits), Fine (4 bits) PCL 6: • 600 x 600 dpi : Fast (1 bit), Standard (2 bits), Fine (4 bits) • 1200 x 1200 dpi (1 bit) RPCS: • 600 x 600 dpi (1 bit), 1800 x 600 dpi*, 9600 dpi x 600 dpi* *1800 x 600 dpi = 600 x 600 dpi (2 bits) *9600 dpi x 600 dpi* = 600 x 600 dpi (4 bits) • 1200 x 1200 dpi (1 bit) PS3: • 600 x 600 dpi : Fast (1 bit), Standard (2 bits), Fine (4 bits) • 1200 x 1200 dpi (1 bit)
Printing speed:	P3c: 45 ppm (color / black and white, A4/LT LEF) P3d: 55 ppm (color / black and white, A4/LT LEF)
Resident Fonts:	PCL 6(XL)/5c (Standard) • 45 Compatible fonts • 13 International fonts Adobe PostScript 3 (Optional) / PDF Direct • 136 Compatible fonts (24 Type 2 fonts, 112 Type 14 fonts) IPDS (Optional) • 108 Compatible fonts

Host Interfaces:	Standard: • USB2.0 Type A and Type B • Ethernet (100 Base-TX/10 Base-T) • SD and USB2.0 Type A (Operation panel) Optional: • Gigabit Ethernet (1000 Base-T) • IEEE1284 parallel x 1 • IEEE802.11a/b/g (Wireless LAN)
Network Protocols:	TCP/IP (IPv4, IPv6), IPX/SPX(Optional)

Supported Paper Sizes

Paper Feed

North America

BT: By-pass Tray, T1: Tray 1, T2/3/4: Tray 2/3/4, LCT 2000: Large Capacity Tray: 2000-sheet, LCT 1200: Large Capacity Tray: 1200-sheet, DU: Duplex Unit

Paper	Size (W x L)	BT	T1	T2/3/4	LCT 2000	LCT 1200	DU
A3 W	12" x 18"	M	-	-	-	-	-
A3 SEF	297 x 420mm	M	-	M	-	-	M
A4 SEF	210 x 297mm	M	-	A	-	-	M
A4 LEF	297 x 210mm	M	S	M	S	S	M
A5 SEF	148 x 210mm	M	-	-	-	-	-
A5 LEF	210 x 148mm	M	S	A	-	-	M
A6 SEF	105 x 148mm	M	-	-	-	-	-
B4 SEF	257 x 364mm	M	-	M	-	-	M
B5 SEF	182 x 257mm	M	-	A	-	-	M
B5 LEF	257 x 182mm	M	S	M	-	S	M
B6 SEF	128 x 182mm	M	-	-	-	-	-
Ledger	11" x 17"	A	-	A	-	-	M
Letter SEF	8.5" x 11"	A	-	A	-	-	M
Letter LEF	11" x 8.5"	A	M	A	M	M	M
Legal SEF	8.5" x 14"	M	-	A	-	-	M
Government Legal SEF	8.25" x 14"	M	-	M	-	-	M
Half Letter SEF	5.5" x 8.5"	A	-	-	-	-	-

Paper	Size (W x L)	BT	T1	T2/3/4	LCT 2000	LCT 1200	DU
Executive SEF	7.25" x 10.5"	M	-	M	-	-	M
Executive LEF	10.5" x 7.25"	M	-	A	-	-	M
F SEF	8" x 13"	M	-	M	-	-	M
Foolscap SEF	8.5" x 13"	M	-	M	-	-	M
Folio SEF	8.25" x 13"	M	-	M	-	-	M
	11" x 15"	M	-	M	-	-	M
	10" x 14"	M	-	M	-	-	M
	8" x 10"	M	-	M	-	-	M
8K	267 x 390mm	M	-	M	-	-	M
16K SEF	195 x 267mm	M	-	M	-	-	M
16K LEF	267 x 195mm	M	-	M	-	-	M
Custom		M	-	M	-	-	-
Com10 Env.	4.125" x 9.5"	M	-	-	-	-	-
Monarch Env.	3.875" x 7.5"	M	-	-	-	-	-
C6 Env.	114 x 162mm	M	-	-	-	-	-
C5 Env.	162 x 229mm	M	-	-	-	-	-
DL Env.	110 x 220mm	M	-	-	-	-	-

Remarks:

A	Supported: the sensor detects the paper size.
M	Supported: the user specifies the paper size.
S	Supported: depends on a technician adjustment
-	Not supported

Europe/ Asia

BT: By-pass Tray, T1: Tray 1, T2/3/4: Tray 2/3/4, LCT 2000: Large Capacity Tray: 2000-sheet, LCT 1200: Large Capacity Tray: 1200-sheet, DU: Duplex Unit

Paper	Size (W x L)	BT	T1	T2/3/4	LCT 2000	LCT 1200	DU
A3 W	12" x 18"	M	-	-	-	-	-
A3 SEF	297 x 420mm	A	-	A	-	-	M
A4 SEF	210 x 297mm	A	-	A	-	-	M
A4 LEF	297 x 210mm	A	M	A	M	S	M
A5 SEF	148 x 210mm	A	-	-	-	-	-
A5 LEF	210 x 148mm	A	S	A	-	-	M
A6 SEF	105 x 148mm	A	-	-	-	-	-
B4 SEF	257 x 364mm	M	-	A	-	-	M
B5 SEF	182 x 257mm	M	-	A	-	-	M
B5 LEF	257 x 182mm	M	S	A	-	S	M
B6 SEF	128 x 182mm	M	-	-	-	-	-
Ledger	11" x 17"	M	-	M	-	-	M
Letter SEF	8.5" x 11"	M	-	A	-	-	M
Letter LEF	11" x 8.5"	M	S	M	S	S	M
Legal SEF	8.5" x 14"	M	-	M	-	-	M
Government Legal SEF	8.25" x 14"	M	-	M	-	-	M
Half Letter SEF	5.5" x 8.5"	M	-	-	-	-	-
Executive SEF	7.25" x 10.5"	M	-	M	-	-	M
Executive LEF	10.5" x 7.25"	M	-	M	-	-	M
F SEF	8" x 13"	M	-	M	-	-	M
Foolscap SEF	8.5" x 13"	M	-	M	-	-	M

Paper	Size (W x L)	BT	T1	T2/3/4	LCT 2000	LCT 1200	DU
Folio SEF	8.25" x 13"	M	-	M	-	-	M
	11" x 15"	M	-	M	-	-	M
	10" x 14"	M	-	M	-	-	M
	8" x 10"	M	-	M	-	-	M
8K	267 x 390mm	M	-	M	-	-	M
16K SEF	195 x 267mm	M	-	M	-	-	M
16K LEF	267 x 195mm	M	-	M	-	-	M
Custom		M	-	M	-	-	-
Com10 Env.	4.125" x 9.5"	M	-	-	-	-	-
Monarch Env.	3.875" x 7.5"	M	-	-	-	-	-
C6 Env.	114 x 162mm	M	-	-	-	-	-
C5 Env.	162 x 229mm	M	-	-	-	-	-
DL Env.	110 x 220mm	M	-	-	-	-	-

Remarks:

A	Supported: the sensor detects the paper size.
M	Supported: the user specifies the paper size.
S	Supported: depends on a technician adjustment
-	Not supported

Paper Exit

2000/3000 Sheet Booklet Finisher (D637/D636)

MF: Main Frame, Prf: Proof, Clr: Clear, Shf: Shift, Stp: Staple, SS: Saddle Stitch,

2P: 2 Holes Punch, N2P: North Europe 2 Holes, 3P: 3 Holes Punch,

Punch 4 P: 4 Holes Punch, N4P: North Europe 4 Holes Punch

Paper	Size (W x L)	MF	2000/3000-sheet booklet finisher								
			Prf	Clr	Shf	Stp	SS	2P/ N2P	3P	4P	N4P
A3 W	12" x 18"	Y	Y	Y	Y	30	15	-	-	-	-
A3 SEF	297 x 420 mm	Y	Y	Y	Y	30	15	Y	Y	Y	Y
A4 SEF	210 x 297 mm	Y	Y	Y	Y	50	15	Y	-	-	Y
A4 LEF	297 x 210 mm	Y	Y	Y	Y	50	-	Y	Y	Y	Y
A5 SEF	148 x 210 mm	Y	Y	Y	Y	-	-	Y	-	-	Y
A5 LEF	210 x 148 mm	Y	Y	Y	Y	-	-	Y	-	-	Y
A6 SEF	105 x 148 mm	Y	Y	Y	-	-	-	-	-	-	-
B4 SEF	257 x 364 mm	Y	Y	Y	Y	30	15	Y	Y	Y*4	Y*4
B5 SEF	182 x 257 mm	Y	Y	Y	Y	50	15	Y	-	-	Y
B5 LEF	257 x 182 mm	Y	Y	Y	Y	50	Y	Y	Y	Y	Y
B6 SEF	128 x 182 mm	Y	Y	Y	-	-	-	-	-	-	-
Ledger	11" x 17"	Y	Y	Y	Y	30	15	Y	Y	Y	Y
Letter SEF	8.5" x 11"	Y	Y	Y	Y	50	15	Y	-	-	Y
Letter LEF	11" x 8.5"	Y	Y	Y	Y	50	-	Y	Y	Y	Y
Legal SEF	8.5" x 14"	Y	Y	Y	Y	30	15	Y	-	-	Y

Paper	Size (W x L)	MF	2000/3000-sheet booklet finisher								
			Prf	Clr	Shf	Stp	SS	2P/ N2P	3P	4P	N4P
Government Legal SEF	8.25" x 14"	Y	Y	Y	Y	30	-	Y	-	-	Y
Half Letter SEF	5.5" x 8.5"	Y	Y	Y	Y	-	-	Y	-	-	Y
Executive SEF	7.25" x 10.5"	Y	Y	Y	Y	50	-	Y	-	-	Y
Executive LEF	10.5" x 7.25"	Y	Y	Y	Y	50	-	Y	Y	Y	Y
F SEF	8" x 13"	Y	Y	Y	Y	30	-	Y	-	-	Y
Foolscap SEF	8.5" x 13"	Y	Y	Y	Y	30	-	Y	-	-	Y
Folio SEF	8.25" x 13"	Y	Y	Y	Y	30	-	Y	-	-	Y
	11" x 15"	Y	Y	Y	Y	30	-	Y	Y	Y	Y
	10" x 14"	Y	Y	Y	Y	30	-	Y	Y	-	Y
	8" x 10"	Y	Y	Y	Y	50	-	Y	-	-	Y
8K	267 x 390 mm	Y	Y	Y	Y	30	-	Y	Y	Y	Y
16K SEF	195 x 267 mm	Y	Y	Y	Y	50	-	Y	-	-	Y
16K LEF	267 x 195 mm	Y	Y	Y	Y	50	-	Y	Y	Y	Y
Custom		Y	Y	Y	-	-	-	Y*3	Y*3	Y*3	Y*3
Com10 Env.	4.125" x 9.5"	Y	Y*1	Y*2	-	-	-	-	-	-	-
Monarch Env.	3.875" x 7.5"	Y	-	Y	-	-	-	-	-	-	-

Paper	Size (W x L)	MF	2000/3000-sheet booklet finisher								
			Prf	Clr	Shf	Stp	SS	2P/ N2P	3P	4P	N4P
C6 Env.	114 x 162 mm	Y	-	Y	-	-	-	-	-	-	-
C5 Env.	162 x 229 mm	Y	-	Y	-	-	-	-	-	-	-
DL Env.	110 x 220 mm	Y	-	Y	-	-	-	-	-	-	-

Remarks:

Y	Supported
15	Output up to 15 sheets
30	Output up to 30 sheets
50	Output up to 50 sheets
-	Not supported

*1: Minimum 100 mm or more, Maximum 600 mm or less

*2: Minimum 100 mm or more, Maximum 600 mm or less

- Longer paper (feed length) than DLT (432 mm) is not guaranteed in this mode.

*3: Minimum 100 mm for 2P, 230 mm for 3P, 255 mm for 4P, 125 mm for N4P

*4: Corner stapling is not available in this mode.

Software Accessories

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer lets you select the components you want to install.

Printer Drivers

Printer Language	Windows XP	Windows Vista	Windows 7
PCL 5c / 6	Yes	Yes	Yes
PS3	Yes	Yes	Yes
RPCS			

Printer Language	Windows Server 2003	Windows Server 2008 / 2008 R2	Mac OSX 10.2 to 10.7 or later
PCL 5c / 6	Yes	Yes	No
PS3	Yes	Yes	Yes
RPCS			

Note

- The PCL5c/6 and PS3 drivers are provided on the CD-ROM
- The PS3 drivers are all genuine Adobe PS drivers, except for Windows XP / 2003 / Vista / 7.
- A PPD file for each operating system is provided with the driver.

Utility Software

Software	Description
Font Manager (XP / Vista)	A font management utility with screen fonts for the printer This is provided on the printer drivers CD-ROM
Smart Device Monitor for Admin (XP / Vista / 7 / Server 2003 / 2003R2 / 2008 / 2008R2)	A printer management utility for network administrators. NIB setup utilities are also available. This is provided on the CD-ROM

Software	Description
DeskTopBinder – SmartDeviceMonitor for Client (2000/XP/Server 2003/ Vista/7)	A printer management utility for client users. A utility for peer-to-peer printing over a NetBEUI or TCP/IP network. A peer-to-peer print utility over a TCP/IP network. This provides the parallel printing and recovery printing features. This is provided on the printer drivers CD-ROM
Printer Utility for Mac (Mac)	A utility for peer-to-peer printing over a NetBEUI or TCP This software provides several convenient functions for printing from Macintosh clients. This is provided on the scanner drivers CD-ROM
Remote Communication Gate S Pro	Used to control devices connected to the same network.

Optional Equipment

1-Tray Paper Feed Unit (D579)

Paper Feed System:	FRR
Paper Height Detection:	
Capacity:	
Paper Weight:	52 to 256 g/m^2 (14 to 68 lb.)
Paper Size:	
Power Source:	
Power Consumption:	
Dimensions (W x D x H):	
Weight:	

2-Tray Paper Feed Unit (D580)

Paper Feed System:	FRR
Paper Height Detection:	5 steps (100%, 70%, 30%, 10% (Near end), and Empty)
Capacity:	550 sheets x 2 trays
Paper Weight:	52 to 256 g/m^2 (14 to 68 lb.)
Paper Size:	A3 SEF to A5, DLT SEF to HLT
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	Less than 60 W (Max.)/ Less than 35 W (Ave,)
Dimensions (W x D x H):	580 mm x 620 mm x 260 mm (22.8" x 24.4" x 10.2")
Weight:	26 kg (57.3 lb.)

LCT 2000-sheet (D581)

Paper Size:	A4 LEF/LT LEF
Paper Weight:	52 to 256 g/m^2 (14to 68 lb.)
Tray Capacity:	2,000 sheets (80 g/m^2, 20lb.)
Remaining Paper Detection:	5 steps (100%, 70%, 30%, 10%, Empty): Right Tray 4 steps (100%, 70%, 30%, Empty): Left Tray
Power Source:	DC 24 V, 5 V (from copier/printer)
Power Consumption:	55 W (Max.)/30 W (Ave.)
Weight:	26 kg (57.3 lb.)
Size (W x D x H):	580 mm x 620 mm x 260 mm (22.8" x 24.4" x 10.2")

LCT 1200-sheet (D631)

Paper Size:	A4 LEF/ LT LEF/ B5 LEF
Paper Weight:	60 to 216 g/m^2 (- to 57 lb.)
Tray Capacity:	1,200 sheets (80 g/m^2, 20lb)
Remaining Paper Detection:	5 steps (100%, 70%, 30%, 10%, End)
Power Source:	24 Vdc, 5 Vdc (from copier/printer)
Power Consumption:	55 W (Max)/ 25 W (Ave.)
Weight:	14 kg (30.8 lb.)
Size (W x D x H):	348 mm x 540 mm x 290 mm (13.7" x 21.3" x 11.4")

3000-Sheet Finisher (D636)

Finisher	
Dimension (w x d x h)	657 mm x 613 mm x 960 mm (25.9" x 24.1" x 37.8")

Weight		Less than 54 kg (119 lb.) (no punch unit) Less than 56 kg (123.5 lb.) (with punch unit)	
Power Consumption		Less than 96 W	
Noise		Less than 75 db	
Configuration		Console type attached base-unit	
Power Source		From base-unit	
Proof Tray	Stack Capacity	250 sheets: A4, 8.5" x 11" or smaller 50 sheets: B4, 8.5" x 14 or larger	
	Paper Size	A5-A3 SEF, A6 SEF, A6 SEF 5.5" x 8.5"-11" x 17" SEF, 12" x 18" SEF	
	Paper Weight	52 g/m^2 – 256 g/m^2 (14 lb. - 68 lb.)	
Shift Tray	Stack Capacity	3,000 sheets	A4 LEF, 8.5" x 11" LEF
		1,500 sheets	A3 SEF, A4 SEF, B4 SEF, B5, 11" x 17" SEF, 8.5" x 14" SEF, 8.5" x 11" SEF, 12" x 18" SEF
		500 sheets	A5 LEF
		100 sheets	A5 SEF, B6 SEF, A6 SEF, 5.5" x 8.5" SEF
	Paper Size	A5 - A3 SEF, A6 SEF, B6 SEF, 5.5" x 8.5"- 11" x 17" SEF, 12" x 18" SEF	
	Paper Weight	52 g/m^2 - 256 g/m^2 (14 lb. - 68 lb.)	
Staples			
Paper Size		B5 - A3 8.5" x 11" - 11" x 17", 12" x 18"	
Paper Weight		52 g/m^2 - 90 g/m^2 (14 lb. - 24 lb.)	
Staple Position		Top, Bottom, 2 Staple, Top-slant	

Stapling Capacity	Same Paper Size	50 sheets	A4, 8.5" x 11" or smaller
		30 sheets	B4, 8.5" x 14" or larger
	Mixed Paper Size	30 sheets	A4 LEF + A3 SEF, B5 LEF + B4 SEF, 8.5" x11" LEF + 11" x 17" SEF

Staple Replenishment	Cartridge exchange / 5000 pins per cartridge		
Stapled Stack Capacity (same size)	Paper Size	Pages/Set	Sets
	A4 LEF, 8.5" x 11" LEF	20 - 50 pages	150 - 60 sets
		2 - 19 pages	150 sets
	A4 SEF, B5, 8.5" x 11" SEF	15 - 50 pages	100 - 30 sets
		2 - 14 pages	100 sets
	Others	15 - 30 pages	100 - 33 sets
		2 - 14 pages	100 sets
Stapled Stack Capacity (mixed sizes)	A4 LEF & A3 SEF, B5 LEF & B4 SEF, 8.5" x11" LEF & 11" x 17" SEF	2 - 30 pages	50 set

2000-Sheet Booklet Finisher (D637)

Finisher	
Dimension W x D x H	657 mm x 613 mm x 960 mm (25.9 x 24.1 x 37.8")
Weight	Less than 63 kg (138.6 lb.) (no punch unit) Less than 65 kg (143 lb.) (with punch unit)
Power Consumption	Less than 96 W
Noise	Less than 75 db
Configuration	Console type attached base-unit
Power Source	From base-unit

Proof Tray	Stack Capacity	250 sheets: A4, 8.5" x 11" or smaller 50 sheets: B4, 8.5" x 14" or larger	
	Paper Size	A5 - A3 SEF, B6 SEF, A6 LEF 5.5" x 8.5" to 11" x 17" SEF, 12"x18" SEF	
	Paper Weight	52 g/m^2 - 256 g/m^2 (14 lb. - 68 lb.)	
Shift Tray	Stack Capacity	2,000 sheets	A4 LEF, 8.5" x 11" LEF
		1,000 sheets	A3 SEF, A4 SEF, B4 SEF, B5 11" x 17" SEF, 8.5" x 14" SEF, 8.5" x 11" SEF, 12"x18" SEF
		500 sheets	A5 LEF
		100 sheets	A5 SEF, B6 SEF, A6 SEF, 5.5" x 8.5" SEF
	Paper Size	A5 - A3 SEF, A6 SEF, B6 SEF 5.5" x 8.5" to 11" x 17" SEF, 12" x 18" SEF	
	Paper Weight	52 g/m^2 - 256 g/m^2 (14 lb. - 68 lb.)	
Staple			
Paper Size		B5-A3, 8.5" x 11" - 11" x 17", 12" x 18"	
Paper Weight		52 g/m^2 - 90 g/m^2, 14 lb. Bond - 28 lb. Bond	
Staple Position		Top, Bottom, 2 Staple, Top-slant	
Staples Capacity	Same Paper Size	50 sheets	A4, 8.5" x 11" or smaller
		30 sheets	B4, 8.5" x 14" or larger
	Mixed Paper Size	30 sheets	A4 LEF & A3 SEF, B5 LEF & B4 SEF, 8.5" x 11" LEF & 11" x 17" SEF
	Booklet Stapling	15 sheets	A4 SEF, A3 SEF, B5 SEF, B4 SEF 8.5" x 11" SEF, 8.5" x 14" SEF, 11" x 17" SEF, 12" x 18" SEF

Staple Replenishment		Corner staple	5,000 staples per cartridge
		Booklet staple	2,000 staples per cartridge
Corner Staple Capacity	Same Size	A4 LEF, 8.5" x 11" LEF	13 - 50 pages
			2 - 12 pages
		A4 SEF, B5, 8.5" x 11" SEF	10 - 50 pages
			2 - 9 pages
		Others	10 - 30 pages
			2 - 9 pages
	Mixed Size	A4 LEF + A3 SEF B5 LEF + B4 SEF 8.5" x 11" LEF + 11" x 17" SEF	2 - 30 pages
Booklet Staple Capacity	A4 SEF, A3 SEF, B5 SEF, B4 SEF 8.5" x 11" SEF, 8.5" x 14" SEF, 11" x 17" SEF 12" x 18" SEF		2 - 5 pages
			6 - 10 pages
			11 - 15 pages

Punch Unit (D570) for 2000-Sheet (Booklet) / 3000-Sheet Finisher

Available Punch Units	NA	2/3 holes switchable
	EU	2/4 holes switchable
	Scandinavia	4 holes
Punch Waste Replenishment	NA 2-holes	Up to 5,000 sheets
	NA 3-holes	Up to 5,000 sheets
	EU 2-holes	Up to 14,000 sheets
	EU 4-holes	Up to 7,000 sheets
	Scandinavia 4-holes	Up to 7,000 sheets
Paper Weight	52 g/m^2 - 163 g/m^2, 14 lb Bond - 43 lb Bond	

Paper Sizes	NA 2-holes	SEF	A5 to A3, 5.5" x 8.5" to 11" x 17"
		LEF	A5 to A4, 5.5" x 8.5" , 8.5" x 11"
	NA 3-holes	SEF	A3, B4, 11" x 17"
		LEF	A4, B5, 8.5" x 11"
	EU 2-holes	SEF	A5 to A3, 5.5" x 8.5" to 11" x 17"
		LEF	A5 to A4, 5.5" x 8.5", 8.5" x 11"
	EU 4-holes	SEF	A3, B4, 11"x17"
		LEF	A4, B5, 8.5" x 11"
	Scandinavia 4-holes	SEF	A5 to A3, 5.5" x 8.5" to 11" x 17"
		LEF	A5 to A4, 5.5" x 8.5", 8.5" x 11"

Bridge Unit (D634)

Paper Size:	Standard sizes A6 SEF to A3, HLT to DLT Non-standard sizes Width: 90 to 305 mm Length: 148 to 1260 mm
Paper Weight:	52 g/m^2 to 256 g/m^2, 16 lb. to 68 lb.
Paper Capacity:	250 sheet (A4/ $8_{1/2}$" x $11_{1/2}$" or smaller: 80g/m^2/ 20 lbs) 125 sheet (B4 $8_{1/2}$" x $11_{1/2}$" or larger: 80g/m^2/ 20 lbs)
Power Source:	DC 24 V, 5 V (form the copier/printer)
Dimensions (W x D x H):	415 mm x 412 mm x 111 mm (16.3" x 16.2" x 4.4")
Weight	5 kg (11 lb.)

4-bin Mail Box (M413)

Paper Size:	

Paper Weight:	
Tray Capacity:	250 sheets x 4 bins
Power Source:	
Power Consumption:	
Weight:	
Size (W x D x H):	

Output Jogger Unit (B703)

Paper Size:	
Paper Weight:	
Tray Capacity:	250 sheets (80 g/m^2, 20 lb., A4 / LT)
Power Source:	
Power Consumption:	
Weight:	
Size (W x D x H):	

2. Appendix: PM Tables

Maintenance Tables

Preventive Maintenance Items

Chart: A4 (LT) / 5%

Mode: 3 prints / job

Ratio 60%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect

User Maintenance

Item	40K	60K	160K	200K	EM	Remarks
PCDU (Bk)		R				
PCDU (C, M, Y)		R				
ITB Unit				R		
Fusing Unit (with Paper Transfer Roller, Dust Filter, Ozone Filter)			R			
Toner Collection Bottle	R					

Service Maintenance

Item	40K	150K	300K	EM	Remarks
PCDU (Bk)		R			
PCDU (C, M, Y)		R			

Item	40K	150K	300K	EM	Remarks
Toner Collection Bottle	R				Replace when the waste toner bottle full message appears.
Image Transfer Belt-cleaning Unit			R		
Image Transfer Belt			R		
Paper Transfer Roller Unit			R		
Fusing Unit			R		
Registration Roller				C	Damp cloth
Registration Sensor				C	Blower brush or dry cloth
Paper Dust Container				C	Blower brush
Vertical Transport Roller				C	Damp cloth
Vertical Transport Sensor				C	Blower brush or dry cloth
Paper Feed Sensor				C	Blower brush or dry cloth
Feed Roller				C	Blower brush or dry cloth
Separation Roller				C	Blower brush or dry cloth
Pick-up Roller				C	Damp cloth
Inverter Roller				C	Damp cloth
Fusing Exit Sensor				C	Blower brush or dry cloth
Junction Paper Jam Roller				C	Blower brush or dry cloth
Junction Paper Jam Sensor				C	Blower brush or dry cloth
Transport Roller				C	Damp cloth
Duplex Entrance Sensor				C	Blower brush or dry cloth
Duplex Exit Sensor				C	Blower brush or dry cloth
Duplex Exit Roller				C	Damp cloth

Item	40K	150K	300K	EM	Remarks
Ozone Filter (Charge Unit)				C	
Ozone Filter (AC Controller)			R		
Exhaust Filter (AC Controller)			R		
Dust Glass				C	
ID Sensor				C	

Two-tray Paper Feed Unit (D580)

Item	EM	Remarks
Feed Roller	C	Dry cloth
Separation Roller	C	Dry cloth
Pick-up Roller	C	Dry cloth
Paper Feed Sensor	C	Dry cloth
Relay Sensor	C	Dry cloth
Relay Roller	C	Damp cloth
Bottom Plate Pad	C	Damp cloth

1200-sheet LCT (D631)

Item	EM	Remarks
Feed Roller	C	Dry cloth
Separation Roller	C	Dry cloth
Pick-up Roller	C	Dry cloth
Paper Feed Sensor	C	Dry cloth

Item	EM	Remarks
Relay Sensor	C	Dry cloth
Relay Roller	C	Damp cloth
Bottom Plate Pad	C	Damp cloth

2000-sheet LCT (D581)

Item	EM	Remarks
Feed Roller	C	Dry cloth
Separation Roller	C	Dry cloth
Pick-up Roller	C	Dry cloth
Paper Feed Sensor	C	Dry cloth
Relay Sensor	C	Dry cloth
Relay Roller	C	Damp cloth
Bottom Plate Pad	C	Damp cloth

2000 Sheet Finisher / 3000 Sheet Booklet Finisher (D637 / D636)

Items	EM	Remarks
Rollers	C	Damp cloth
Discharge Brush	C	Dry cloth
Sensors	C	Blower brush

2000/3000-Sheet (Booklet) Finisher Punch Unit (D570)

Items	EM	Remarks
Punch Chads	C	Discard chads.

Bridge Unit (D634)

Items	EM	Remarks
Rollers	C	Damp cloth

Shift Tray (D633)

Items	EM	Remarks
Tray	C	Damp cloth

Side tray (D635)

Items	EM	Remarks
Rollers	C	Damp cloth
Sensors	C	Blower brush

Mail Box (M413)

Items	EM	Remarks

Output Jogger Unit (M413)

Items	EM	Remarks

Other Yield Parts

The parts mentioned in these tables have a target yield. However, the total 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 (APV, color ratio, and P/J). So, these parts are categorized not as PM parts but as yield parts (EM parts).

Mainframe

Item	300K	1500K	2000K	Remarks
Tonner Suplpy Unit - K			R	-
Tonner Suplpy Unit - Y		R		-
Tonner Suplpy Unit - C		R		-
Tonner Suplpy Unit - M		R		-
Toner Scatter proof Filter	R			-

3. Appendix: Service Program Mode Tables

Service SP Tables

SP1-XXX

1001	[Bit Switch]			
001	Bit Switch 1		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**No I/O Timeout**	**Disable**	Enable
		Enable: The MFP I/O Timeout setting will have no effect. I/O Timeouts will never occur.		
	bit 4	**SD Card Save Mode**	**Disable**	Enable
		Enable: Print jobs will be saved to an SD Card in the GW SD slot. For details, see "Card Save Function" in the "Main chapters: 5. System Maintenance".		
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	**[RPCS,PCL]: Printable area frame border**	**Disable**	Enable
		Enable: The machine prints all RPCS and PCL jobs with a border on the edges of the printable area.		

1001	[Bit Switch]

002	Bit Switch 2		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**Applying a collation Type**	**Shift Collate**	Normal Collate
		A collation type (shift or normal) will be applied to all jobs that do not already have a 'Collate Type' configured. **Note** • If #5-0 is enabled, this Bit Switch has no effect.		
	bit 3	**[PCL5e/c,PS]: PDL Auto Switching**	**Enable**	1: Disable
		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	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**

003	Bit Switch 3		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**[PCL5e/c]: Legacy HP compatibility**	**Disable**	Enable
		Enable: Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually "<ESC>*r0A") will be changed to "<ESC>*r1A"		
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
004	Bit Switch 4		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**IPDS print-side reversal**	**Disable**	Enable
		If enabled, the simplex pages of IPDS jobs will be printed on the front side because of printing on the back side of the page. This might reduce printing speed.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	IPDS support tools	**Disable**	Enable
		Enable: Enables the port for IPDS support tools.		

1001	**[Bit Switch]**

005	Bit Switch 5		0	1
	bit 0	**Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.**	**Disable**	Enable
		If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available types will depend on the device and configured options. After enabling the function, the settings will appear under: "User Tools > Printer Features > System"		
	bit 1	**Multiple copies if a paper size or type mismatch occurs**	**Disable (Single copy)**	Enable (Multiple copy)
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.		
	bit 2	**Prevent SDK applications from altering the contents of a job.**	**Disable**	Enable
		If this switch is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter". Note: The main purpose of this switch is for troubleshooting the effects of SDK applications on data.		
	bit 3	**[PS] PS Criteria**	**Pattern3**	Pattern1
		Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not. Pattern3: includes most PS commands. Pattern1: A small number of PS tags and headers		
	bit 4	**Increase max number of the stored jobs.**	**Disable (100)**	Enable (1000)
		Enable: Changes the maximum number of jobs that can be stored on the HDD via Job Type settings to 1000. The default is 100.		
	bit 5	DFU	-	-

RTB 18a
Bit 4: Modified

	bit 6	**Method for determining the image rotation for the edge to bind on.**	**Disable**	Enable
		If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs. The old models are below: - PCL: Pre-04A models - PS/PDF/RPCS:Pre-05S models		
	bit 7	**Letterhead mode printing**	**Disable**	Enable (Duplex)
		Routes all pages through the duplex unit. Disable: Simplex pages or the last page of an odd-paged duplex job, are not routed through the duplex unit. This could result in problems with letterhead/pre-printed pages. Only affects pages specified as Letterhead paper.		

1001	**[Bit Switch]**		
006	Bit Switch 6 **DFU**	-	-

1001	**[Bit Switch]**

007	Bit Switch 7		0	1
	bit 0	**Print path**	**Disable**	Enable
		If enabled, simplex pages (in mixed simplex/duplex PS/PCL5 jobs only) and the last page of an odd paged duplex job (PS, PCL5, PCL6), are always routed through the duplex unit. Not having to switch paper paths increases the print speed slightly.		
	bit 1	DFU	-	-
	bit 2			
	bit 3			
	bit 4			
	bit 5	DFU	-	-
	bit 6			
	bit 7	DFU	-	-

1001	**[Bit Switch]**

008	Bit Switch 8		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**[PCL,PS]: Allow BW jobs to print without requiring User Code**	**Disable**	Enable
		Enable: BW jobs submitted without a user code will be printed even if usercode authentication is enabled. **Note** • Color jobs will not be printed without a valid user code.		
	bit 4	**PCL edge to edge printing setting**	**Disable (Standard)**	Enable (BMS)
		Switches the edge to edge printing setting for custom-made machines (BMS).		
	bit 5	DFU	-	-
	bit 6		**Disable**	Enable
	bit 7		**Disable**	Enable

1001	**[Bit Switch]**			
009	Bit Switch 9		0	1
	bit 0	**PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).**	**"Disabled (Immediately)"**	"Enabled (10 seconds)"
		To be used if PDL auto-detection fails. A failure of PDL autodetection doesn't necessarily mean that the job can't be printed. This bit switch tells the device whether to time-out immediately (default) upon failure or to wait 10 seconds.		

	bit 1	DFU	-	-
	bit 2	**Job Cancel**	**Disabled (Not cancelled)**	Enabled (Cancelled)
		If this bit switch, all jobs will be cancelled after a jam occurs. Note: If this bitsw is enabled, printing under the following conditions might result in problems: - Job submission via USB or Parallel Port - Spool printing (WIM >Configuration > Device Settings > System)		
	bit 3	DFU	-	-
	bit 4	**Timing of the PJL Status ReadBack (JOB END) when printing multiple collated copies.**	**Disable**	Enable
		This switch determines the timing of the PJL USTATUS JOB END sent when multiple collated copies are being printed. 0 (default): JOB END is sent by the device to the client after the first copy has completed printing. This causes the page counter to be incremented after the first copy and then again at the end of the job. 1: JOB END is sent by the device to the client after the last copy has finished printing. This causes the page counter to be incremented at the end of each job.		
	bit 5	**Display UTF-8 text in the operation panel**	**Enabled**	Disabled
		Enabled (=0): Text composed of UTF-8 characters can be displayed in the operation panel. Disabled (=1): UTF-8 characters cannot be displayed in the operation panel. For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this switch is enabled (=0).		
	bit 6			

	bit 7	**Enable/Disable Print from USB/SD's Preview function**	Enabled	**Disabled**
		Determines whether Print from USB/SD will have the Preview function. Enabled (=0): Print from USB/SD will have the Preview function. Disabled (=1): Print from USB/SD will not have the Preview function.		

1001	[Bit Switch]			
010	Bit Switch A		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	**Auto Job Promotion locks the queue**	**Queue is not locked after AJP**	Queue locked after AJP
		If this is 1, then after a job is stored using Auto Job Promotion, new jobs cannot be added to the queue until the stored job has been completely printed.		
	bit 6	**Allow use of Auto Job Promotion if connected to an external charge device.**	**Does not allow AJP with ECD**	Allows AJP with ECD
		If this is 0, Auto Job Promotion will be automatically disabled if an external charge device is connected. Note: We do not officially support enabling this switch (1). Use it at your own risk.		
	bit 7	DFU	-	-

1001	[Bit Switch]			
011	Bit Switch B		0	1
	bit 0	DFU	-	-

	bit 1	**Print job interruption**	**Does not allow interruption**	Allow interruption
		0 (default): Print jobs are not interrupted. If a job is promoted to the top of the print queue, it will wait for the currently printing job to finish. 1: If a job is promoted to the top of the queue, it will interrupt the currently printing job and start printing immediately.		
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**			
012	Bit Switch C		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1003	**[Clear Setting]**		
001	Initialize System	*CTL	[- / - / -] [Execute]
	Initializes settings in the "System" menu of the user mode.		

003	Delete Program	*CTL	[- / - / -] [Execute]

1004	**[Print Summary]**		
001	Service Summary	CTL	[- / - / -] [Execute]
	Prints the service summary sheet (a summary of all the controller settings).		

1005	**[Display Version]**		
001	Printer Version	CTL	[- / - / -]
	Displays the version of the controller firmware.		

1007	**[Supply Display]**		
	Sets displaying supply information or not. 0: Displays supply information 1: Does not display supply information		
001	Development	*CTL	[0 or 1 / **1** / 1 /step]
002	PCU	*CTL	
003	Transfer	*CTL	
004	Int. Transfer	*CTL	
005	Transfer Roller	*CTL	
006	Fuser	*CTL	
007	Fuser Oil	*CTL	

1101	**[Data Recall]**
	Recalls a set of gamma settings. This can be either a) the factory setting, b) the previous setting, or c) the current setting.

001	Factory	*CTL	[- / **-** / -] [Execute]
002	Previous	*CTL	
003	Current	*CTL	
004	ACC	*CTL	

1102	**[Resolution Setting]**		
	Selects the printing mode (resolution) for the printer gamma adjustment.		
001	Tone Control Mode Selection	CTL	[0 to 7 / **0** / 1/step] 0: 1200x1200 Photo (1bit/4col) 1: 600x600 Photo (4bit/4col) 2: 600x600 Photo (2bit/4col) 3: 600x600 Photo (1bit/4col) 4: 1200x1200 Text (1bit/4col) 5: 600x600 Text (4bit/4col) 6: 600x600 Text (2bit/4col) 7: 600x600 Text (1bit/4col)

1103	**[Test Page]**		
	Prints the test page to check the color balance before and after the gamma adjustment.		
001	Color Gray Scale	CTL	[- / **-** / -] [Execute]
002	Color Pattern	CTL	

1104	**[Gamma Adjustment]**		
	Adjusts the printer gamma for the mode selected in the "Mode Selection" menu.		
001	Black: Highlight	CTL	[0 to 30 / **15** / 1/step]
002	Black: Shadow	CTL	
003	Black: Middle	CTL	
004	Black: IDmax	CTL	

005	Black	CTL	[0 to 30 / **15** / 1/step]
006	Black	CTL	
007	Black	CTL	
008	Black	CTL	
009	Black	CTL	[0 to 30 / **15** / 1/step]
010	Black	CTL	
011	Black	CTL	
012	Black	CTL	
013	Black	CTL	[0 to 30 / **15** / 1/step]
014	Black	CTL	
015	Black	CTL	
016	Black	CTL	
021	Cyan: Highlight	CTL	[0 to 30 / **15** / 1/step]
022	Cyan: Shadow	CTL	
023	Cyan: Middle	CTL	
024	Cyan: IDmax	CTL	
025	Cyan	CTL	[0 to 30 / **15** / 1/step]
026	Cyan	CTL	
027	Cyan	CTL	
028	Cyan	CTL	
029	Cyan	CTL	[0 to 30 / **15** / 1/step]
030	Cyan	CTL	
031	Cyan	CTL	
032	Cyan	CTL	

033	Cyan	CTL	[0 to 30 / **15** / 1/step]
034	Cyan	CTL	
035	Cyan	CTL	
036	Cyan	CTL	
041	Magenta: Highlight	CTL	[0 to 30 / **15** / 1/step]
042	Magenta: Shadow	CTL	
043	Magenta: Middle	CTL	
044	Magenta: IDmax	CTL	
045	Magenta	CTL	[0 to 30 / **15** / 1/step]
046	Magenta	CTL	
047	Magenta	CTL	
048	Magenta	CTL	
049	Magenta	CTL	[0 to 30 / **15** / 1/step]
050	Magenta	CTL	
051	Magenta	CTL	
052	Magenta	CTL	
053	Magenta	CTL	[0 to 30 / **15** / 1/step]
054	Magenta	CTL	
055	Magenta	CTL	
056	Magenta	CTL	
061	Yellow: Highlight	CTL	[0 to 30 / **15** / 1/step]
062	Yellow: Shadow	CTL	
063	Yellow: Middle	CTL	
064	Yellow: IDmax	CTL	

065	Yellow	CTL	[0 to 30 / **15** / 1/step]
066	Yellow	CTL	
067	Yellow	CTL	
068	Yellow	CTL	
069	Yellow	CTL	[0 to 30 / **15** / 1/step]
070	Yellow	CTL	
071	Yellow	CTL	
072	Yellow	CTL	
073	Yellow	CTL	[0 to 30 / **15** / 1/step]
074	Yellow	CTL	
075	Yellow	CTL	
076	Yellow	CTL	

1105	**[Save Tone Control Value]**		
	Stores the print gamma adjusted with the "Gamma Adj." menu item as the current setting. Before the machine stores the new "current setting", it moves the data currently stored as the "current setting" to the "previous setting" memory storage location.		
001	Save Tone Control Value	*CTL	[- / **-** / -] [Execute]

1106	**[Toner Limit]**		
	Adjusts the maximum toner amount for image development.		
001	Toner Limit Value	*CTL	[0 to 400 / **220** / 1 %/step]

1108	**[Ext.TonerSave]**		
	Adjusts the maximum toner amount for image development.		
001	Mode1:Text	*CTL	[0 to 999 / **75** / 1 /step]
002	Mode2:Text	*CTL	[0 to 999 / **50** / 1 /step]

003	Mode1:Image	*CTL	[0 to 999 / **75** / 1 /step]
004	Mode2:Image	*CTL	[0 to 999 / **50** / 1 /step]
005	Mode1:Line	*CTL	[0 to 999 / **75** / 1 /step]
006	Mode2:Line	*CTL	[0 to 999 / **50** / 1 /step]
007	Mode1:Paint	*CTL	[0 to 999 / **75** / 1 /step]
008	Mode2:Paint	*CTL	[0 to 999 / **50** / 1 /step]

1109	**[EconomyColor]**		
	Adjusts the maximum toner amount for image development.		
001	Text	*CTL	[0 to 999 / **100** / 1 /step]
002	Image	*CTL	[0 to 999 / **50** / 1 /step]
003	Line	*CTL	[0 to 999 / **30** / 1 /step]
004	Paint	*CTL	[0 to 999 / **30** / 1 /step]

1110	**[Media Print Device Setting]**		
	Enables or disables the front I/F (USB/SD) for Media print support function.		
002	0:Disable 1:Enable	*CTL	[0 or 1 / **-** / 1/step] Default w/ Option: 0 Standard model: 1

1111	**[All Jobs Delete Mode]**		
	This switch determines whether all SCS jobs in progress are included in the SMC report when SP5990 is executed.		
001	0:excluding New Job 1:including New Job	*CTL	[0 or 1 / **1** / 1/step]

Engine SP Tables-1

SP1-XXX (Feed)

1001	**[Leading Edge Registration]** Leading Edge Registration Adjustment (Tray Location, Paper Type, Color Mode), Paper Type → Thin, Plain, Thick 1, Thick 2 or Thick 3		
	Adjusts the leading edge registration by changing the registration motor operation timing for each mode.		
002	Tray: Plain	*ENG	[-9.0 to 9.0 / **0.0** / 0.1 mm/step]
003	Tray: Middle Thick	*ENG	
004	Tray: Thick 1	*ENG	
005	Tray: Thick 2	*ENG	
007	By-pass: Plain	*ENG	
008	By-pass: Middle Thick	*ENG	
009	By-pass: Thick 1	*ENG	
010	By-pass: Thick 2	*ENG	
011	By-pass: Thick 3	*ENG	
013	Duplex: Plain	*ENG	
014	Duplex: Middle Thick	*ENG	
015	Duplex: Thick 1	*ENG	

016	Tray: Thick 3	*ENG	[-9.0 to 9.0 / **0.0** / 0.1 mm/step]
017	Tray: Plain:1200	*ENG	
018	Tray: Middle Thick:1200	*ENG	
019	Tray: Thick 1:1200	*ENG	
020	By-pass: Plain:1200	*ENG	
021	By-pass: Middle Thick:1200	*ENG	
022	By-pass: Thick 1:1200	*ENG	
023	Duplex: Plain:1200	*ENG	
024	Duplex: Middle Thick:1200	*ENG	
025	Duplex: Thick 1:1200	*ENG	
026	Tray: Thin	*ENG	[-9.0 to 9.0 / **0.0** / 0.1 mm/step]
027	By-pass: Thin	*ENG	
028	Duplex: Thin	*ENG	
029	Tray: Thin: 1200	*ENG	
030	By-pass: Thin: 1200	*ENG	
031	Duplex: Thin: 1200	*ENG	

1002	**[Side to Side Registration]** Side-to-Side Registration Adjustment
	Adjusts the side-to-side registration by changing the laser main scan start position for each mode.

001	By-pass Table	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 mm/step]
002	Paper Tray 1	*ENG	
003	Paper Tray 2	*ENG	
004	Paper Tray 3	*ENG	
005	Paper Tray 4	*ENG	
006	Duplex	*ENG	
007	Paper Tray 5	*ENG	
008	Large Capacity Tray	*ENG	

1003	**[Paper Buckle]** Paper Buckle Adjustment (Tray Location, Paper Type, Color mode), Paper Type → Plain, Thick, Thick1		
	Adjusts the amount of paper buckle at the registration roller by changing the paper feed timing.		
002	Paper Tray1: Plain	*ENG	[-9 to 5 / **-2** / 1 mm/step]
003	Tray1: Middle Thick	*ENG	[-9 to 5 / **-1** / 1 mm/step]
004	Paper Tray1: Thick1	*ENG	[-9 to 5 / **-2** / 1 mm/step]
007	Paper Tray2/3/4/5/LCT: Plain	*ENG	
008	Tray 2/3/4/5/LCT: Middle Thick	*ENG	[-9 to 5 / **-1** / 1 mm/step]
009	Paper Tray2/3/4/5/LCT: Thick 1	*ENG	[-9 to 5 / **-2** / 1 mm/step]
012	By-pass: Plain	*ENG	[-9 to 5 / **-1** / 1 mm/step]
013	By-pass: Middle Thick	*ENG	
014	By-pass: Thick 1	*ENG	[-9 to 5 / **-2** / 1 mm/step]
018	Duplex: Plain	*ENG	[-9 to 5 / **-1** / 1 mm/step]
019	Duplex: Middle Thick	*ENG	
020	Duplex: Thick 1	*ENG	[-9 to 5 / **-2** / 1 mm/step]

021	Paper Tray1: Plain:1200	*ENG	[-9 to 5 / **0** / 1 mm/step]
022	Tray1: Middle Thick:1200	*ENG	
023	Tray 2/3/4/5LCT: Plain:1200	*ENG	
024	Tray 2/3/4/5LCT: Mid:1200	*ENG	
025	By-pass: Plain:1200	*ENG	
026	By-pass: Middle Thick:1200	*ENG	
027	Paper Tray1: Thick1:1200	*ENG	[-9 to 5 / **-2** / 1 mm/step]
028	Paper Tray2/3/4/5/LCT: Thick 1:1200	*ENG	
029	By-pass: Thick 1:1200	*ENG	
030	Duplex: Plain: 1200	*ENG	[-9 to 5 / **0** / 1 mm/step]
031	Duplex: Middle Thick: 1200	*ENG	
032	Duplex: Thick 1: 1200	*ENG	[-9 to 5 / **-2** / 1 mm/step]

1007	**[By-Pass Size Detection]** By-Pass Size Detection Display		
001	LG	*ENG	[0 or 1 / **0** / -] 0: OFF, 1: ON
	Enables or disables the automatic paper size detection function of the by-pass tray. This SP determines what paper size the machine detects if the detected size is less than 8.5". 0: OFF (Letter/SEF), 1: ON (Legal/SEF)		

1101	**[Reload Permit Setting]**		
	Specifies the settings of the reload permit for cold temperature in color mode.		
001	Pre-rotation Start Temp.	*ENG	[-50 to 200 / **-50** / 1 deg/step]
002	Reload Target Temp.:Center	*ENG	[0 to 190 / **P3c:180(NA,TW), 165(EU,ASIA,CHN), P3d:180(NA,TW), 168(EU, ASIA)** / 1 deg/step]
003	Reload Target Temp.:Press	*ENG	[0 to 200 / **P3c:150, P3d:148** / 1 deg/step]

004	Temp.:Delta:Cold:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
005	Temp.:Delta:Cold:End	*ENG	[0 to 200 / **5** / 1 deg/step]
006	Temp.:Delta:Cold:Press	*ENG	[0 to 200 / **P3c:17(NA,TW), 40(EU,ASIA,CHN), P3d: 6(NA,TW), 26(EU,ASIA)** / 1 deg/step]
1101	**[Reload Permit Setting]**		
	Specifies the settings of the forced reload time for cold temperatures in color mode.		
007	Forced Reload Time :Cold	*ENG	[0 to 100 / **P3c: 15, P3d: 20** / 1 sec/step]
1101	**[Reload Permit Setting]**		
	Specifies the settings of the reload permit for low power mode temperature in color mode.		
008	Temp.:Delta:Low Power Mode:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
009	Temp.:Delta:Low Power Mode:End	*ENG	[0 to 200 / **5** / 1 deg/step]
010	Temp.:Delta:Low Power Mode:Press	*ENG	[0 to 200 / **P3c:25(NA,TW), 40(EU,ASIA,CHN), P3d:23(NA,TW), 38(EU,ASIA)** / 1 deg/step]

1101	**[Reload Permit Setting]**		
	Specifies the setting of the forced reload time for low power in color mode.		
011	Forced Reload Time:Low Power Mode	*ENG	[0 to 100 / **10** / 1 sec/step]
1101	**[Reload Permit Setting]**		
	Specifies the settings of the reload permit for hot temperature in color mode.		
012	Temp.:Delta:Hot:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
013	Temp.:Delta:Hot:End	*ENG	[0 to 200 / **5** / 1 deg/step]
014	Temp.:Delta:Hot:Press	*ENG	[0 to 200 / **P3c: 40, P3d: 26** / 1 deg/step]
1101	**[Reload Permit Setting]**		
	Specifies the setting of the forced reload time for hot temperatures in color mode.		

015	Forced Reload Time:Hot	*ENG	[0 to 100 / **P3c: 15, P3d: 20** / 1 sec/step]
1101	**[Reload Permit Setting Temp.]**		
	Specifies the settings of the reload permit for cold temperature in BW mode.		
016	Temp.:Delta:Cold:BW:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
017	Temp.:Delta:Cold:BW:End	*ENG	[0 to 200 / **5** / 1 deg/step]
018	Temp.Delta:Cold:BW:Press	*ENG	[0 to 200 / **P3c: 40, P3d: 26** / 1 deg/step]
1101	**[Reload Permit Setting]** Specifies the setting of the forced reload time for cold temperatures in BW mode.		
019	Forced Reload Time:Cold:BW	*ENG	[0 to 100 / **P3c: 15, P3d: 20** / 1 sec/step]
1101	**[Flicker Control]**		
	Enables or disables the Flicker Control.		
030	Flicker Control	*ENG	[0 to 1 / **0** / 1/step] **0: Disable** 1: Enable

1101	**[Reload Permit Setting]** Specifies the settings of the reload permit for target temperature in BW mode 2.		
101	Reload Target Temp.:Center:BW2	*ENG	[0 to 180 / **P3c:144(NA,TW), 139(EU,ASIA,CHN), P3d:150(NA,TW), 145(EU,ASIA)** / 1 deg/step]
102	Reload Target Temp.:Press:BW2	*ENG	[0 to 200 / **120** / 1 deg/step]
1101	**[Reload Permit Setting]** Specifies the settings of the reload permit for cold temperature in BW mode 2.		
103	Temp.:Delta:Cold:BW2:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
104	Temp.:Delta:Cold:BW2:End	*ENG	[0 to 200 / **5** / 1 deg/step]
105	Temp.:Delta:Cold:BW2:Press	*ENG	[0 to 200 / **100** / 1 deg/step]
1101	**[Reload Permit Setting]** Specifies the setting of the forced reload time for cold temperatures in BW mode 2.		

106	Forced Reload Time:Cold:BW2	*ENG	[0 to 100 / **P3c: 15, P3d: 20** / 1 sec/step]
1101	**[Reload Permit Setting]** Specifies the settings of the reload permit for low temperature.		
151	Temp.:Delta:Low Temp.:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
152	Temp.:Delta:Low Temp.:End	*ENG	[0 to 200 / **5** / 1 deg/step]
153	Temp.:Delta:Low Temp.:Press	*ENG	[0 to 200 / **P3c:40(NA,TW), 35(EU,ASIA,CHN) P3d: 33** / 1 deg/step]
1101	**[Reload Permit Setting]** Specifies the setting of the forced reload permit for low temperature.		
154	Forced Reload Time:Low Temp.	*ENG	[0 to 100 / **60** / 1 sec/step]

1101	**[Reload Permit Setting]** Specifies the settings of the reload permit for cold temperature.		
201	Temp .:Delta:Cold:Center: FIN-less/ADF-less	*ENG	[0 to 200 / **5** / 1 deg/step]
202	Temp .:Delta:Cold:End: FIN-less/ADF-less	*ENG	[0 to 200 / **5** / 1 deg/step]
203	Temp .:Delta:Cold:Press: FIN-less/ADF-less	*ENG	[0 to 200 / **P3c: 67, P3d: 36** / 1 deg/step]
1101	**[Reload Permit Setting]** Specifies the setting of the forced reload time for cold temperatures.		
204	Forced Reload Time:Cold: FIN-less/ADF-less	*ENG	[0 to 100 / **P3c: 14 , P3d: 20** / 1 sec/step]
1101	**[Reload Permit Setting]** Specifies the setting of the forced reload permit for cold temperatures.		
211	Temp:Delta:Cold:Center:FIN-less/ADF-attached	*ENG	[0 to 200 / **5** / 1 deg/step]
212	Temp:Delta:Cold:End:FIN-less/ADF-attached	*ENG	[0 to 200 / **5** / 1 deg/step]

213	Temp:Delta:Cold:Press:FIN-less/ADF-attached	*ENG	[0 to 200 / **P3c: 54, P3d: 31** / 1 deg/step]
1101	**[Reload Permit Setting]** Specifies the setting of the forced reload time for cold temperatures.		
214	Forced Reload Time:Cold: FIN-less/ADF-attached	*ENG	[0 to 100 / **P3c: 14 , P3d: 20** / 1 sec/step]

1102	**[Feed Permit Setting]**		
	Specified the settings of the paper feeding timing.		
001	Temp.:Lower Delta:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
002	Temp.:Lower Delta:End	*ENG	[0 to 200 / **5** / 1 deg/step]
003	Temp.:Upper Delta:Center	*ENG	[0 to 200 / **30** / 1 deg/step]
004	Temp.:Upper Delta:End	*ENG	[0 to 200 / **30** / 1 deg/step]
005	Temp.:Lower Delta:Press	*ENG	[0 to 200 / **100** / 1 deg/step]
006	Rotation Time	*ENG	[0 to 100 / **0** / 1 sec/step]
007	Temp.:Lower Delta:Center:Sp.1	*ENG	[0 to 200 / **5** / 1 deg/step]
008	Temp.:Lower Delta:End:Sp.1	*ENG	[0 to 200 / **5** / 1 deg/step]
009	Temp.:Upper Delta:Center:Sp.1	*ENG	[0 to 200 / **30** / 1 deg/step]
010	Temp.:Upper Delta:End:Sp.1	*ENG	[0 to 200 / **30** / 1 deg/step]
011	Temp.:Lower Delta:Press:Sp.1	*ENG	[0 to 200 / **P3c:15(NA,TW), 10(EU,ASIA,CHN), P3d:15(NA,TW), 7(EU,ASIA)** / 1 deg/step]
012	Rotation Time:Sp.1	*ENG	[0 to 100 / **0** / 1 sec/step]
013	Temp.:Lower Delta:Center:Sp.2	*ENG	[0 to 200 / **5** / 1 deg/step]
014	Temp.:Lower Delta:End:Sp.2	*ENG	[0 to 200 / **5** / 1 deg/step]

015	Temp.:Upper Delta:Center:Sp.2	*ENG	[0 to 200 / **15** / 1 deg/step]
016	Temp.:Upper Delta:End:Sp.2	*ENG	[0 to 200 / **15** / 1 deg/step]
017	Temp.:Lower Delta:Press:Sp.2	*ENG	[0 to 200 / **100** / 1 deg/step]
018	Rotation Time:Sp2	*ENG	[0 to 100 / **0** / 1 sec/step]
019	Feed Permit Time	*ENG	[0 to 200 / **60** / 1 sec/step]

1105	**[Print Target Temp.]**		
	(Printing Mode, Roller Type, [Color], Simplex/Duplex) Roller Type → Center and Ends: Heating roller, Pressure → Pressure roller Paper Type → Plain, Thin, Thick, OHP, Middle Thick, Special, Postcard		
001	Plain1:FC:Center	*ENG	[100 to 180 / **P3c:158(NA,TA), 160(EU,ASIA,CHN) P3d:161(NA,TA), 163(EU,ASIA)** / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in full color printing.		
002	Plain1:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
	Specifies the pressure roller target temperature for the ready condition in full color printing..		
003	Plain1:BW:Center	*ENG	[100 to 180 / **P3c:158(NA,TW), 160(EU,ASIA,CHN) P3d:161(NA,TW), 163(EU,ASIA)** / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in BW printing.		
004	Plain1:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
	Specifies the pressure roller target temperature for the ready condition in BW printing.		
005	Plain2:FC:Center	*ENG	[100 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in full color printing.		

006	Plain2:FC:Press	*ENG	[0 to 200 / **P3c:120(NA,TW), 145(EU,ASIA,CHN), P3d:145** / 1 deg/step]
	Specifies the pressure roller target temperature for the ready condition in full color printing.		
007	Plain2:BW:Center	*ENG	[100 to 180 / **P3c:157(NA,TW), 159(EU,ASIA,CHN), P3d:160(NA,TW), 162(EU,ASIA)** / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in BW printing.		
008	Plain2:BW:Press	*ENG	[0 to 200 / **P3c:120(NA,TW), 139(EU,ASIA,CHN), P3d:139** / 1 deg/step]
	Specifies the pressure roller target temperature for the ready condition in BW printing.		
009	Thin:FC:Center	*ENG	[100 to 180 / **P3c:148, P3d:151** / 1 deg/step]
010	Thin:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
011	Thin:BW:Center	*ENG	[100 to 180 / **P3c: 148, P3d: 151** / 1 deg/step]
012	Thin:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
013	M-thick:FC:Center	*ENG	[100 to 180 / **P3c: 170, P3d: 173** / 1 deg/step]
014	M-thick:FC:Press	*ENG	[0 to 200 / **P3c:120(NA,TW), 150(EU,ASIA,CHN), P3d:150** / 1 deg/step]
015	M-thick:BW:Center	*ENG	[100 to 180 / **P3c:168(NA,TW), 170(EU,ASIA,CHN), P3d:171(NA,TW), 173(EU,ASIA)** / 1 deg/step]
016	M-thick:BW:Press	*ENG	[0 to 200 / **P3c:120(NA,TW), 150(EU,ASIA,CHN), P3d:150** / 1 deg/step]
017	Thick1:FC:Center	*ENG	[100 to 180 / **171** / 1 deg/step]
018	Thick1:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
019	Thick1:BW:Center	*ENG	[100 to 180 / **171** / 1 deg/step]
020	Thick1:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]

021	Thick2:FC:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
022	Thick2:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
023	Thick2:BW:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
024	Thick2:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
025	Thick3:FC:Center	*ENG	[100 to 180 / **163** / 1 deg/step]
026	Thick3:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
027	Thick3:BW:Center	*ENG	[100 to 180 / **163** / 1 deg/step]
028	Thick3:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
029	Special1:FC:Center	*ENG	[100 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
030	Special1:FC:Press	*ENG	[0 to 200 / **P3c:120, P3d:145** / 1 deg/step]
031	Special1:BW:Center	*ENG	[100 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
032	Special1:BW:Press	*ENG	[0 to 200 / **P3c:120, P3d:145** / 1 deg/step]
033	Special2:FC:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
034	Special2:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
035	Special2:BW:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
036	Special2:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
037	Special3:FC:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
038	Special3:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
039	Special3:BW:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
040	Special3:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
041	Envelop:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
042	Envelop:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
101	Plain1:FC:Center:Low Speed	*ENG	[100 to 180 / **123** / 1 deg/step]

102	Plain1:FC:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
103	Plain1:BW:Center:Low Speed	*ENG	[100 to 180 / **123** / 1 deg/step]
104	Plain1:BW:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
105	Plain2:FC:Center:Low Speed	*ENG	[100 to 180 / **128** / 1 deg/step]
106	Plain2:FC:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
107	Plain2:BW:Center:Low Speed	*ENG	[100 to 180 / **128** / 1 deg/step]
108	Plain2:BW:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
109	M-thick:FC:Center:Low Speed	*ENG	[100 to 180 / **143** / 1 deg/step]
110	M-thick:FC:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
111	M-thick:BW:Center:Low Speed	*ENG	[100 to 180 / **143** / 1 deg/step]
112	M-thick:BW:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
113	Thick1:FC:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]
114	Thick1:FC:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
115	Thick1:BW:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]
116	Thick1:BW:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
117	Special1:FC:Center:Low Speed	*ENG	[100 to 180 / **123** / 1 deg/step]
118	Special1:FC:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
119	Special1:BW:Center:Low Speed	*ENG	[100 to 180 / **128** / 1 deg/step]
120	Special1:BW:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
121	Special2:FC:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]

122	Special2:FC:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
123	Special2:BW:Center:Low Speed	*ENG	[100 to 180 / **148** / 1 deg/step]
124	Special2:BW:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
125	Plain1:Glossy:Center	*ENG	[100 to 180 / **138** / 1 deg/step]
126	Plain1:Glossy:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
127	Plain2:Glossy:Center	*ENG	[100 to 180 / **143** / 1 deg/step]
128	Plain2:Glossy:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
129	M-thick:Glossy:Center	*ENG	[100 to 180 / **148** / 1 deg/step]
130	M-thick:Glossy:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
131	OHP:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
132	OHP:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
133	Envelop:Center:Low Speed	*ENG	[100 to 180 / **163** / 1 deg/step]
134	Envelop:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
135	Thin:FC:Center:Low Speed	*ENG	[100 to 180 / **118** / 1 deg/step]
136	Thin:FC:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
137	Thin:BW:Center:Low Speed	*ENG	[100 to 180 / **118** / 1 deg/step]
138	Thin:BW:Press:Low Speed	*ENG	[0 to 200 / **120** / 1 deg/step]
139	Thick4:FC:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
140	Thick4:FC:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
141	Thick4:BW:Center	*ENG	[100 to 180 / **168** / 1 deg/step]
142	Thick4:BW:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
143	Postcard:Center	*ENG	[100 to 180 / **158** / 1 deg/step]
144	Postcard:Press	*ENG	[0 to 200 / **120** / 1 deg/step]

1106	[Fusing Temp. Display]		
001	Heat: Center	ENG	[-10 to 250 / - / 1 deg/step] Displays the temperature of the heating roller.
002	Heat: End	ENG	
003	Press: Center	ENG	[-10 to 250 / - / 1 deg/step] Displays the temperature of the pressure roller.
004	Press: End	ENG	

1107	[Standby Target Temp. Setting]		
001	Standby/Preheat1:Center	*ENG	[0 to 125 / **90** / 1 deg/step]
	Specifies the temperature of the pressure roller for the ready or energy save 1 mode.		
003	Preheat2:Center	*ENG	[0 to 125 / **90** / 1 deg/step]
	Specifies the temperature of the pressure roller for the energy save 2 mode.		
005	Low Power :Center	*ENG	[0 to 125 / **90** / 1 deg/step]
	Specifies the temperature of the pressure roller for the low power mode.		
007	Print Ready:Center	*ENG	[0 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
	Specifies the temperature of the heating roller for the print ready condition.		
008	Print Ready:Press	*ENG	[0 to 200 / **120** / 1 deg/step]
	Specifies the temperature of the pressure roller for the print ready condition.		
011	Standby Heater Off Time	*ENG	[0 to 100 / **0** / 1 sec/step]
	Specifies the time that the fusing heater turns off after the fusing unit temperature has reached its target temperature.		

1108	[After Reload/Job Target Temp.]		
001	Center	*ENG	[0 to 180 / **P3c:163(NA,TW), 165(EU,ASIA,CHN), P3d:166(NA,TW), 168(EU,ASIA)** / 1 deg/step]
	Specifies the temperature of the heating roller after re-load or job.		

002	Press	*ENG	[0 to 200 / **120** / 1 deg/step]
	Specifies the temperature of the pressure roller after re-load or job.		
011	Center:BW2	*ENG	[0 to 180 / **P3c:144(NA,TW), 139(EU,ASIA,CHN), P3d:150(NA,TW), 145(EU,ASIA)** / 1 deg/step]
	Specifies the temperature of the pressure roller after re-load or job in BW mode 2.		
012	Press:BW2	*ENG	[0 to 200 / **120** / 1 deg/step]
	Specifies the temperature of the pressure roller after re-load or job in BW mode 2.		

1111	**[Environment Correction:Fusing]**		
001	Temp.: Threshold: Low	*ENG	[0 to 100 / **17** / 1 deg/step]
	Specifies the threshold temperature for low temperature. If the fusing temperature is 17°C or less, the machine executes the fusing mode for low temperature.		
002	Temp.: Threshold: High	*ENG	[0 to 100 / **30** / 1 deg/step]
	Sepcifies the threshold temperature for high temperature. If the fusing temperature is 30°C or more, the machine executes the fusing mode for high temperature.		
003	Low Temp. Correction	*ENG	[0 to 15 / **13** / 1 deg/step]
	Specifies the additional temperature for the target temperature. If the fusing temperature is in low temperature condition, this temperature is added to the target temperature.		
004	High Temp. Correction	*ENG	[-5 to 15 / **0** / 1 deg/step]
	Specifies the additional temperature for the target temperature. If the fusing temperature is in high temperature condition, this temperature is added to the target temperature.		
005	Job Low Temp. Correction	*ENG	[0.0 to 100.0 / **10.0** / 0.1 deg/step]
006	Job High Temp. Correction	*ENG	[-5.0 to 100.0 / **0.0** / 0.1 deg/step]
007	Job Low Temp. Correction:Sp.	*ENG	[0 to 100 / **10.0** / 0.1 deg/step]
008	Job High Temp. Correction:Sp.	*ENG	[-5.0 to 100.0 / **0.0** / 0.1 deg/step]
011	Standard Environment Temp.	*ENG	[10 to 30 / **23** / 1 deg/step]

1112	**[Image Processing Temp. Correct]**		
	These SPs are used for fusing temperature control for variable job images. This control reduces the power consumption when the machine copies or prints a job text image in black and white mode.		
001	Temp.:Plain:Center:Level1	*ENG	Specifies the subtractive temperature level 1 of the fusing temperature control for variable job images. [-20 to 20 / **0** / 1 deg/step]
002	Temp.:Plain:Center:Level2	*ENG	Specifies the subtractive temperature level 2 of the fusing temperature control for variable job images. **Usage Limitation:** Use 0°C or less for this setting. [-30 to 20 / **P3c:-13(NA,TW),-20(EU,ASIA,CHN), P3d:-10(NA,TW),-17(EU,ASIA)** / 1 deg/step]

1113	**[Curl Correction]**		
001	Execute Pattern	*ENG	[0 to 2 / **0** / 1 /step] 0: Off, 1: On (No Decurl), 2: On
	Selects the curl correction type.		
002	Humidity:Threshold:M-humid	*ENG	[0 to 100 / **1** / 1 %/step]
	Specifies the threshold between low and middle humidity.		
003	Humidity:Threshold:H-humid	*ENG	[0 to 100 / **65** / 1 %/step]
	Specifies the threshold between middle and high humidity.		
004	Permit Temp.:Delta:Press:M-humid	*ENG	[0 to 200 / **40** / 1 deg/step]
	Specifies the threshold temperature for the curl control in middle humidity.		
005	Permit Temp.:Delta:Press:H-humid	*ENG	[0 to 200 / **30** / 1 deg/step]
	Specifies the threshold temperature for the curl control in high humidity.		

006	Permit Temp.:Delta:Press:M-humid:No Decurl	*ENG	[0 to 200 / **30** / 1 deg/step]
	Specifies the threshold temperature for the no curl control in middle humidity.		
007	Permit Temp.:Delta:Press:H-humid:No Decurl	*ENG	[0 to 200 / **20** / 1 deg/step]
	Specifies the threshold temperature for the no curl control in high humidity.		
008	CPM:M-humid	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the CPM ratio of the decurl control against to the normal operation in middle humidity.		
009	CPM:H-humid	*ENG	[0 to 100 / **65** / 1 %/step]
	Specifies the CPM ratio of the decurl control against to the normal operation in high humidity.		
010	CPM:M-humid:No Decurl	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the CPM ratio against of the no decurl control to the normal operation in middle humidity.		
011	CPM:H-humid:No Decurl	*ENG	[0 to 100 / **65** / 1 %/step]
	Specifies the CPM ratio against of the no decurl control to the normal operation in high humidity.		

1114	**[Heat Storage Status]**		
001	Temp.:Threshold:Press	*ENG	[-0 to 200 / **80** / 1 deg/step]
	Specifies the threshold temperature of the pressure roller for the heat storage status.		
002	Temp.:Threshold:Atmosphere	*ENG	[-0 to 200 / **80** / 1 deg/step]
	Specifies the threshold temperature inside the machine for the heat storage feedback control.		

1115	**[Target Temp. Correction]**		
001	Temp.:Delta:End	*ENG	[-100 to 100 / **0** / 1 deg/step]
	Specifies the different temperature between end and center of the heating roller.		

1116	**[Heat Storage FB Control]**		
	-		
001	Execution mode	*ENG	[0 to 2 / **1** / 1 /step] 0: OFF, 1: ON: BW, 2: ON: BW/FC
	Selects the heat storage FB control mode. **Usage Limitation:** Use "0: OFF" or "1: ON: BW" only.		
011	Time out	*ENG	[0 to 500 / **10** / 1 sec/step]
021	Delay:Standard Speed:FC:1	*ENG	[0 to 20000 / **P3c:2600, P3d:2100** / 1 msec/step]
022	Delay:Standard Speed:BW:1	*ENG	[0 to 20000 / **P3c:1000, P3d:800** / 1 msec/step]
031	Delay:Standard Speed:FC:2	*ENG	[0 to 20000 / **P3c:2600, P3d:2100** / 1 msec/step]
032	Delay:Standard Speed:BW:2	*ENG	[0 to 20000 / **P3c:1000, P3d:800** / 1 msec/step]
041	Press Reference Temp.	*ENG	[0 to 200 / **75** / 1 deg/step]
042	Temp. Correction Lower Limit	*ENG	[-30 to 0 / **-1** / 1 deg/step]
043	Temp. Correction Upper Limit	*ENG	[0 to 30 / **0** / 1 deg/step]
051	Paper Thickness Coefficient:Plain1	*ENG	[0 to 100 / **30** / 1 /step]
052	Paper Thickness Coefficient:Plain2	*ENG	[0 to 100 / **30** / 1 /step]

1117	**[Repeat Temp. Correction]**		
	Adjust the amount of time for timeout.		
001	Control Time 1:A3	*ENG	[0 to 300 / **0** / 1sec /step]
002	Control Time 2:A3	*ENG	[0 to 300 / **P3c:90(NA),30(others), P3d:90(NA),30(others)** / 1sec /step]

003	Temp.:Center:1:A3	*ENG	[-30 to 30 / **P3c:10(NA),0(others), P3d: 10(NA), 0(others)** / 1deg /step]
004	Temp.:End:1:A3	*ENG	[-30 to 30 / **P3c:20(NA),10(others), P3d: 20(NA), 10(others)** / 1deg /step]
005	Temp.:Center:2:A3	*ENG	[-30 to 30 / **0** / 1deg /step]
006	Temp.:End:2:A3	*ENG	[-30 to 30 / **P3c:-5(NA),0(others), P3d:-5(NA), 0(others)** / 1deg /step]
011	Control Time 1:DLT	*ENG	[0 to 300 / **15** / 1 sec/step]
012	Control Time 2:DLT	*ENG	[0 to 300 / **15** / 1 sec/step]
013	Temp.:Center:1:DLT	*ENG	[-30 to 30 / **-5** / 1 deg/step]
014	Temp.:End:1:DLT	*ENG	[-30 to 30 / **-5** / 1 deg/step]
015	Temp.:Center:2:DLT	*ENG	[-30 to 30 / **-5** / 1 deg/step]
016	Temp.:End:2:DLT	*ENG	[-30 to 30 / **-5** / 1 deg/step]
021	Control Time 1:B4	*ENG	[0 to 300 / **0** / 1 sec/step]
022	Control Time 2:B4	*ENG	[0 to 300 / **30** / 1 sec/step]
023	Temp.:Center:1:B4	*ENG	[-30 to 30 / **-3** / 1 deg/step]
024	Temp.:End:1:B4	*ENG	[-30 to 30 / **-3** / 1 deg/step]
025	Temp.:Center:2:B4	*ENG	[-30 to 30 / **-3** / 1 deg/step]
026	Temp.:End:2:B4	*ENG	[-30 to 30 / **-2** / 1 deg/step]
031	Control Time 1:LT	*ENG	[0 to 300 / **0** / 1 sec/step]
032	Control Time 2:LT	*ENG	[0 to 300 / **0** / 1 sec/step]
033	Temp.:Center:1:LT	*ENG	[-30 to 30 / **5** / 1 deg/step]
034	Temp.:End:1:LT	*ENG	[-30 to 30 / **5** / 1 deg/step]
035	Temp.:Center:2:LT	*ENG	[-30 to 30 / **5** / 1 deg/step]
036	Temp.:End:2:LT	*ENG	[-30 to 30 / **5** / 1 deg/step]
041	Control Time 1:A3/DLT:BW2	*ENG	[0 to 300 / **P3c: 46, P3d: 56** / 1 sec/step]
042	Control Time 2:A3/DLT:BW2	*ENG	[0 to 300 / **0** / 1 sec/step]

043	Temp.: Center:1:A3/ DLT:BW2	*ENG	[-30 to 30 / **5** / 1 deg/step]
044	Temp.: End:1:A3/DLT:BW2	*ENG	[-30 to 30 / **5** / 1 deg/step]
045	Temp.: Center:2:A3/ DLT:BW2	*ENG	[-30 to 30 / **5** / 1 deg/step]
046	Temp.: End:2:A3/DLT:BW2	*ENG	[-30 to 30 / **5** / 1 deg/step]
051	Control Time 1:A4	*ENG	[0 to 300 / **0** / 1 sec/step]
052	Control Time 2:A4	*ENG	[0 to 300 / **0** / 1 sec/step]
053	Temp.:Center:1:A4	*ENG	[-30 to 30 / **0** / 1 deg/step]
054	Temp.:End:1:A4	*ENG	[-30 to 30 / **0** / 1 deg/step]
055	Temp.:Center:2:A4	*ENG	[-30 to 30 / **0** / 1 deg/step]
056	Temp.:End:2:A4	*ENG	[-30 to 30 / **0** / 1 deg/step]
061	Control Time 1:A3:M-thick	*ENG	[0 to 300 / **0** / 1 sec/step]
062	Control Time 2:A3:M-thick	*ENG	[0 to 300 / **P3c: 90(NA),30(Others) P3d: 90(NA),30(Others)** / 1 sec/step]
063	Temp.:Center:1:A3:M-thick	*ENG	[-30 to 30 / **P3c: 10(NA),0(Others) P3d: 10(NA),0(Others)** / 1 deg/step]
064	Temp.:End:1:A3:M-thick	*ENG	[-30 to 30 / **P3c: 20(NA),10(Others) P3d: 20(NA),10(Others)** / 1 deg/step]
065	Temp.:Center:2:A3:M-thick	*ENG	[-30 to 30 / **0** / 1 deg/step]
066	Temp.:End:2:A3:M-thick	*ENG	[-30 to 30 / **P3c: -5(NA),0(Others) P3d: -5(NA),0(Others)** / 1 deg/step]
071	Control Time 1:DLT:M-thick	*ENG	[0 to 300 / **15** / 1 sec/step]
072	Control Time 1:DLT:M-thick	*ENG	[0 to 300 / **15** / 1 sec/step]
073	Temp.:Center:1:DLT:M-thick	*ENG	[-30 to 30 / **-5** / 1 deg/step]
074	Temp.:End:1:DLT:M-thick	*ENG	[-30 to 30 / **-5** / 1 deg/step]
075	Temp.:Center:2:DLT:M-thick	*ENG	[-30 to 30 / **-10** / 1 deg/step]
076	Temp.:End:2:DLT:M-thick	*ENG	[-30 to 30 / **-10** / 1 deg/step]

081	Control Time 1:Envelope:Long	*ENG	[0 to 300 / **0** / 1 sec/step]
082	Control Time 2:Envelope:Long	*ENG	[0 to 300 / **0** / 1 sec/step]
083	Temp.:Center: 1:Envelope:Long	*ENG	[-30 to 30 / **0** / 1 deg/step]
084	Temp.:End:1:Envelope:Long	*ENG	[-30 to 40 / **10** / 1 deg/step]
085	Temp.:Center: 2:Envelope:Long	*ENG	[-30 to 30 / **0** / 1 deg/step]
086	Temp.:End:2:Envelope:Long	*ENG	[-30 to 40 / **10** / 1 deg/step]
091	Control Time 1:Envelope:Short	*ENG	[0 to 300 / **0** / 1 sec/step]
092	Control Time 2:Envelope: Short	*ENG	[0 to 300 / **0** / 1 sec/step]
093	Temp.:Center:1:Envelope: Short	*ENG	[-30 to 30 / **0** / 1 deg/step]
094	Temp.:End:1:Envelope: Short	*ENG	[-30 to 30 / **0** / 1 deg/step]
095	Temp.:Center:2:Envelope: Short	*ENG	[-30 to 30 / **0** / 1 deg/step]
096	Temp.:End:2:Envelope: Short	*ENG	[-30 to 30 / **0** / 1 deg/step]
101	Control Time 1:B5	*ENG	[0 to 300 / **10** / 1 sec/step]
102	Control Time 2: B5	*ENG	[0 to 300 / **10** / 1 sec/step]
103	Temp.:Center:1: B5	*ENG	[-30 to 30 / **-5** / 1 deg/step]
104	Temp.:End:1: B5	*ENG	[-30 to 30 / **-5** / 1 deg/step]
105	Temp.:Center:2: B5	*ENG	[-30 to 30 / **-5** / 1 deg/step]
106	Temp.:End:2: B5	*ENG	[-30 to 30 / **-5** / 1 deg/step]

1118	**[Before Job Temp. Correct]**
	Adjusts temperature correction before the job.

001	Temp.:Center:12inch	*ENG	[-30 to 30 / **P3c: 10(NA),0(Others) P3d: 10(NA),0(Others)** / 1 deg/step]
002	Temp.:End:12inch	*ENG	[-30 to 30 / **20** / 1 deg/step]
003	Temp.:Center:A3	*ENG	[-30 to 30 / **P3c: 10(NA),0(Others) P3d: 10(NA),0(Others)** / 1 deg/step]
004	Temp.:End:A3	*ENG	[-30 to 30 / **P3c: 20(NA),0(Others) P3d: 20(NA),0(Others)** / 1 deg/step]
005	Temp.:Center:DLT	*ENG	[-30 to 30 / **0** / 1 deg/step]
006	Temp.:End:DLT	*ENG	[-30 to 30 / **0** / 1 deg/step]

1119	**[Aging Temp. Correction]**		
	-		
001	Page(%)	*ENG	[0 to 100 / **10** / 1 %/step]
002	Rotation(%)	*ENG	[0 to 100 / **10** / 1 %/step]
011	Temp.:Plain:FC	*ENG	[0 to 20 / **0** / 1 deg/step]
012	Temp.:Plain:BW	*ENG	[0 to 20 / **0** / 1 deg/step]
013	Temp.:Plain:BW2	*ENG	[0 to 20 / **10** / 1 deg/step]

1121	**[Switch:Rotation Start/Stop]**		
	Sets the time interval for the shift from reload temperature to standby temperature.		
001	Time:After Reload	*ENG	[0 to 100 / **60** / 1 sec/step]
002	Time:After Recovery	*ENG	[0 to 100 / **15** / 1 sec/step]
003	Time:After Job	*ENG	[0 to 100 / **60** / 1 sec/step]
004	Press Temp.:After Reload	*ENG	[0 to 160 / **160** / 1 deg/step]
005	Uniform End Temp.:FC: 12inch:Press End	*ENG	[0 to 250 / **200** / 1 deg/step]
006	Uniform End Temp.:FC:A3:Press End	*ENG	[0 to 250 / **200** / 1 deg/step]

007	Uniform End Temp.:FC:DLT:Press End	*ENG	[0 to 250 / **200** / 1 deg/step]
008	Overshoot Prevent Temp.	*ENG	[0 to 250 / **200** / 1 deg/step]
009	Overshoot Prevent Time	*ENG	[0 to 100 / **10** / 1 sec/step]
010	Uniform End Temp.:B4:Press End	*ENG	[0 to 250 / **135** / 1 deg/step]
011	Uniform End Temp.:FC:LT:Fuser End	*ENG	[0 to 250 / **170** / 1 deg/step]
012	Uniform End Temp.:FC:B5:Press Center	*ENG	[0 to 250 / **155** / 1 deg/step]
013	Uniform End Temp.:FC:A5:Press Center	*ENG	[0 to 250 / **150** / 1 deg/step]
014	Uniform End Temp.:FC:B6:Press Center	*ENG	[0 to 250 / **155** / 1 deg/step]
021	Time:After Main Switch On	*ENG	[0 to 100 / **60** / 1 sec/step]
101	Heat Off Time:Start:Warm Up	*ENG	[0 to 60000 / **0** / 1 msec/step]
111	Heat Off Time:Reload:Print Ready	*ENG	[0 to 60000 / **0** / 1 msec/step]
112	Heat Off Time:Stop:After Job	*ENG	[0 to 60000 / **0** / 1 msec/step]
113	Heat Off Time:Stop:After Job:BW2	*ENG	[0 to 60000 / **0** / 1 msec/step]
114	Relay On Temp.:Warm Up	*ENG	[100 to 250 / **200** / 1 deg/step]

1122	**[Standby Rotation Setting]**		
	Sets the interval between fusing roller idle rotations during standby.		
001	Rotation Interval	*ENG	[0 to 240 / **60** / 1 min/step]
002	Rotation Time	*ENG	[0.0 to 60.0 / **0.9** / 0.1 sec/step]

1123	[Paper Jam Rotation Setting		
	-		
001	Normal Rotation Distance	*ENG	[1 to 10000 / **75** / 1 mm/step]
002	Reverse Rotation Distance	*ENG	[1 to 10000 / **75** / 1 mm/step]

1124	[CPM Down Setting]		
	Specifies the settings for the CPM down mode.		
001	Low:Down Temp.	*ENG	[-50 to 0 / **-20** / 1 deg/step]
	Specifies the CPM down threshold temperature for the low temperature condition. If the fusing temperature decreases -20°C (adjustable) below the target temperature, the machine enters the CPM down mode.		
002	Low:Up Temp.	*ENG	[-50 to 0 / **-15** / 1 deg/step]
	Specifies the CPM up threshold temperature for the low temperature condition. If the fusing temperature increases -15°C (adjustable) below the target temperature, the machine enters the CPM up mode.		
003	Low :1st CPM	*ENG	[10 to 100 / **80** / 1 %/step]
	Specifies the 1st CPM down ration against the normal CPM in the low temperature condition.		
004	Low :2nd CPM	*ENG	[10 to 100 / **65** / 1 %/step]
	Specifies the 2nd CPM down ration against the normal CPM in the low temperature condition.		
005	Low :3rd CPM	*ENG	[10 to 100 / **50** / 1 %/step]
	Specifies the 3rd CPM down ration against the normal CPM in the low temperature condition.		
006	High :1st CPM	*ENG	[10 to 100 / **80** / 1 %/step]
	Specifies the 1st CPM down ration against the normal CPM in the high temperature condition.		
007	High:2nd CPM	*ENG	[10 to 100 / **50** / 1 %/step]
	Specifies the 3rd CPM down ration against the normal CPM in the high temperature condition.		

008	High:3rd CPM	*ENG	[10 to 100 / **30** / 1 %/step]
	Specifies the 1st CPM down ration against the normal CPM in the high temperature condition.		
009	High:1st CPM Down Temp.:A3:Press End	*ENG	[100 to 250 / **P3c: 180(NA),205(Others) P3d: 180(NA),205(Others)** / 1 deg/step]
	Specifies the heating roller temperature for 1st CPM down of A3 paper size.		
010	High:2nd CPM Down Temp.:A3:Press End	*ENG	[100 to 250 / **P3c: 185(NA),210 (Others) P3d: 180(NA),205(Others)** / 1 deg/step]
	Specifies the heating roller temperature for 2nd CPM down of A3 paper size.		
011	High:3rd CPM Down Temp.:A3:Press End	*ENG	[100 to 250 / **P3c: 190(NA),215 (Others) P3d: 190(NA),215(Others)** / 1 deg/step]
	Specifies the heating roller temperature for 3rd CPM down of A3 paper size.		
012	High:1st CPM Down Temp.:DLT:Press End	*ENG	[100 to 250 / **145** / 1 deg/step]
	Specifies the heating roller temperature for 1st CPM down of DLT paper size.		
013	High:2nd CPM Down Temp.:DLT:Press End	*ENG	[100 to 250 / **185** / 1 deg/step]
	Specifies the heating roller temperature for 2nd CPM down of DLT paper size.		
014	High:3rd CPM Down Temp.:DLT:Press End	*ENG	[100 to 250 / **155** / 1 deg/step]
	Specifies the heating roller temperature for 3rd CPM down of DLT paper size.		
015	High:1st CPM Down Temp.:B4:Press End	*ENG	[100 to 250 / **125** / 1 deg/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 paper size.		
016	High:2nd CPM Down Temp.:B4:Press End	*ENG	[100 to 250 / **130** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of B4 paper size.		
017	High:3rd CPM Down Temp.:B4:Press End	*ENG	[100 to 250 / **135** / 1 deg/step]
	Specifies the pressure roller temperature for 3rd CPM down of B4 paper size.		

018	High:1st CPM Down Temp.:LT:Fuser End	*ENG	[100 to 250 / **180** / 1 deg/step]
	Specifies the pressure roller temperature for 1st CPM down of LT paper size.		
019	High:2nd CPM Down Temp.:LT:Fuser End	*ENG	[100 to 250 / **185** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of LT paper size.		
020	High:3rd CPM Down Temp.:LT:Fuser End	*ENG	[100 to 250 / **190** / 1 deg/step]
	Specifies the pressure roller temperature for 3rd CPM down of LT paper size.		
021	High:1st CPM Down Temp.:A4:Fuser End	*ENG	[100 to 250 / **180** / 1 deg/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 paper size.		
022	High:2nd CPM Down Temp.:A4:Fuser End	*ENG	[100 to 250 / **185** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of A4 paper size.		
023	High:3rd CPM Down Temp.:A4:Fuser End	*ENG	[100 to 250 / **190** / 1 deg/step]
	Specifies the pressure roller temperature for 3rd CPM down of A4 paper size.		
024	High:1st CPM Down Temp.:B5:Press End	*ENG	[100 to 250 / **190** / 1 deg/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 paper size.		
025	High :2nd CPM Down Temp.:B5:Press End	*ENG	[100 to 250 / **195** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of B5 paper size.		
026	High :3rd CPM Down Temp .:B5:Press End	*ENG	[100 to 250 / **200** / 1 deg/step]
	Specifies the pressure roller temperature for 3rd CPM down of B5 paper size.		
027	High :1st CPM Down Temp .:A5:Press End	*ENG	[100 to 250 / **190** / 1 deg/step]
	Specifies the pressure roller temperature for 1st CPM down of A5 paper size.		

028	High :2nd CPM Down Temp .:A5:Press End	*ENG	[100 to 250 / **195** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of A5 paper size.		
029	High :3rd CPM Down Temp .:A5:Press End	*ENG	[100 to 250 / **200** / 1 deg/step]
	Specifies the pressure roller temperature for 3rd CPM down of A5 paper size.		
030	High :1st CPM Down Temp .:B6:Press End	*ENG	[100 to 250 / **190** / 1 deg/step]
	Specifies the pressure roller temperature for 1st CPM down of B6 paper size.		
031	High :2nd CPM Down Temp .:B6:Press End	*ENG	[100 to 250 / **195** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of B6 paper size.		
032	High :3rd CPM Down Temp .:B6:Press End	*ENG	[100 to 250 / **200** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of B6 paper size.		
033	High :1st CPM:Down Temp.:A6:Press Center	*ENG	[100 to 250 / **190** / 1 deg/step]
	Specifies the pressure roller temperature for 1st CPM down of A6 paper size.		
034	High :2nd CPM:Down Temp.:A6:Press Center	*ENG	[100 to 250 / **195** / 1 deg/step]
	Specifies the pressure roller temperature for 2nd CPM down of A6 paper size.		
035	High :3rd CPM:Down Temp.:A6:Press Center	*ENG	[100 to 250 / **200** / 1 deg/step]
	Specifies the pressure roller temperature for 3rd CPM down of A6 paper size.		
051	Judging Interval	*ENG	[1 to 250 / **5** / 1 sec/step]
	Specifies the interval for CPM down judgment.		
101	High :1st CPM:Down Time:A3	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 paper size.		

102	High :2nd CPM:Down Time:A3	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A3 paper size.		
103	High :3rd CPM:Down Time:A3	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A3 paper size.		
104	High :1st CPM:Down Time:DLT	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT.		
105	High :2nd CPM:Down Time:DLT	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of DLT.		
106	High :3rd CPM:Down Time:DLT	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of DLT.		
107	High :1st CPM:Down Time:B4	*ENG	[0 to 10000 / **P3c: 30, P3d: 20** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 paper size.		
108	High :2nd CPM:Down Time:B4	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of B4 paper size.		
109	High :3rd CPM:Down Time:B4	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of B4 paper size.		
110	High :1st CPM:Down Time:LT	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of LT.		
111	High :2nd CPM:Down Time:LT	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of LT.		

112	High :3rd CPM:Down Time:LT	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of LT.		
113	High :1st CPM:Down Time:A4	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 paper size.		
114	High :2nd CPM:Down Time:A4	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A4 paper size.		
115	High :3rd CPM:Down Time:A4	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A4 paper size.		
116	High :1st CPM:Down Time:B5	*ENG	[0 to 10000 / **P3c: 30, P3d: 20** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 paper size.		
117	High :2nd CPM:Down Time:B5	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of B5 paper size.		
118	High :3rd CPM:Down Time:B5	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of B5 paper size.		
119	High :1st CPM:Down Time:A5	*ENG	[0 to 10000 / **P3c: 40, P3d: 20** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A5 paper size.		
120	High :2nd CPM:Down Time:A5	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A5 paper size.		
121	High :3rd CPM:Down Time:A5	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A5 paper size.		

122	High :1st CPM:Down Time:B6	*ENG	[0 to 10000 / **P3c: 40, P3d: 20** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of B6 paper size.		
123	High :2nd CPM:Down Time:B6	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of B6 paper size.		
124	High :3rd CPM:Down Time:B6	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of B6 paper size.		
125	High :1st CPM:Down Time:A6	*ENG	[0 to 10,000 / **P3c: 40, P3d: 20** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A6 paper size.		
126	High :2nd CPM:Down Time:A6	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A6 paper size.		
127	High :3rd CPM:Down Time:A6	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A6 paper size.		
151	High :1st CPM:Down Time:A3:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 paper size.		
152	High :2nd CPM:Down Time:A3:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A3 paper size.		
153	High :3rd CPM:Down Time:A3:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A3 paper size.		
154	High :1st CPM:Down Time:DLT:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT.		

155	High :2nd CPM:Down Time:DLT:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of DLT.		
156	High :3rd CPM:Down Time:DLT:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of DLT.		
157	High :1st CPM:Down Time:B4:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 paper size.		
158	High :2nd CPM:Down Time:B4:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of B4 paper size.		
159	High :3rd CPM:Down Time:B4:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of B4 paper size.		
160	High :1st CPM:Down Time:LT:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of LT.		
161	High :2nd CPM:Down Time:LT:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of LT.		
162	High :3rd CPM:Down Time:LT:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of LT.		
163	High :1st CPM:Down Time:A4:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 paper size.		
164	High :2nd CPM:Down Time:A4:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A4 paper size.		

165	High :3rd CPM:Down Time:A4:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A4 paper size.		
166	High :1st CPM:Down Time:B5:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 paper size.		
167	High :2nd CPM:Down Time:B5:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of B5 paper size.		
168	High :3rd CPM:Down Time:B5:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of B5 paper size.		
169	High :1st CPM:Down Time:A5:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A5 paper size.		
170	High :2nd CPM:Down Time:A5:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A5 paper size.		
171	High :3rd CPM:Down Time:A5:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A5 paper size.		
172	High :1st CPM:Down Time:B6:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of B6 paper size.		
173	High :2nd CPM:Down Time:B6:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of B6 paper size.		
174	High :3rd CPM:Down Time:B6:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of B6 paper size.		

175	High :1st CPM:Down Time:A6:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 1st CPM down of A6 paper size.		
176	High :2nd CPM:Down Time:A6:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 2nd CPM down of A6 paper size.		
177	High :3rd CPM:Down Time:A6:Low Speed	*ENG	[0 to 10000 / **10000** / 1 sec/step]
	Specifies the pressure roller temperature for 3rd CPM down of A6 paper size.		

1125	**[CPM Down Setting]**		
	Specifies the settings for the CPM down mode.		
001	High :1st CPM:A3:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:80(NA,TW), 74(EU,ASIA,CHN), P3d:80(NA,TW), 77(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 Large paper size.		
002	High :2nd CPM:A3:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:60(NA),49(EU,ASIA,CHN), 50(TW), P3d:60(NA),58(EU,ASIA,CHN), 50(TW)** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A3 Large paper size.		
003	High :3rd CPM:A3:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:30, P3d:30(NA,TW), 46(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of A3 Large paper size.		
004	High :1st CPM:A3:Small Size:Normal Speed	*ENG	[0 to 100 / **P3c:80, P3d:80(NA,TW),90 (EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 Small paper size.		
005	High :2nd CPM:A3:Small Size:Normal Speed	*ENG	[0 to 100 / **P3c:60(NA),49(EU,ASIA,CHN), 50(TW), P3d:60(NA,EU,ASIA,CHN), 50(TW)** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A3 Small paper size.		

006	High :3rd CPM:A3:Small Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of A3 Small paper size.		
007	High :1st CPM:DLT:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:80(NA,TW), 74(EU,ASIA,CHN), P3d:80(NA,TW), 77(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT Large paper size.		
008	High :2nd CPM:DLT:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:50(NA,TW), 49(EU,ASIA,CHN), P3d:50(NA,TW), 58(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of DLT Large paper size.		
009	High :3rd CPM:DLT:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:30, P3d:30(NA,TW), 40(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of DLT Large paper size.		
010	High :1st CPM:DLT:Small Size:Normal Speed	*ENG	[0 to 100 / **P3c:80, P3d:80(NA,TW), 90(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT Small paper size.		
011	High :2nd CPM:DLT:Small Size:Normal Speed	*ENG	[0 to 100 / **P3c:50(NA,TW), 49(EU,ASIA,CHN), P3d:50(NA,TW), 60(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of DLT Small paper size.		
012	High :3rd CPM:DLT:Small Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of DLT Small paper size.		
013	High :1st CPM:B4:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:85(NA,TW), 81(EU,ASIA,CHN), P3d:70(NA,TW), 60(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 Large paper size.		

014	High :2nd CPM:B4:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:50(NA,TW), 61(EU,ASIA,CHN), P3d:50(NA,TW), 40(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B4 Large paper size.		
015	High :3rd CPM:B4:Large Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of B4 Large paper size.		
016	High :1st CPM:B4:Small Size:Normal Speed	*ENG	[0 to 100 / **P3c: 90, P3d: 75** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 Small paper size.		
017	High :2nd CPM:B4:Small Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B4 Small paper size.		
018	High :3rd CPM:B4:Small Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of B4 Small paper size.		
019	High :1st CPM:LT:Large Size:Normal Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of LT Large paper size.		
020	High :2nd CPM:LT:Large Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of LT Large paper size.		
021	High :3rd CPM:LT:Large Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of LT Large paper size.		
022	High :1st CPM:LT:Small Size:Normal Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of LT Small paper size.		

023	High :2nd CPM:LT:Small Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of LT Small paper size.		
024	High :3rd CPM:LT:Small Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of LT Small paper size.		
025	High :1st CPM:A4:Large Size:Normal Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 Large paper size.		
026	High :2nd CPM:A4:Large Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A4 Large paper size.		
027	High :3rd CPM:A4:Large Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of A4 Large paper size.		
028	High :1st CPM:A4:Small Size:Normal Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 Small paper size.		
029	High :2nd CPM:A4:Small Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A4 Small paper size.		
030	High :3rd CPM:A4:Small Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of A4 Small paper size.		
031	High :1st CPM:B5:Large Size:Normal Speed	*ENG	[0 to 100 / **P3c:80, P3d: 70** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 Large paper size.		
032	High :2nd CPM:B5:Large Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B5 Large paper size.		

033	High :3rd CPM:B5:Large Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of B5 Large paper size.		
034	High :1st CPM:B5:Small Size:Normal Speed	*ENG	[0 to 100 / **P3c:80, P3d: 70** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 Small paper size.		
035	High :2nd CPM:B5:Small Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B5 Small paper size.		
036	High :3rd CPM:B5:Small Size:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of B5 Small paper size.		
037	High :1st CPM:A5:Normal Speed	*ENG	[0 to 100 / **P3c:85(NA,TW), 83(EU,ASIA,CHN), P3d:65(NA,TW), 70(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A5 paper size.		
038	High :2nd CPM:A5:Normal Speed	*ENG	[0 to 100 / **P3c:50(NA,TW), 55(EU,ASIA,CHN), P3d:50(NA,TW), 40(EU,ASIA,CHN)** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A5 paper size.		
039	High :3rd CPM:A5:Normal Speed	*ENG	[0 to 100 / **P3c:30(NA,TW), 33(EU,ASIA,CHN), P3d:30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of A5 paper size.		
040	High :1st CPM:B6:Normal Speed	*ENG	[0 to 100 / **P3c: 85, P3d: 65** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B6 paper size.		
041	High :2nd CPM:B6:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B6 paper size.		

042	High :3rd CPM:B6:Normal Speed	*ENG	[0 to 100 / **30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of B6 paper size.		
043	High :1st CPM:A6:Normal Speed	*ENG	[0 to 100 / **P3c:85(NA,TW), 74(EU,ASIA,CHN), P3d:65** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A6 paper size.		
044	High :2nd CPM:A6:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A6 paper size.		
045	High :3rd CPM:A6:Normal Speed	*ENG	[0 to 100 / **P3c:30(NA,TW), 38(EU,ASIA,CHN), P3d:30** / 1 %/step]
	Specifies the pressure roller temperature for 3rd CPM down of A6 paper size.		
101	High :1st CPM:A3:Large Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 Large paper size.		
102	High :2nd CPM:A3:Large Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A3 Large paper size.		
104	High :1st CPM:A3:Small Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 Small paper size.		
105	High :2nd CPM:A3:Small Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A3 Small paper size.		
107	High :1st CPM:DLT:Large Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT Large paper size.		
108	High :2nd CPM:DLT:Large Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of DLT Large paper size.		

110	High :1st CPM:DLT:Small Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT Small paper size.		
111	High :2nd CPM:DLT:Small Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of DLT Small paper size.		
113	High :1st CPM:B4:Large Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 Large paper size.		
114	High :2nd CPM:B4:Large Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B4 Large paper size.		
116	High :1st CPM:B4:Small Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 Small paper size.		
117	High :2nd CPM:B4:Small Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B4 Small paper size.		
119	High :1st CPM:LT:Large Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of LT Large paper size.		
120	High :2nd CPM:LT:Large Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of LT Large paper size.		
122	High :1st CPM:LT:Small Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of LT Small paper size.		
123	High :2nd CPM:LT:Small Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of LT Small paper size.		

125	High :1st CPM:A4:Large Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 Large paper size.		
126	High :2nd CPM:A4:Large Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A4 Large paper size.		
128	High :1st CPM:A4:Small Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 Small paper size.		
129	High :2nd CPM:A4:Small Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A4 Small paper size.		
131	High :1st CPM:B5:Large Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 Large paper size.		
132	High :2nd CPM:B5:Large Size:Normal Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B5 Large paper size.		
134	High :1st CPM:B5:Small Size:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 Small paper size.		
135	High :2nd CPM:B5:Small Size:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B5 Small paper size.		
137	High :1st CPM:A5:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A5 paper size.		
138	High :2nd CPM:A5:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A5 paper size.		

140	High :1st CPM:B6:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B6 paper size.		
141	High :2nd CPM:B6:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of B6 paper size.		
143	High :1st CPM:A6:Middle Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A6 paper size.		
144	High :2nd CPM:A6:Middle Speed	*ENG	[0 to 100 / **50** / 1 %/step]
	Specifies the pressure roller temperature for 2nd CPM down of A6 paper size.		
201	High :1st CPM:A3:Large Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 Large paper size.		
204	High :1st CPM:A3:Small Size: Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A3 Small paper size.		
207	High :1st CPM:DLT:Large Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT Large paper size.		
210	High :1st CPM:DLT:Small Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of DLT Small paper size.		
213	High :1st CPM:B4:Large Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 Large paper size.		
216	High :1st CPM:B4:Small Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B4 Small paper size.		

219	High :1st CPM:LT:Large Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of LT Large paper size.		
222	High :1st CPM:LT:Small Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of LT Small paper size.		
225	High :1st CPM:A4:Large Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 Large paper size.		
228	High :1st CPM:A4:Small Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A4 Small paper size.		
231	High :1st CPM:B5:Large Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 Large paper size.		
234	High :1st CPM:B5:Small Size:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B5 Small paper size.		
237	High :1st CPM:A5:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A5 paper size.		
240	High :1st CPM:B6:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of B6 paper size.		
243	High :1st CPM:A6:Low Speed	*ENG	[0 to 100 / **80** / 1 %/step]
	Specifies the pressure roller temperature for 1st CPM down of A6 paper size.		

1131	**[Continuous Print Mode]**
	Sets the permission for paper to feed.

001	Switch Feed Permit Condition	*ENG	[0 to 2 / **1** / 1 /step] 0: Productivity mode 1: Fusing Quality mode 1 2: Fusing Quality mode 2

1132	**[Maximum Duty Switch]**		
	Switches between maximum fixed duty level and power control.		
001	Control Method Switch	*ENG	[0 or 1 / **1** / 1 /step] 0: Fixed Duty 1: Auto Offset Control

1133	**[Voltage Detection]**		
	Detects AC power voltage.		
001	Voltage Detection	*ENG	[0 to 350 / **1** / 1 V/step]

1134	**[Effective Duty Adjustment]**		
	Switches between effective fixed duty level and power control for adjustment.		
001	Control Method Switch	*ENG	[0 or 1 / **1** / 1 /step] 0: OFF 1: ON

1141	**[Fusing SC Issue Time Info]**		
	Displays the time when an SC code was issued.		
001	SC Number	*ENG	Displays the issued SC number. [0 to 99999 / **-** / 1/step]
101	Htg Roller:Ctr Det1	*ENG	Displays the temperature at the center of the heating roller when an SC was issued. [-50 to 300 / **-** / 1 deg/step]
102	Htg Rolloer:End Det1	*ENG	Displays the temperature at the end of the heating roller when an SC was issued. [-50 to 300 / **-** / 1 deg/step]

103	Press Roller:Ctr Det1	*ENG	Displays the temperature at the center of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
104	Press Roller:End Det1	*ENG	Displays the temperature at the end of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
151	Htg Roller:Ctr Det2	*ENG	Displays the temperature at the center of the heating roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
152	Htg Roller:End Det2	*ENG	Displays the temperature at the end of the heating roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
153	Press Roller:Ctr Det2	*ENG	Displays the temperature at the center of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
154	Press Roller:End Det2	*ENG	Displays the temperature at the end of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
201	Htg Roller:Ctr Det3	*ENG	Displays the temperature at the center of the heating roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
202	Htg Rolloer:End Det3	*ENG	Displays the temperature at the end of the heating roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
203	Press Roller:Ctr Det3	*ENG	Displays the temperature at the center of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]
204	Press Roller:End Det3	*ENG	Displays the temperature at the end of the pressure roller when an SC was issued. [-50 to 300 / - / 1 deg/step]

1142	**[Fusing Jam Detection]**

001	SC Display	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
	Enables or disables the fusing consecutive jam (three times) SC detection.		

1151	**[Pressure Setting]**		
001	Pressure Change ON/OFF	*ENG	[0 or 1 / **1** / - /step] 0: OFF 1: ON
	Enables or disables the pressure switching control for the fusing unit.		
002	Pressure Position1	*ENG	[0 to 10000 / **550** / 10 msec/step]
	Specifies the rotation time of the pressure roller contact motor for the pressure position 1.		
003	Pressure Position2	*ENG	[0 to 10000 / **550** / 10 msec/step]
	Specifies the rotation time of the pressure roller contact motor for the pressure position 2.		
004	Pressure Position3	*ENG	[0 to 10000 / **550** / 10 msec/step]
	Specifies the rotation time of the pressure roller contact motor for the pressure position 3.		
005	Depressure Position:Light Pressure	*ENG	[0 to 10000 / **120** / 10 msec/step]
	Specifies the rotation time of the pressure roller contact motor for the depression position (no pressure).		
006	Depressure Position:Full Depressure	*ENG	[0 to 10000 / **1800** / 10 msec/step]
	-		
010	Shift Time: BW2	*ENG	[0 to 3600 / **0** / 1 sec/step]
	Specifies the timing for depressing the fusing unit. If the machine does not get any jobs for specified time by this SP after copying or printing, the machine depresses the fusing unit.		
011	Shift Time	*ENG	[0 to 3600 / **60** / 1 sec/step]
	-		

101	Pressure:Plain1/2	*ENG	[0 to 3 / **3** / 1 /step]
	Sets the default pressure position of the fusing unit for each paper type in normal speed. 0: Depression position (no pressure) 1: Position 1 (less pressure) 2: Position 2 3: Position 3 (strongest pressure)		
102	Pressure:Thin	*ENG	[0 to 3 / **3** / 1 /step]
103	Pressure:M-thick	*ENG	[0 to 3 / **3** / 1 /step]
104	Pressure:Thick1	*ENG	[0 to 3 / **3** / 1 /step]
105	Pressure:Thick2	*ENG	[0 to 3 / **3** / 1 /step]
106	Pressure:Thick3	*ENG	[0 to 3 / **3** / 1 /step]
107	Pressure:Special1	*ENG	[0 to 3 / **3** / 1 /step]
108	Pressure:Special2	*ENG	[0 to 3 / **3** / 1 /step]
109	Pressure:Special3	*ENG	[0 to 3 / **3** / 1 /step]
110	Pressure:Envelope	*ENG	[0 to 3 / **3** / 1 /step]
151	Pressure:Plain1/2:Low Speed	*ENG	[0 to 3 / **3** / 1 /step]
	Sets the default pressure position of the fusing unit for each paper type in low speed. 0: Depression position (no pressure) 1: Position 1 (less pressure) 2: Position 2 3: Position 3 (strongest pressure)		
152	Pressure:M-thick:Low Speed	*ENG	[0 to 3 / **3** / 1 /step]
153	Pressure:Thick1:Low Speed	*ENG	[0 to 3 / **3** / 1 /step]
154	Pressure:Special1:Low Speed	*ENG	[0 to 3 / **3** / 1 /step]
155	Pressure:Special2:Low Speed	*ENG	[0 to 3 / **3** / 1 /step]
156	Pressure:Plain1/2:Glossy	*ENG	[0 to 3 / **3** / 1 /step]

157	Pressure:M-thick:Glossy	*ENG	[0 to 3 / **3** / 1 /step]
158	Pressure:OHP	*ENG	[0 to 3 / **3** / 1 /step]
159	Pressure:Envelope:Low Speed	*ENG	[0 to 3 / **3** / 1 /step]
160	Pressure:Thin:Low Speed	*ENG	[0 to 3 / **3** / 1 /step]
161	Pressure:Thick4	*ENG	[0 to 3 / **3** / 1 /step]
	Sets the default pressure position of the fusing unit for thick 4 paper. 0: Depression position (no pressure) 1: Position 1 (less pressure) 2: Position 2 3: Position 3 (strongest pressure)		
162	Pressure:Postcard	*ENG	[0 to 3 / **3** / 1 /step]
	Sets the default pressure position of the fusing unit for postcard. 0: Depression position (no pressure) 1: Position 1 (less pressure) 2: Position 2 3: Position 3 (strongest pressure)		
201	Filler Edge Detection Counter	ENG	[0 to 9,000,000 / **-** / 1 /step]
	Displays the detection time for the edge of the pressure roller actuator.		

1152	**[Fusing Nip Band Check]**		
001	Execute	ENG	[- / **-** / -] [Execute]
	Executes the nip band measurement between heating roller and pressure roller. If the nip band width is not 8 mm, and fusing is not good, replace the pressure roller or install a new fusing unit.		
002	Pre-idling Time	*ENG	[0 to 999 / **300** / 1 sec/step]
	Specifies the fusing rotation time before executing SP1152-001.		

003	Stop Time	* ENG	[0 to 100 / **40** / 1 sec/step]
	Specifies the time for measuring the nip.		
004	Pressure Position	* ENG	[1 to 3 / **3** / 1]
	Specifies the pressure position for measuring the nip.		

1154	**[Overshoot Prevent Control]**		
	If 1 is selected, overshoot prevent control doesn't execute when main power is off and transits immediately.		
001	Main Switch OFF Immediate Transition Select	*ENG	[-10 to 100 / **0** / 1/step]
1154	**[Low Temp. Start Up]**		
	Specifies the threshold temperature at the low temperature start-up.		
002	Temp. : Threshold Value 2	*ENG	[-10 to 100 / **15** / 1 deg/step]
003	Temp. : Target	*ENG	[0 to 100 / **100** / 1 deg/step]
004	Temp. :Rotation Threshold Value	*ENG	[-10 to 100 / **30** / 1/step]
1154	**[Switch Rotation Start/Stop]**		
	-		
005	Heater On Timing From Motor ON	*ENG	[0 to 250 / **50** / 10msec/step]
006	Overshoot Prevent Temp. Abnormal Case	*ENG	[0 to 250 / **P3c:157(NA,TW), 159(EU,ASIA,CHN), P3d:160(NA,TW), 162(EU,ASIA,CHN)** / 1/step]

1155	**[Short Heater Control]** Sets the short heater controls.		
001	Print Width :Upper Limit	*ENG	[0 to 300 / **0** / 1 mm/step]
011	Feed Permit Temp. :delta:Center	*ENG	[0 to 200 / **5** / 1 deg/step]

012	Feed Permit Temp. :delta:Press	*ENG	[0 to 200 / **100** / 1 deg/step]
013	Feed Permit Rotation Time	*ENG	[0 to 100 / **0** / 1 deg/step]
021	After Job End Temp .:Center	*ENG	[0 to 200 / **5** / 1 sec/step]
022	After Job End Temp .:End	*ENG	[0 to 200 / **5** / 1 sec/step]
023	After Job End Time	*ENG	[0 to 100 / **0** / 1 sec/step]

1156	**[A3/DLT Size Heater Control]** Sets the A3/DLT size heater controls.		
001	Print Width :Lower Limit	*ENG	[0 to 400 / **P3c:280(NA),265(Others), P3d: 280(NA),265(Others)** / 1 mm/step]
002	Print Width :Upper Limit	*ENG	[0 to 400 / **P3c:400(NA),280(Others), P3d: 400(NA),280(Others)** / 1 mm/step]
003	Warm Up Heater Switch	*ENG	[0 or 1 / **P3c:1(NA,TW),0(EU,ASIA,CHN), P3d:1(NA,TW),0(EU,ASIA,CHN)** / 1/step]
011	Feed Permit Temp. :Delta:Center	*ENG	[0 to 200 / **5** / 1 deg/step]
012	Feed Permit Temp. :Delta:End	*ENG	[0 to 200 / **5** / 1 deg/step]
013	Feed Permit Temp. :Delta:Press	*ENG	[0 to 200 / **P3c:0(NA,TW), 15(EU,ASIA,CHN), P3d:10(NA,TW), 15(EU,ASIA,CHN)** / 1 deg/step]
014	Feed Permit Rotation Time	*ENG	[0 to 100 / **P3c:1(NA),0(Others), P3d:1(NA), 0(Others)** / 1 sec/step]
021	Initial CPM Down Temp.	*ENG	[0 to 200 / **0** / 1 deg/step]
022	Initial CPM Down Temp.:M-thick	*ENG	[0 to 200 / **P3c:0, P3d:200(NA,TW), 0(EU,ASIA,CHN)** / 1 deg/step]
023	Initial CPM Down Rate	*ENG	[0 to 100 / **100** / 1 %/step]
024	Initial CPM Down Rate:M-thick	*ENG	[0 to 100 / **P3c:100, P3d:80(NA,TW), 100(EU,ASIA,CHN)** / 1 %/step]
025	Initial CPM Down Time	*ENG	[0 to 100 / **0** / 1 sec/step]

026	Initial CPM Down Time:M-thick	*ENG	[0 to 100 / **P3c: 0, P3d:40(NA,TW), 100(EU,ASIA,CHN)** / 1 sec/step]
031	CPM Down Temp.	*ENG	[0 to 200 / **0** / 1 deg/step]
032	CPM Down Temp.:M-thick	*ENG	[0 to 200 / **0** / 1 deg/step]
033	CPM Down Rate	*ENG	[0 to 100 / **100** / 1 %/step]
034	CPM Down Rate:M-thick	*ENG	[0 to 100 / **100** / 1 %/step]

1157	**[Overshoot Prevent Control]**		
	Specifies overshoot prevent control settings.		
001	Decision Time	*ENG	[0 to 100 / **5** / 1 sec/step]
002	Decision Temp.	*ENG	[0 to 250 / **P3c:195, P3d:200** / 1 deg/step]
003	Off Sleep Shift Time	*ENG	[0 to 300 / **60** / 1 sec/step]

1801	**[Motor Speed Adjust]**		
001	Registration:Plain:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
002	Registration:Plain:High	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
003	Registration:Middle Thick:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
004	Registration:Middle Thick:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
005	Registration:Middle Thick:High	*ENG	
006	Registration:Thick 1:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
007	Registration:Thick1:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
008	Registration:Thick 2:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
009	Registration:Thick 3:Low	*ENG	

010	Duplex CW:Plain:Low	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
011	Duplex CW:Normal:High	*ENG	
012	Duplex CW:Middle Thick:Low	*ENG	
013	Duplex CW:Middle Thick:Mid	*ENG	
014	Duplex CW:Middle Thick:High	*ENG	
015	Duplex CW:Thick1:Low	*ENG	
016	Duplex CW:Thick1:Mid	*ENG	
017	Duplex CW:Thick2:Low	*ENG	
018	Duplex CW:Thick3:Low	*ENG	
019	Duplex CCW:Normal:High	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
020	Duplex CCW:Middle Thick:Mid	*ENG	
021	Duplex CCW:Middle Thick:high	*ENG	
023	Duplex CCW:Thick1:Mid	*ENG	
024	Reverse CW:Normal:High	*ENG	[-4.0 to 4.0 / **-0.5** / 0.1%/step]
025	Reverse CW:Middle Thick:Mid	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
026	Reverse CW:Middle Thick:High	*ENG	[-4.0 to 4.0 / **-0.5** / 0.1%/step]

028	Reverse CW:Thick1:Mid	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
029	Reverse CCW:Normal:High	*ENG	
030	Reverse CCW:Middle Thick:Mid	*ENG	
031	Reverse CCW:Middle Thick:High	*ENG	
033	Reverse CCW:Thick1:Mid	*ENG	
034	Feed:Plain:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
035	Feed:Plain:High	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
036	Feed:Middle thick:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
037	Feed:Middle thick:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
038	Feed:Middle thick:High	*ENG	
039	Feed:Thick 1:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
040	Feed:Thick 1:Mid	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
041	Feed:Thick 2:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
042	Feed:Thick 3:Low	*ENG	
043	Bridge Motor:Low	*ENG	[-4.0 to 4.0 / **0.0** / 0.1 %/step]
044	Bridge Motor:Mid	*ENG	
045	Bridge Motor:High	*ENG	
060	KOpcDevMot:High	*ENG	[-4.00 to 4.00 / **-0.30** / 0.01 %/step]
061	KOpcDevMot:Mid	*ENG	
062	KOpcDevMot:Low	*ENG	
063	MOpcDevMot:High	*ENG	[-10 to 10 / **0** / 1 /step]
064	MOpcDevMot:Mid	*ENG	[-9 to 9 / **0** / 1 /step]
065	MOpcDevMot:Low	*ENG	[-14 to 14 / **0** / 1 /step]
066	COpcDevMot:High	*ENG	[-10 to 10 / **0** / 1 /step]

067	COpcDevMot:Mid	*ENG	[-9 to 9 / **0** / 1 /step]
068	COpcDevMot:Low	*ENG	[-14 to 14 / **0** / 1 /step]
069	YOpcDevMot:High	*ENG	[-10 to 10 / **0** / 1 /step]
070	YOpcDevMot:Mid	*ENG	[-9 to 9 / **0** / 1 /step]
071	YOpcDevMot:Low	*ENG	[-14 to 14 / **0** / 1 /step]
072	Fusing: High	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
073	Fusing: Mid	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
074	Fusing: Low	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
075	TransferMot:High	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
076	TransferMot:Mid	*ENG	
077	TransferMot:Low	*ENG	
078	TonerMot	*ENG	[-30 to 30 / **10** / 5 %/step]
079	Fusing: 1200	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
080	Fusing:Thin:600	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
100	Drum Adjust	*ENG	[0 or 1 / **1** / 1 /step] 0: Off, 1: On
	Enables or disables the drum amplitude adjustment.		
101	MOpcDevMot:High	*ENG	P3c: [-10 to 10 / **0** / 1 /step] P3d: [-8 to 8 / **0** / 1 /step]
102	COpcDevMot:High	*ENG	
103	YOpcDevMot:High	*ENG	
104	MOpcDevMot:Mid	*ENG	[-7 to 7 / **0** / 1 /step]
105	COpcDevMot:Mid	*ENG	
106	YOpcDevMot:Mid	*ENG	
107	MOpcDevMot:Low	*ENG	[-14 to 14 / **0** / 1 /step]
108	COpcDevMot:Low	*ENG	
109	YOpcDevMot:Low	*ENG	

110	MOpcDevMot:1200	*ENG	[-7 to 7 / **0** / 1 /step]
111	COpcDevMot:1200	*ENG	
112	YOpcDevMot:1200	*ENG	
120	Long:Registration:Plain:High	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
121	Long:Registration:Plain:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
122	Long:Registration:Middle Thick:High	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
123	Long:Registration:Middle Thick:Middle	*ENG	
124	Long:Registration:Middle Thick:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
125	Long:Registration:Thick 1:Middle	*ENG	[-2.0 to 2.0 / **-0.1** / 0.1 %/step]
126	Long:Registration:Thick 1:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
127	Long:Registration:Thick 2:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
128	Long:Registration:Thick 3:Low	*ENG	[-2.0 to 2.0 / **-1.1** / 0.1 %/step]
129	Long:Fusing:Plain:High	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
130	Long:Fusing:Plain:Low	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
131	Long:Fusing:Middle Thick:High	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
132	Long:Fusing:Middle Thick:Middle	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
133	Long:Fusing:Middle Thick:Low	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
134	Long:Fusing:Thick 1:Middle	*ENG	[-4.00 to 4.00 / **-0.60** / 0.01 %/step]
135	Long:Fusing:Thick 1:Low	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]
136	Long:Fusing:Thick 2:Low	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]

137	Long:Fusing:Thick 3:Low	*ENG	[-4.00 to 4.00 / **0.10** / 0.01 %/step]

1802	**[CPM Setting]**		
	Specifies CPM information setting. This SP is saved to EEPROM and cannot be re-written by SP5885.		
001	CPM Setting	*ENG	[0 to 255 / **0** / 1 CPM/step]

1902	**[Amplitude Control]**		
001	Execute	ENG	Execute the drum phase adjustment. [- / **-** / -] [Execute]
002	Result	*ENG	[0 to 3 / **-** / 1 /step] Displays the result of the drum phase adjustment. 0: Successfully done 2: Sampling failure 3: Insufficient detection number
003	Auto Execution	*ENG	[0 or 1 / **1** / - /step] Turns the automatic drum phase adjustment on or off. 0: Off, 1: On
004	Confirmation	ENG	[0 or 1 / **0** / - /step] -

1907	**[Paper Feed Timing Adj.]**		
	Adjusts the timing of paper feed. (A "+" setting widens the paper feed interval, a "-" setting narrows the paper feed interval.)		
002	Feed Solenoid ON: Plain	*ENG	[35 to 85 / **60** / 5 %/step]
003	Feed Clutch OFF: Plain	*ENG	[-10 to 10 / **0** / 1 mm/step]
004	Feed Clutch ON: Plain	*ENG	[-10 to 10 / **0** / 1 mm/step]
005	Inverter Stop Position	*ENG	[-10 to 10 / **0** / 1 mm/step]

006	Reverse Stop Position	*ENG	[-10 to 10 / **0** / 1 mm/step]
007	Re-Feed Stop Position S Size	*ENG	[-10 to 10 / **0** / 1 mm/step]
008	By-pass Solenoid OFF	*ENG	[0 to 40 / **0** / 1 mm/step]
009	By-pass Solenoid Re-ON	*ENG	[0 or 1 / **1** / 1 /step]
010	By-pass Feed Clutch ON	*ENG	[-10 to 10 / **0** / 1 mm/step]
012	Feed Solenoid ON: Thick	*ENG	[35 to 85 / **35** / 5 %/step]
013	Feed Clutch OFF: Thick	*ENG	[-10 to 10 / **0** / 1 mm/step]
014	Feed Clutch ON: Thick	*ENG	[-10 to 10 / **0** / 1 mm/step]
015	Re-Feed Stop Position	*ENG	[-10 to 10 / **0** / 1 mm/step]

1908	**[Paper Feed Timing Adj.]**		
	Adjusts the paper feed timing.		
010	Bridge Junction Gate Sol-ON	*ENG	[-10 to 10 / **0** / 1 mm/step]
011	Bridge Junction Gate Sol-OFF	*ENG	[-10 to 10 / **0** / 1 mm/step]
012	1 Bin Junction Gate Sol-ON	*ENG	[-10 to 10 / **0** / 1 mm/step]
013	1 Bin Junction Gate Sol-OFF	*ENG	[-10 to 10 / **0** / 1 mm/step]
015	Junction Gate Sol1:ON:Plain	*ENG	[-10 to 10 / **0** / 1 mm/step]
016	Junction Gate Sol1:ON:Thick	*ENG	[-10 to 10 / **0** / 1 mm/step]
017	Junction Gate Sol1:OFF:Plain	*ENG	[-10 to 10 / **0** / 1 mm/step]
018	Junction Gate Sol1:OFF:Thick	*ENG	[-10 to 10 / **0** / 1 mm/step]

1950	**[Fan Cooling Time Set]**	
	Adjust the rotation time for each fan motor after a job end.	

002	Fusing Exit Fan	*ENG	[0.0 to 120.0 / **0.0** / 0.1 min./step]
006	Main Suction Fan	*ENG	
007	Paper Exit Fan	*ENG	
008	PSU Fan	*ENG	
009	QSU Heater Cooling Fan	*ENG	
010	AC Control board Cooling Fan	*ENG	
011	Second Duct Fan	*ENG	
012	Toner Supply Cooling Fan	*ENG	

1951	**[Fan Start Time Set]**		
	Adjust the start time for each fan motor after a job end.		
002	Fusing Exit Fan	*ENG	[0 to 900 / **120** / 1 sec/step]
006	Main Suction Fan	*ENG	[0 to 900 / **120** / 1 sec/step]
007	Paper Exit Fan	*ENG	[0 to 900 / **120** / 1 sec/step]
008	PSU Fan	*ENG	[0 to 900 / **120** / 1 sec/step]
009	QSU Heater Cooling Fan	*ENG	[0 to 900 / **120** / 1 sec/step]
010	AC Control board Cooling Fan	*ENG	
011	Second Duct Fan	*ENG	
012	Toner Supply Cooling Fan	*ENG	

1952	**[Fan Control Off Mode Time Set]**		
	Specifies the time for fan control off mode.		
001	Fan Control Off Mode Time Set	*ENG	[0 to 60 / **10** / 1 min/step]

1953	**[Extra Fan Control]**		
	Configures the settings of extra fan control.		
001	Extra Fan Cooling State	*ENG	[0 or 1 / **-** / 1 /step] 0: Off, 1: On
	Displays the extra fan cooling is On or Off.		
006	Execution Temp. Threshold	*ENG	[20.0 to 70.0 / **37.3** / 0.1 deg/step]
	Specifies the judgment temperature for the starting of extra fan execution.		
007	Cancellation Temp. Threshold	*ENG	[0.1 to 20.0 / **1.3** / 0.1 deg/step]
	Specifies the threshold temperature (the difference in value with the starting of extra fan execution) for the cancellation of extra fan execution.		
008	ON/OFF Setting	*ENG	[0 or 1 / **1** / 1 /step] 0: Disable 1: Enable
	Enables or disenables the control of extra fan execution control.		

1955	**[Fan Control]**		
	Configures the settings of fan execution switching.		
001	Execution Temp. Threshold	*ENG	[20.0 to 70.0 / **34.6** / 0.1 deg/step]
002	Cancellation Temp. Threshold	*ENG	[0.1 to 20.0 / **1.8** / 0.1 deg/step]

Engine SP Tables-2

SP2-XXX (Drum)

2005	**[Charge DC Voltage]** Charge Roller DC Voltage Adjustment (Paper Type, Process Speed, Color) Paper Type -> Plain, Thick 1, Thick 2 Plain: High speed, Thick 1: Middle speed, Thick 2&FINE: Low speed		
	Adjusts the DC component of the charge roller bias in the various print modes. Charge bias (DC component) is automatically adjusted during process control; therefore, adjusting these settings does not effect while process control mode (SP3-041-1 Default: ON) is activated. When deactivating process control mode with SP3-041-1, the values in these SP modes are used for printing.		
001	Plain: Bk	*ENG	[0 to 1000 / **690** / 10 -V/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	
005	Thick 1: Bk	*ENG	
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2&FINE: Bk	*ENG	
010	Thick 2&FINE: M	*ENG	
011	Thick 2&FINE: C	*ENG	
012	Thick 2&FINE: Y	*ENG	
2005	**[Charge DC: Correction]**		
013	PCU:Plain	*ENG	[-100 to 100 / **P3c: -26, P3d: -28** / 1 -V/step]
014	PCU:Thick 1	*ENG	[-100 to 100 / **-29** / 1 -V/step]

015	PCU:Thick 2&FINE	*ENG	[-100 to 100 / **-28** / 1 -V/step]
016	HVP:Plain	*ENG	[-100 to 100 / **P3c:25, P3d: 24** / 1 -V/step]
017	HVP:Thick 1	*ENG	[-100 to 100 / **20** / 1 -V/step]
018	HVP: Thick 2&FINE	*ENG	[-100 to 100 / **29** / 1 -V/step]

2006	**[Charge AC Voltage]** Charge Roller AC Voltage Adjustment (Paper Type, Process Speed, Color) Paper Type → Plain, Thick 1, Thick 2 Plain: High speed, Thick 1: Middle speed, Thick 2&FINE: Low speed		
	Adjusts the AC component of the charge roller bias in the various print modes. Charge bias (AC component) is adjusted by environment correction (SP2-007-xxx to SP2-011-xxx). These SPs are activated only when SP2-012-1 is set to "1: manual control".		
001	Plain: Bk	*ENG	[0.00 to 3.00 / **1.90** / 0.01 KV/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	
005	Thick 1: Bk	*ENG	[0.00 to 3.00 / **1.90** / 0.01 KV/step]
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2&FINE: Bk	*ENG	[0.00 to 3.00 / **1.90** / 0.01 KV/step]
010	Thick 2&FINE: M	*ENG	
011	Thick 2&FINE: C	*ENG	
012	Thick 2&FINE: Y	*ENG	

2007	**[Charge AC Current: LL]** Charge Roller AC Current Adjustment for LL (Color)
	Displays/sets the AC current target of the charge roller for LL environment (Low temperature and Low humidity).

001	Environmental Target: Bk	*ENG	[0.00 to 3.00 / **P3c:0.89, P3d: 1.31** / 0.01 mA/step]
002	Environmental Target: M	*ENG	[0.00 to 3.00 / **P3c:0.93, P3d: 1.36** / 0.01 mA/step]
003	Environmental Target: C	*ENG	[0.00 to 3.00 / **P3c:0.93, P3d: 1.36** / 0.01 mA/step]
004	Environmental Target: Y	*ENG	[0.00 to 3.00 / **P3c:0.95, P3d: 1.38** / 0.01 mA/step]

2008	**[Charge AC Current: ML]** Charge Roller AC Current Adjustment for MM (Color)		
	Displays/sets the AC current target of the charge roller for ML environment (Meddle temperature and Low humidity).		
001	Environmental Target: Bk	*ENG	[0.00 to 3.00 / **P3c:0.91, P3d: 1.31** / 0.01 mA/step]
002	Environmental Target: M	*ENG	[0.00 to 3.00 / **P3c:0.95, P3d: 1.36** / 0.01 mA/step]
003	Environmental Target: C	*ENG	[0.00 to 3.00 / **P3c:0.95, P3d: 1.36** / 0.01 mA/step]
004	Environmental Target: Y	*ENG	[0.00 to 3.00 / **P3c:0.97, P3d: 1.38** / 0.01 mA/step]

2009	**[Charge AC Current: MM]** Charge Roller AC Current Adjustment for MM (Color)		
	Displays/sets the AC current target of the charge roller for MM environment (Middle temperature and Middle humidity).		
001	Environmental Target: Bk	*ENG	[0.00 to 3.00 / **P3c:0.92, P3d: 1.28** / 0.01 mA/step]
002	Environmental Target: M	*ENG	[0.00 to 3.00 / **P3c:0.96, P3d: 1.33** / 0.01 mA/step]
003	Environmental Target: C	*ENG	[0.00 to 3.00 / **P3c:0.96, P3d: 1.33** / 0.01 mA/step]
004	Environmental Target: Y	*ENG	[0.00 to 3.00 / **P3c:0.98, P3d: 1.35** / 0.01 mA/step]

2010	[Charge AC Current: MH] Charge Roller AC Current Adjustment for MH (Color) Displays/sets the AC current target of the charge roller for MH environment (Middle temperature and High humidity).		
001	Environmental Target: Bk	*ENG	[0.00 to 3.00 / **P3c:0.95, P3d: 1.37** / 0.01 mA/step]
002	Environmental Target: M	*ENG	[0.00 to 3.00 / **P3c:0.99, P3d: 1.46** / 0.01 mA/step]
003	Environmental Target: C	*ENG	[0.00 to 3.00 / **P3c:0.99, P3d: 1.46** / 0.01 mA/step]
004	Environmental Target: Y	*ENG	[0.00 to 3.00 / **P3c:1.01, P3d: 1.48** / 0.01 mA/step]

2011	[Charge AC Current: HH] Charge Roller AC Current Adjustment for HH (Color) Displays/sets the AC current target of the charge roller for HH environment (High temperature and High humidity).		
001	Environmental Target: Bk	*ENG	[0.00 to 3.00 / **P3c:0.95, P3d: 1.37** / 0.01 mA/step]
002	Environmental Target: M	*ENG	[0.00 to 3.00 / **P3c:0.99, P3d: 1.48** / 0.01 mA/step]
003	Environmental Target: C	*ENG	[0.00 to 3.00 / **P3c:0.99, P3d: 1.48** / 0.01 mA/step]
004	Environmental Target: Y	*ENG	[0.00 to 3.00 / **P3c:1.01, P3d: 1.50** / 0.01 mA/step]

2012	[Charge Output Control]		
001	AC Voltage	*ENG	Selects the AC voltage control type. [0 or 1 / **0** / 1 /step] 0: Process control 1: Manual control (AC voltages are decided with SP2006.)

2013	[Environmental Correction: PCU]		
001	Current Environmental FC: Display	*ENG	Displays the environmental condition, which is measured in absolute humidity. [1 to 5 / - / 1 /step] 1: LL (LL <= 4.3 g/m^3) 2: ML (4.3 < ML <= 11.3 g/m^3) 3: MM (11.3 < MM <= 18.0 g/m^3) 4: MH (18.0 < MH <= 24.0 g/m^3) 5: HH (24.0 g/m^3 < HH)
002	Forced Setting	*ENG	Selects the environmental condition manually. [0 to 5 / **0** / 1 /step] 0: The environmental condition is determined automatically. 1: LL, 2: ML, 3: MM, 4: MH, 5: HH
003	Absolute Humidity: Threshold 1	*ENG	Changes the humidity threshold between LL and ML. [0.00 to 100.00 / **3.00** / 0.01 g/m^3/step]
004	Absolute Humidity: Threshold 2	*ENG	Changes the humidity threshold between ML and MM. [0.00 to 100.00 / **8.00** / 0.01 g/m^3/step]
005	Absolute Humidity: Threshold 3	*ENG	Changes the humidity threshold between MM and MH. [0.00 to 100.00 / **15.00** / 0.01 g/m^3/step]
006	Absolute Humidity: Threshold 4	*ENG	Changes the humidity threshold between MH and HH. [0.00 to 100.00 / **22.00** / 0.01 g/m^3/step]
007	Current Temp. FC: Display	*ENG	Displays the current temperature. [0 to 100 / - / 1 deg/step]
008	Current Relative Humidity FC: Display	*ENG	Displays the current relative humidity. [0 to 100 / - / 1%RH/step]
009	Current Absolute Humidity FC: Display	*ENG	Displays the absolute humidity. [0.00 to 100.00 / - / 0.01 g/m^3/step]

010	Previous Environmental Bk: Display	*ENG	Displays the previous environmental condition, which is measured in absolute humidity. [1 to 5 / - / 1 /step] 1: LL, 2: ML, 3: MM, 4: MH, 5: HH
011	Previous Temp. Bk: Display	*ENG	Displays the previous temperature. [0 to 100 / - / 1 deg/step]
012	Previous Relative Humidity Bk: Display	*ENG	Displays the previous relative humidity. [0 to 100 / - / 1%RH/step]
013	Previous Absolute Humidity Bk: Display	*ENG	Displays the previous absolute humidity. [0.00 to 100.00 / - / 0.01 g/m^3/step]

2014	[Charge AC Control: Setting]		
001	Exec Interval: Power ON	*ENG	[0 to 2000 / **500** / 1 page/step]
002	Exec Interval: Print	*ENG	[0 to 2000 / **500** / 1 page/step]
003	Page Interval	*ENG	[0 to 2000 / **500** / 5 page/step]
004	Temperature	*ENG	[0 to 99 / **99** / 1 deg/step]
005	Relative Humidity	*ENG	[0 to 99 / **50** / 1 %RH/step]
006	Absolute Humidity	*ENG	[0 to 99 / **12** / 1 g/m^3/step]
007	Temp Threshold M	*ENG	[0 to 99 / **5** / 1 deg/step]
008	RH Threshold M	*ENG	[0 to 99 / **25** / 1 %RH/step]
009	AH Threshold	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
010	Temp Threshold S	*ENG	[0.0 to 20.0 / **1.0** / 0.1 deg/step]
011	RH Threshold S	*ENG	[0 to 50 / **5** / 1 %RH/step]
012	AH Threshold S	*ENG	[0.0 to 20.0 / **1.0** / 0.1 deg/step]
013	Non-use Time	*ENG	[0 to 1440 / **360** / 10 min./step]

2015	[Charge AC Adj: Result] Displays a result of the AC charge adjustment.

001	Bk	*ENG	[0 to 9 / **0** / 1 /step] 0: Success 1: Out of tolerance range 2: Out of adjustable range 3: Adjustment incompleted
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

2016	**[Background Pot Correction]**		
	-		
001	Setting:Temperature	*ENG	[0 to 99 / **15** / 1 deg/step]
002	Setting:Absolute Humidity	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
011	Coefficient1:K	*ENG	[0.00 to 1.00 / **0.08** / 0.01 /step]
012	Coefficient1:M	*ENG	[0.00 to 1.00 / **0.08** / 0.01 /step]
013	Coefficient1:C	*ENG	[0.00 to 1.00 / **0.08** / 0.01 /step]
014	Coefficient1:Y	*ENG	[0.00 to 1.00 / **0.08** / 0.01 /step]

2017	**[Background Pot Correction]**		
	-		
001	Display:K	*ENG	[0 to 200 / **-** / 10 V/step]
002	Display:M	*ENG	
003	Display:C	*ENG	
004	Display:Y	*ENG	
005	Setting1:K	*ENG	[0 to 90 / **10** / 10 V/step]
006	Setting1:M	*ENG	
007	Setting1:C	*ENG	
008	Setting1:Y	*ENG	

009	Setting2:K	*ENG	[0 to 90 / **20** / 10 V/step]
010	Setting2:M	*ENG	
011	Setting2:C	*ENG	
012	Setting2:Y	*ENG	

2018	**[Charge R Running Par]**		
	-		
001	Display:K	*ENG	[0 to 4000 / **-** / 1 /step]
002	Display:M	*ENG	
003	Display:C	*ENG	
004	Display:Y	*ENG	
009	Threshold1:K	*ENG	[0 to 4000 / **60** / 10 /step]
010	Threshold1:M	*ENG	
011	Threshold1:C	*ENG	
012	Threshold1:Y	*ENG	
013	Threshold2:K	*ENG	[0 to 4000 / **120** / 10 /step]
014	Threshold 2:M	*ENG	
015	Threshold 2:C	*ENG	
016	Threshold 2:Y	*ENG	

2019	**[Prev Calculation]**		
	-		
001	Time:Year	*ENG	[0 to 99 / **-** / 1 year/step]
002	Time:Month	*ENG	[1 to 12 / **-** / 1 month/step]
003	Time:Day	*ENG	[1 to 31 / **-** / 1day/step]
004	Time:Hour	*ENG	[0 to 23 / **-** / 1 hour/step]
005	Time:Minute	*ENG	[0 to 59 / **-** / 1 minute/step]

006	Counter:Rotation: PCU: Bk	*ENG	[0 to 999999999 / - / 1 mm/step]
007	Counter:Rotation: PCU: M	*ENG	
008	Counter:Rotation: PCU: C	*ENG	
009	Counter:Rotation: PCU: Y	*ENG	

2101	[Color Registration Correction] FA		
	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. For details, see "Laser Optics Housing Unit" in the "Main chapters: 4. Replacement and Adjustment: Laser Optics". The value should be provided with the new laser optics housing unit.		
001	Main Dot: Bk	*ENG	[-512 to 511 / **0** / 1 dot/step]
002	Main Dot: Ma	*ENG	
003	Main Dot: Cy	*ENG	
004	Main Dot: Ye	*ENG	
005	Sub Line: Bk	*ENG	[-16384 to 16383 / **0** / 1 line/step]
006	Sub Line: Ma	*ENG	
007	Sub Line: Cy	*ENG	
008	Sub Line: Ye	*ENG	

2102	[Magnification Adjustment]		
	Adjusts the magnification in the main scan direction for copy mode and printer mode. These values are the parameters for the automatic line position adjustment and are adjusted at the factory. These SPs must be input only when a new laser unit is installed.		
001	Main Mag.: High Speed: Bk	*ENG	[0 to 560 / **280** / 1 /step]
002	Main Mag.: Medium Speed: Bk	*ENG	
003	Main Mag.: Low Speed: Bk	*ENG	

004	Main Mag.: High Speed: M	*ENG	[0 to 560 / **280** / 1 /step]
005	Main Mag.: Medium Speed: M	*ENG	
006	Main Mag.: Low Speed: M	*ENG	
007	Main Mag.: High Speed: C	*ENG	[0 to 560 / **280** / 1 /step]
008	Main Mag.: Medium Speed: C	*ENG	
009	Main Mag.: Low Speed: C	*ENG	
010	Main Mag.: High Speed: Y	*ENG	[0 to 560 / **280** / 1 /step]
011	Main Mag.: Medium Speed: Y	*ENG	
012	Main Mag.: Low Speed: Y	*ENG	
013	Offset: Mag Bk1-2	*ENG	[-256 to 255 / **0** / 1 sub-dot/step]
014	Offset: Mag M1-2	*ENG	
015	Offset: Mag C1-2	*ENG	
016	Offset: Mag Y1-2	*ENG	

2103	**[Erase Margin Adjustment]** (Area, Paper Size)		
	Adjusts the erase margin by deleting image data at the margins.		
001	Lead Edge Width	*ENG	[0.0 to 9.9 / **4.2** / 0.1 mm/step]
002	Trail. Edge Width	*ENG	
003	Left	*ENG	[0.0 to 9.9 / **2.0** / 0.1 mm/step]
004	Right	*ENG	
006	Duplex Trail. L Size	*ENG	[0.0 to 4.0 / **1.0** / 0.1 mm/step]
007	Duplex Trail. M Size	*ENG	[0.0 to 4.0 / **0.8** / 0.1 mm/step]
008	Duplex Trail. S Size	*ENG	[0.0 to 4.0 / **0.6** / 0.1 mm/step]

009	Duplex Left Edge	*ENG	[0.0 to 1.5 / **0.3** / 0.1 mm/step]
010	Duplex Right Edge	*ENG	
011	Duplex Trail. L Size:Thick	*ENG	[0.0 to 4.0 / **1.0** / 0.1 mm/step]
012	Duplex Trail. M Size:Thick	*ENG	[0.0 to 4.0 / **0.8** / 0.1 mm/step]
013	Duplex Trail. S Size:Thick	*ENG	[0.0 to 4.0 / **0.6** / 0.1 mm/step]
014	Duplex Left Edge:Thick	*ENG	[0.0 to 1.5 / **0.3** / 0.1 mm/step]
015	Duplex Right Edge:Thick	*ENG	
016	Lead Edge Width: Thin	*ENG	[0.0 to 9.9 / **4.2** / 0.1 mm/step]
017	Trail. Edge Width: Thin	*ENG	
018	Duplex Trail. L Size: Thin	*ENG	[0.0 to 4.0 / **1** / 0.1 mm/step]
019	Duplex Trail. M Size: Thin	*ENG	[0.0 to 4.0 / **0.8** / 0.1 mm/step]
020	Duplex Trail. S Size: Thin	*ENG	[0.0 to 4.0 / **0.6** / 0.1 mm/step]

2105	**[LD Power Adj.]** (Process Speed, Color)		
	Adjusts the LD power of each color for each process speed. Each LD power setting is decided by process control.		
001	High Speed: Bk	*ENG	[50 to 120 / **100** / 1%/step] Decreasing a value makes lines thinner on the output. Increasing a value makes lines thicker on the output.
002	High Speed: Ma	*ENG	
003	High Speed: Cy	*ENG	
004	High Speed: Ye	*ENG	
005	Middle Speed: Bk	*ENG	[50 to 120 / **100** / 1%/step] Decreasing a value makes lines thinner on the output. Increasing a value makes lines thicker on the output.
006	Middle Speed: Ma	*ENG	
007	Middle Speed: Cy	*ENG	
008	Middle Speed: Ye	*ENG	

009	Low Speed: Bk	*ENG	[50 to 120 / **100** / 1%/step] Decreasing a value makes lines thinner on the output. Increasing a value makes lines thicker on the output.
010	Low Speed: Ma	*ENG	
011	Low Speed: Cy	*ENG	
012	Low Speed: Ye	*ENG	

2106	**[Polygon Rotation Time]**		
	Sets the polygon motor rotation time.		
001	Warming-Up	*ENG	[0 to 60 / **10** / 1 sec/step] Adjusts the time of polygon motor rotation before a job. If this is set to "0", this SP is not activated.
002	Job End	*ENG	[0 to 60 / **10** / 1 sec/step] Adjusts the time of the polygon motor rotation after a job. If this is set to "0", the polygon motor never switches off in standby mode. However, if the machine enters the energy saver mode, the polygon motor will ignore the zero setting and switch itself off.

2107	**[Image Parameter]**		
	Adjusts image parameters.		
001	Image Gamma Flag	ENG	[0 or 1 / **1** / 1 /step] Sets the image gamma flag ON/OFF.
002	Shading Correction Flag	*ENG	[0 or 1 / **1** / 1 /step] Sets shading correction ON/OFF.

<table>
<tr><td rowspan="2">2109</td><td colspan="3">[Test Pattern]</td></tr>
<tr><td colspan="3">Follow these steps to generate the test pattern.
1. Enter the SP mode and select SP2-109-003.
2. Enter the number for the test pattern that you want to print.
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.
5. Exit the SP mode.
6. Touch the following tabs in order, to print a test pattern.
User Tools >Printer Features >List/Test Print >Color Sample
7. Re-enter the SP mode, and reset SP2-109-003 to "0: None".
8. Exit the SP mode.
Note
• This SP mode must be reset to the default value “0” after test pattern check is done.</td></tr>
<tr><td rowspan="2">003</td><td>Pattern Selection</td><td>ENG</td><td>[0 to 23 / 0 / 1/step]</td></tr>
<tr><td colspan="2">0 None
1: Vertical Line (1dot)
2: Vertical Line (2dot)
3: Horizontal (1dot)
4: Horizontal (2dot)
5: Grid Vertical Line
6: Grid Horizontal Line
7: Grid pattern Small
8: Grid pattern Large
9: Argyle Pattern Small
10: Argyle Pattern Large</td><td>11. Independent Pattern (1dot)
12. Independent Pattern (2dot)
13. Independent Pattern (4dot)
14. Trimming Area
16: Hound’s Tooth Check (Horizontal)
17: Band (Horizontal)
18: Band (Vertical)
19: Checker Flag Pattern
20: Grayscale Vertical Margin
21: Grayscale Horizontal Margin
23: Full Dot Pattern</td></tr>
<tr><td>005</td><td>Color Selection</td><td>ENG</td><td>Specifies the color for the test pattern.
[1 to 4 / 1 / 1/step]
1: All colors, 2: Magenta, 3: Yellow, 4: Cyan</td></tr>
</table>

006	Density: Bk	ENG	Specifies the color density for the test pattern. [0 to 15 / **15** / 1 /step] 0: Lightest density 15: Darkest density
007	Density: Ma	ENG	
008	Density: Cy	ENG	
009	Density: Ye	ENG	

2111	**[Forced Line Position Adj.]**		
001	Mode a	ENG	Executes the fine line position adjustment twice. If this SP is not completed (NG is displayed), do SP2111-003 first and then try this SP again.
002	Mode b	ENG	Executes the fine line position adjustment once. If this SP is not completed, do SP2111-003 first and then try this SP again.
003	Mode c	ENG	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.

2112	**[TM/ID Sensor Check]** ID Sensor Check **FA**		
001	Execute	ENG	[0 or 1 / **0** / 1 /step] This SP is used to check the ID sensors at the factory. The results of this SP are displayed in SP2140 to SP2145.

2117	**[Skew Adjustment]**
	Specifies a skew adjustment value for the skew motor M, C or Y. These SPs must be used when a new laser optics housing unit is installed or when SC2.585 occurs. For details, see "Laser Optics Housing Unit" in the "Main chapters: 4. Replacement and Adjustment: Laser Optics".

001	Pulse: M	*ENG	[-50 to 50 / **0** / 1 pulse/step]
002	Pulse: C	*ENG	
003	Pulse: Y	*ENG	

2118	[Skew Adjustment]		
001	Execute: M	ENG	Changes the current skew adjustment values to the values specified with SP2117. These SPs must be used when a new laser optics housing unit is installed or when SC2.585 occurs. For details, see "Laser Optics Housing Unit" in the "Main chapters: 4. Replacement and Adjustment: Laser Optics".
002	Execute: C	ENG	
003	Execute: Y	ENG	

2119	[Skew Adjustment Display]		
	Displays the current skew adjustment value for each skew motor.		
001	M	*ENG	[-50 to 50 / **-** / 1 pulse/step]
002	C	*ENG	
003	Y	*ENG	

2120	[Thick Paper Skew Adj]		
	-		
001	On/Off	*ENG	[0 or 1 / **1** / 1 /step]

2121	[Skew Adjust Coefficient]		
	-		
001	Coefficient	*ENG	[0 to 2 / **0** / 1 /step]

2140	[ID Sensor Check Result]
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and process control.

001	Bk	*ENG	[0 to 1024 / - / 1 /step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	
2140	**[TM Sensor Check Result]**		
005	Front	*ENG	[0 to 1024 / - / 1 /step]
006	Center	*ENG	
007	Rear	*ENG	

2141	**[ID Sensor Check Result]**		
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and process control.		
001	Ave. Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Ave. M	*ENG	
003	Ave. C	*ENG	
004	Ave. Y	*ENG	
2141	**[TM Sensor Check Result]**		
005	Ave. Front	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
006	Ave. Center	*ENG	
007	Ave. Rear	*ENG	

2142	**[ID Sensor Check Result]**
	Displays the maximum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and process control.

001	Maximum: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Maximum: M	*ENG	
003	Maximum: C	*ENG	
004	Maximum: Y	*ENG	
2142	**[TM Sensor Check Result]**		
005	Maximum: Front	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
006	Maximum: Center	*ENG	
007	Maximum: Rear	*ENG	

2143	**[ID Sensor Check Result]**		
	Displays the minimum result values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and process control.		
001	Minimum: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Minimum: M	*ENG	
003	Minimum: C	*ENG	
004	Minimum: Y	*ENG	
2143	**[TM Sensor Check Result]**		
005	Minimum: Front	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
006	Minimum: Center	*ENG	
007	Minimum: Rear	*ENG	

2144	**[ID Sensor Check Result]**
	Displays the maximum result 2 values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and process control.

001	Maximum 2: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Maximum 2: M	*ENG	
003	Maximum 2: C	*ENG	
004	Maximum 2: Y	*ENG	
2144	**[TM Sensor Check Result]**		
005	Maximum 2: Front	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
006	Maximum 2: Center	*ENG	
007	Maximum 2: Rear	*ENG	

2145	**[ID Sensor Check Result]**		
	Displays the minimum result 2 values of the ID sensor check. Front, Center, Rear: ID sensors for the automatic line position adjustment and process control.		
001	Minimum 2: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Minimum 2: M	*ENG	
003	Minimum 2: C	*ENG	
004	Minimum 2: Y	*ENG	
2145	**[TM Sensor Check Result]**		
005	Minimum 2: Front	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
006	Minimum 2: Center	*ENG	
007	Minimum 2: Rear	*ENG	

2150	**[Area Mag. Correction]** LD Pulse Area Correction (Color, Area) **FA**
	Adjusts the magnification for each area. The main scan (297 mm) is divided into 8 areas. Area 1 is at the front side of the machine (left side of the image) and area 8 is at the rear side of the machine (right side of the image). Decreasing a value makes the image shift to the left side on the print. Increasing a value makes the image shift to the right side on the print. 1 pulse = 1/16 dot

027	Area 0: Bk	*ENG	[-255 to 255 / **0** / 1sub-dot/step]
028	Area 1: Bk	*ENG	Adjusts the area magnification for LD 0. [-255 to 255 / **0** / 1 sub-dot/step]
029	Area 2: Bk	*ENG	
030	Area 3: Bk	*ENG	
031	Area 4: Bk	*ENG	
032	Area 5: Bk	*ENG	
033	Area 6: Bk	*ENG	
034	Area 7: Bk	*ENG	
035	Area 8: Bk	*ENG	
036	Area 9: Bk	*ENG	Not used
037	Area 10: Bk	*ENG	
038	Area 11: Bk	*ENG	
039	Area 12: Bk	*ENG	
079	Area 0: Ma	*ENG	[-255 to 255 / **0** / 1 sub-dot/step]
080	Area 1: Ma	*ENG	Adjusts the area magnification for LD 0. [-255 to 255 / **0** / 1 sub-dot/step]
081	Area 2: Ma	*ENG	
082	Area 3: Ma	*ENG	
083	Area 4: Ma	*ENG	
084	Area 5: Ma	*ENG	
085	Area 6: Ma	*ENG	
086	Area 7: Ma	*ENG	
087	Area 8: Ma	*ENG	
088	Area 9: Ma	*ENG	Not used
089	Area 10: Ma	*ENG	
090	Area 11: Ma	*ENG	
091	Area 12: Ma	*ENG	

131	Area 0: Cy	*ENG	[-255 to 255 / **0** / 1 sub-dot/step]
132	Area 1: Cy	*ENG	Adjusts the area magnification for LD 0. [-255 to 255 / **0** / 1 sub-dot/step]
133	Area 2: Cy	*ENG	
134	Area 3: Cy	*ENG	
135	Area 4: Cy	*ENG	
136	Area 5: Cy	*ENG	
137	Area 6: Cy	*ENG	
138	Area 7: Cy	*ENG	
139	Area 8: Cy	*ENG	
140	Area 9: Cy	*ENG	Not used
141	Area 10: Cy	*ENG	
142	Area 11: Cy	*ENG	
143	Area 12: Cy	*ENG	
183	Area 0: Ye	*ENG	[-255 to 255 / **0** / 1 sub-dot/step]
184	Area 1: Ye	*ENG	Adjusts the area magnification for LD 0. [-255 to 255 / **0** / 1 sub-dot/step]
185	Area 2: Ye	*ENG	
186	Area 3: Ye	*ENG	
187	Area 4: Ye	*ENG	
188	Area 5: Ye	*ENG	
189	Area 6: Ye	*ENG	
190	Area 7: Ye	*ENG	
191	Area 8: Ye	*ENG	
192	Area 9: Ye	*ENG	Not used
193	Area 10: Ye	*ENG	
194	Area 11: Ye	*ENG	
195	Area 12: Ye	*ENG	

2152	[Area Shad. Correct. Setting] FA		
	Adjusts the area correction value for each LD power. The main scan is divided into 16 areas. However, the image areas are limited from area 1 to area 14. For BK and Magenta, area 1 is at the rear side of the machine (left side of the image) and area 14 is at the front side of the machine (right side of the image). For Cyan and Yellow, area 1 is at the front side of the machine (right side of the image) and area 14 is at the rear side of the machine (left side of the image).		
001	Area 0: Bk	*ENG	This is for the synchronizing detection board. [50 to 150 / **100** / 1 %/step]
002	Area 1: Bk	*ENG	
003	Area 2: Bk	*ENG	
004	Area 3: Bk	*ENG	
005	Area 4: Bk	*ENG	
006	Area 5: Bk	*ENG	
007	Area 6: Bk	*ENG	
008	Area 7: Bk	*ENG	
009	Area 8: Bk	*ENG	
010	Area 9: Bk	*ENG	
011	Area 10: Bk	*ENG	
012	Area 11: Bk	*ENG	
013	Area 12: Bk	*ENG	
014	Area 13: Bk	*ENG	
015	Area 14: Bk	*ENG	
016	Area 15: Bk	*ENG	This is out of the image area. [50 to 150 / **100** / 1 %/step]
033	Area 0: Ma	*ENG	This is for the synchronizing detection board. [50 to 150 / **100** / 1 %/step]

034	Area 1: Ma	*ENG	[50 to 150 / **100** / 1 %/step]
035	Area 2: Ma	*ENG	
036	Area 3: Ma	*ENG	
037	Area 4: Ma	*ENG	
038	Area 5: Ma	*ENG	
039	Area 6: Ma	*ENG	
040	Area 7: Ma	*ENG	
041	Area 8: Ma	*ENG	
042	Area 9: Ma	*ENG	
043	Area 10: Ma	*ENG	
044	Area 11: Ma	*ENG	
045	Area 12: Ma	*ENG	
046	Area 13: Ma	*ENG	
047	Area 14: Ma	*ENG	
048	Area 15: Ma	*ENG	This is out of the image area. [50 to 150 / **100** / 1 %/step]
065	Area 0: Cy	*ENG	This is for the synchronizing detection board. [50 to 150 / **100** / 1 %/step]

066	Area 1: Cy	*ENG	[50 to 150 / **100** / 1 %/step]
067	Area 2: Cy	*ENG	
068	Area 3: Cy	*ENG	
069	Area 4: Cy	*ENG	
070	Area 5: Cy	*ENG	
071	Area 6: Cy	*ENG	
072	Area 7: Cy	*ENG	
073	Area 8: Cy	*ENG	
074	Area 9: Cy	*ENG	
075	Area 10: Cy	*ENG	
076	Area 11: Cy	*ENG	
077	Area 12: Cy	*ENG	
078	Area 13: Cy	*ENG	
079	Area 14: Cy	*ENG	
080	Area 15: Cy	*ENG	This is out of the image area. [50 to 150 / **100** / 1 %/step]
097	Area 0: Ye	*ENG	This is for the synchronizing detection board. [50 to 150 / **100** / 1 %/step]

098	Area 1: Ye	*ENG	[50 to 150 / **100** / 1 %/step]
099	Area 2: Ye	*ENG	
100	Area 3: Ye	*ENG	
101	Area 4: Ye	*ENG	
102	Area 5: Ye	*ENG	
103	Area 6: Ye	*ENG	
104	Area 7: Ye	*ENG	
105	Area 8: Ye	*ENG	
106	Area 9: Ye	*ENG	
107	Area 10: Ye	*ENG	
108	Area 11: Ye	*ENG	
109	Area 12: Ye	*ENG	
110	Area 13: Ye	*ENG	
111	Area 14: Ye	*ENG	
112	Area 15: Ye	*ENG	This is out of the image area. [50 to 150 / **100** / 1 %/step]

2160	**[Vertical Line Width]**		
001	600dpi:Bk	*ENG	[10 to 15 / **13** / 1 /step]
002	600dpi:Ma	*ENG	[10 to 15 / **15** / 1 /step]
003	600dpi:Cy	*ENG	[10 to 15 / **15** / 1 /step]
004	600dpi:Ye	*ENG	[10 to 15 / **15** / 1 /step]
005	1200dpi:Bk	*ENG	[10 to 15 / **15** / 1 /step]
006	1200dpi:Ma	*ENG	[10 to 15 / **15** / 1 /step]
007	1200dpi:Cy	*ENG	[10 to 15 / **15** / 1 /step]
008	1200dpi:Ye	*ENG	[10 to 15 / **15** / 1 /step]

009	600dpi:Independent Dot:Bk	*ENG	[10 to 15 / **15** / 1 /step]
010	1200dpi:Independent Dot:Bk	*ENG	[10 to 15 / **15** / 1 /step]

2180	**[Line Pos. Adj. Clear]**		
001	Color Regist.	ENG	[- / - / -] [Execute]
002	Main Scan Length Detection	ENG	
003	MUSIC Result	ENG	
004	Area Magnification Correction	ENG	

2181	**[Line Position Adj. Result]**		
	Displays the values for each correction. • "Paper Int. Mag: Subdot" indicates the magnification correction value between two sheets of paper. • "Mag.Cor. Subdot" indicates the magnification correction value. • "M. Scan Erro." indicates the shift correction value in the main scan direction. • "S. Scan Erro." Indicates the shift correction value in the sub scan direction. • "M. Cor.: Dot" indicates the dot correction value in the main scan direction. • "M. Cor.: Subdot" indicates the sub dot correction value in the main scan direction. • Bk: Black, M: Magenta, C: Cyan, Y: Yellow		
001	Paper Int. Mag: Subdot: Bk	*ENG	[-32768 to 32767 / - / 1 pulse/step]
002	Mag.Cor. Subdot: Bk	*ENG	[-32768 to 32767 / - / 1 pulse/step]
003	Skew: M	*ENG	[-5000.000 to 5000.000 / - / 0.001 um/ step]

005	M. Scan Erro.: Left: M	*ENG	[-5000.000 to 5000.000 / - / 0.001 um/step]
006	M. Scan Erro.: Center: M	*ENG	
007	M. Scan Erro.: Right: M	*ENG	
008	S. Scan Erro.: Left: M	*ENG	
009	S. Scan Erro.: Center: M	*ENG	
010	S. Scan Erro.: Right: M	*ENG	
011	M. Cor.: Dot: M	*ENG	[-512 to 511 / - / 1 dot/step]
012	M. Cor.: Subdot: M	*ENG	[-15 to 15 / - / 1 pulse/step]
013	Paper Int. Mag: Subdot: M	*ENG	[-32768 to 32767 / - / 1 pulse/step]
014	Mag.Cor. Subdot: M	*ENG	
015	M. Left Mag.: Subdot: M	*ENG	
016	M. Right Mag.: Subdot: M	*ENG	
017	S. Cor.: 600 Line: M	*ENG	[-16384 to 16383 / - / 1 line/step]
018	S. Cor.: 600 Sub: M	*ENG	[-1.000 to 1.000 / - / 0.001 line/step]
019	S. Cor.: 1200 Line: M	*ENG	[-16384 to 16383 / - / 1 line/step]
020	S. Cor.: 1200 Sub: M	*ENG	[-1.000 to 1.000 / - / 0.001 line/step]
021	Skew: C	*ENG	[-5000.000 to 5000.000 / - / 0.001 um/step]
023	M. Scan Erro.: Left: C	*ENG	[-5000.000 to 5000.000 / - / 0.001 um/step]
024	M. Scan Erro.: Center: C	*ENG	
025	M. Scan Erro.: Right: C	*ENG	
026	S. Scan Erro.: Left: C	*ENG	
027	S. Scan Erro.: Center: C	*ENG	
028	S. Scan Erro.: Right: C	*ENG	
029	M. Cor.: Dot: C	*ENG	[-512 to 511 / - / 1 dot/step]
030	M. Cor.: Subdot: C	*ENG	[-15 to 15 / - / 1 pulse/step]

031	Paper Int. Mag: Subdot: C	*ENG	[-32768 to 32767 / - / 1 pulse/step]
032	Mag.Cor. Subdot: C	*ENG	
033	M. Left Mag.: Subdot: C	*ENG	
034	M. Right Mag.: Subdot: C	*ENG	
035	S. Cor.: 600 Line: C	*ENG	[-16384 to 16383 / - / 1 line/step]
036	S. Cor.: 600 Sub: C	*ENG	[-1.000 to 1.000 / - / 0.001 line/step]
037	S. Cor.: 1200 Line: C	*ENG	[-16384 to 16383 / - / 1 line/step]
038	S. Cor.: 1200 Sub: C	*ENG	[-1.000 to 1.000 / - / 0.001 line/step]
039	Skew: Y	*ENG	[-5000.000 to 5000.000 / - / 0.001 um/step]
041	M. Scan Erro.: Left: Y	*ENG	
042	M. Scan Erro.: Center: Y	*ENG	
043	M. Scan Erro.: Right: Y	*ENG	
044	S. Scan Erro.: Left: Y	*ENG	
045	S. Scan Erro.: Center: Y	*ENG	
046	S. Scan Erro.: Right: Y	*ENG	
047	M. Cor.: Dot: Y	*ENG	[-512 to 511 / - / 1 dot/step]
048	M. Cor.: Subdot: Y	*ENG	[-15 to 15 / - / 1 pulse/step]
049	Paper Int. Mag: Subdot: Y	*ENG	[-32768 to 32767 / - / 1 pulse/step]
050	Mag.Cor. Subdot: Y	*ENG	
051	M. Left Mag.: Subdot: Y	*ENG	
052	M. Right Mag.: Subdot: Y	*ENG	
053	S. Cor.: 600 Line: Y	*ENG	[-16384 to 16383 / - / 1 line/step]
054	S. Cor.: 600 Sub: Y	*ENG	[-1.000 to 1.000 / - / 0.001 line/step]
055	S. Cor.: 1200 Line: Y	*ENG	[-16384 to 16383 / - / 1 line/step]
056	S. Cor.: 1200 Sub: Y	*ENG	[-1.000 to 1.000 / - / 0.001 line/step]

2182	**[Line Position Adj. Offset]** (Color) M. Scan: Main scan, S. Scan: Sub-scan		
001	M Magnification	*ENG	Adjusts the line position manually. [-1.000 to 1.000 / **0** / 0.001 %/step]
002	C Magnification	*ENG	
003	Y Magnification	*ENG	
	When line shifts are not corrected by the automatic line position adjustment, do this SP. Increasing a value reduces the image in the main scan direction. Decreasing a value enlarges the image in the main scan direction.		
004	M. Scan: High: Dot: M	*ENG	[-512 to 511 / **0** / 1 dot/step]
005	M. Scan: High: Subdot: M	*ENG	[-15 to 15 / **0** / 1 pulse/step]
006	M. Scan: Medium: Dot: M	*ENG	[-512 to 511 / **0** / 1 dot/step]
007	M. Scan: Medium: Subdot: M	*ENG	[-15 to 15 / **0** / 1 pulse/step]
008	M. Scan: Low: Dot: M	*ENG	[-512 to 511 / **0** / 1 dot/step]
009	M. Scan: Low: Subdot: M	*ENG	[-15 to 15 / **0** / 1 pulse/step]
010	M. Scan: High: Dot: C	*ENG	[-512 to 511 / **0** / 1 dot/step]
011	M. Scan: High: Subdot: C	*ENG	[-15 to 15 / **0** / 1 pulse/step]
012	M. Scan: Medium: Dot: C	*ENG	[-512 to 511 / **0** / 1 dot/step]
013	M. Scan: Medium: Subdot: C	*ENG	[-15 to 15 / **0** / 1 pulse/step]
014	M. Scan: Low: Dot: C	*ENG	[-512 to 511 / **0** / 1 dot/step]
015	M. Scan: Low: Subdot: C	*ENG	[-15 to 15 / **0** / 1 pulse/step]
016	M. Scan: High: Dot: Y	*ENG	[-512 to 511 / **0** / 1 dot/step]
017	M. Scan: High: Subdot: Y	*ENG	[-15 to 15 / **0** / 1 pulse/step]
018	M. Scan: Medium: Dot: Y	*ENG	[-512 to 511 / **0** / 1 dot/step]
019	M. Scan: Medium: Subdot: Y	*ENG	[-15 to 15 / **0** / 1 pulse/step]
020	M. Scan: Low: Dot: Y	*ENG	[-512 to 511 / **0** / 1 dot/step]
021	M. Scan: Low: Subdot: Y	*ENG	[-15 to 15 / **0** / 1 pulse/step]

022	S. Scan: High: Line: M	*ENG	[-16384 to 16383 / **0** / 1 line/step]
023	S. Scan: High: Subline: M	*ENG	[-1.000 to 1.000 / **0.000** / 0.001 /line]
024	S. Scan: Medium: Line: M	*ENG	[-16384 to 16383 / **0** / 1 line/step]
025	S. Scan: Medium: Subline: M	*ENG	[-1.000 to 1.000 / **0.000** / 0.001 /line]
026	S. Scan: Low: Line: M	*ENG	[-16384 to 16383 / **0** / 1 line/step]
027	S. Scan: Low: Subline: M	*ENG	Not used
028	S. Scan: High: Line: C	*ENG	[-16384 to 16383 / **0** / 1 line/step]
029	S. Scan: High: Subline: C	*ENG	[-1.000 to 1.000 / **0.000** / 0.001 /line]
030	S. Scan: Medium: Line: C	*ENG	[-16384 to 16383 / **0** / 1 line/step]
031	S. Scan: Medium: Subline: C	*ENG	[-1.000 to 1.000 / **0.000** / 0.001 /line]
032	S. Scan: Low: Line: C	*ENG	[-16384 to 16383 / **0** / 1 line/step]
033	S. Scan: Low: Subline: C	*ENG	Not used
034	S. Scan: High: Line: Y	*ENG	[-16384 to 16383 / **0** / 1 line/step]
035	S. Scan: High: Subline: Y	*ENG	[-1.000 to 1.000 / **0.000** / 0.001 /line]
036	S. Scan: Medium: Line: Y	*ENG	[-16384 to 16383 / **0** / 1 line/step]
037	S. Scan: Medium: Subline: Y	*ENG	[-1.000 to 1.000 / **0.000** / 0.001 /line]
038	S. Scan: Low: Line: Y	*ENG	[-16384 to 16383 / **0** / 1 line/step]
039	S. Scan: Low: Subline: Y	*ENG	Not used

2183	**[Main Scan Length Detection]**
	-

001	Execute: High: Bk	ENG	[- / - / -] [Execute]
002	Execute: Medium: Bk	ENG	
003	Execute: Low: Bk	ENG	
004	Execute: High: M	ENG	
005	Execute: Medium: M	ENG	
006	Execute: Low: M	ENG	
007	Execute: High: C	ENG	[- / - / -] [Execute]
008	Execute: Medium: C	ENG	
009	Execute: Low: V	ENG	
010	Execute: High: Y	ENG	
011	Execute: Medium: Y	ENG	
012	Execute: Low: Y	ENG	

2184	[M-Scan Length Target Detect]		
	-		
001	Execute: Bk	ENG	[- / - / -] [Execute]
002	Execute: M	ENG	
003	Execute: C	ENG	
004	Execute: Y	ENG	
012	Execute: Low: Y	ENG	

2185	[Main Scan Length Target Display]
	Displays/adjusts the target value for the main scan length correction of the line position adjustment. After replacing the laser optics housing unit, input the standard value for Bk provided with the new unit. For details, see "Laser Optics Housing Unit" in the "Main chapters: 4. Replacement and Adjustment: Laser Optics". It is not necessary to input the values for the other colors; these are automatically adjusted after doing the line position adjustment.

001	Bk	*ENG	[0 to 266667 / **249449** / 1 sub-dot/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

2186	**[Main Scan Length Detection]**		
	-		
001	Selection	*ENG	[0 or 1 / **1** / 1 /step]
002	Execute: M	*ENG	[0 to 999 / **1** / 1 sec/step]

2190	**[Line Position Adj.]**		
	-		
001	Paper Int. Mag.: Subdot: Bk	*ENG	[0 or 1 / **1** / 1 /step]
002	Paper Int. Mag.: Subdot: M	*ENG	
003	Paper Int. Mag.: Subdot: C	*ENG	
004	Paper Int. Mag.: Subdot: Y	*ENG	
005	M. Scan Mag.: Subdot: M	*ENG	[0 or 1 / **1** / 1 /step] 0: Disable correction 1: Enable correction
006	M. Scan Mag.: Subdot: C	*ENG	
007	M. Scan Mag.: Subdot: Y	*ENG	
008	Area Mag.: Subdot: M	*ENG	[0 or 1 / **1** / 1 /step]
009	Area Mag.: Subdot: C	*ENG	
010	Area Mag.: Subdot: Y	*ENG	
012	Detection Error Level	*ENG	[0 to 3500 / **200** / 1 um/step]

2191	**[MUSIC Coefficient Setting]**
	Position Adjustment: Coefficient Setting ch 0: ID sensor at rear, ch 1: ID sensor at center, ch 2: ID sensor at front

001	ch 0: Filter: Front: a1	ENG	[-131071 to 131071 / **125869** / 1 bit/step]
002	ch 0: Filter: Front: a2	ENG	[-131071 to 131071 / **-60488** / 1 bit/step]
003	ch 0: Filter: Front: b0	ENG	[-131071 to 131071 / **39** / 1 bit/step]
004	ch 0: Filter: Front: b1	ENG	[-131071 to 131071 / **77** / 1 bit/step]
005	ch 0: Filter: Front: b2	ENG	[-131071 to 131071 / **39** / 1 bit/step]
006	ch 0: Filter: Rear: a1	ENG	[-131071 to 131071 / **128596** / 1 bit/step]
007	ch 0: Filter: Rear: a2	ENG	[-131071 to 131071 / **-63398** / 1 bit/step]
008	ch 0: Filter: Rear: b0	ENG	[-131071 to 131071 / **84** / 1 bit/step]
009	ch 0: Filter: Rear: b1	ENG	[-131071 to 131071 / **168** / 1 bit/step]
010	ch 0: Filter: Rear: b2	ENG	[-131071 to 131071 / **84** / 1 bit/step]
011	ch 1: Filter: Front: a1	ENG	[-131071 to 131071 / **125869** / 1 bit/step]
012	ch 1: Filter: Front: a2	ENG	[-131071 to 131071 / **-60488** / 1 bit/step]
013	ch 1: Filter: Front: b0	ENG	[-131071 to 131071 / **39** / 1 bit/step]
014	ch 1: Filter: Front: b1	ENG	[-131071 to 131071 / **77** / 1 bit/step]
015	ch 0: Filter: Front: b2	ENG	[-131071 to 131071 / **39** / 1 bit/step]
016	ch 1: Filter: Rear: a1	ENG	[-131071 to 131071 / **128596** / 1 bit/step]
017	ch 1: Filter: Rear: a2	ENG	[-131071 to 131071 / **-63398** / 1 bit/step]
018	ch 1: Filter: Rear: b0	ENG	[-131071 to 131071 / **84** / 1 bit/step]
019	ch 1: Filter: Rear: b1	ENG	[-131071 to 131071 / **168** / 1 bit/step]
020	ch 1: Filter: Rear: b2	ENG	[-131071 to 131071 / **84** / 1 bit/step]
021	ch 2: Filter: Front: a1	ENG	[-131071 to 131071 / **125869** / 1 bit/step]
022	ch 2: Filter: Front: a2	ENG	[-131071 to 131071 / **-60488** / 1 bit/step]
023	ch 2: Filter: Front: b0	ENG	[-131071 to 131071 / **39** / 1 bit/step]

024	ch 2: Filter: Front: b1	ENG	[-131071 to 131071 / **77** / 1 bit/step]
025	ch 2: Filter: Front: b2	ENG	[-131071 to 131071 / **39** / 1 bit/step]
026	ch 2: Filter: Rear: a1	ENG	[-131071 to 131071 / **128596** / 1 bit/step]
027	ch 2: Filter: Rear: a2	ENG	[-131071 to 131071 / **-63398** / 1 bit/step]
028	ch 2: Filter: Rear: b0	ENG	[-131071 to 131071 / **84** / 1 bit/step]
029	ch 2: Filter: Rear: b1	ENG	[-131071 to 131071 / **168** / 1 bit/step]
030	ch 2: Filter: Rear: b2	ENG	[-131071 to 131071 / **84** / 1 bit/step]
031	Q Format Selection	ENG	[0 to 3 / **3** / 1 /step]

2192	**[MUSIC Threshold Setting]**		
	Line Position Adjustment: Threshold Setting ch 0: ID sensor at rear, ch 1: ID sensor at center, ch 2: ID sensor at front.		
001	ch 0: 1st	*ENG	[0.5 to 3.0 / **1.4** / 0.1 V/step]
002	ch 0: 2nd	*ENG	
003	ch 0: 3rd	*ENG	
004	ch 0: 4th	*ENG	
005	ch 1: 1st	*ENG	[0.5 to 3.0 / **1.4** / 0.1 V/step]
006	ch 1: 2nd	*ENG	
007	ch 1: 3rd	*ENG	
008	ch 1: 4th	*ENG	
006	ch 2: 1st	*ENG	[0.5 to 3.0 / **1.4** / 0.1 V/step]
010	ch 2: 2nd	*ENG	
011	ch 2: 3rd	*ENG	
012	ch 2: 4th	*ENG	

2193	**[MUSIC Condition Set]** Line Position Adjustment: Condition Setting

001	Auto Execution	*ENG	[0 or 1 / **1** / 1] 0: OFF, 1: ON
	Enables/disables the automatic line position adjustment		
002	Page: Job End: BW+FC	*ENG	[0 to 999 / **500** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW and color printing mode after job end.		
003	Page: Job End: FC	*ENG	[0 to 999 / **200** / 1 page/step]
	Adjusts the threshold of the line position adjustment for color printing mode after job end.		
004	Page: Interrupt: BW+FC	*ENG	[0 to 999 / **200** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW and color printing mode during job.		
005	Page: Interrupt: FC	*ENG	[0 to 999 / **200** / 1 page/step]
	Adjusts the threshold of the line position adjustment for color printing mode during jobs.		
006	Page: Stand-By: BW	*ENG	[0 to 999 / **100** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW printing mode in stand-by mode. The line position adjustment is done when the number of outputs in BW printing mode reaches the value specified with this SP and the condition of SP2-193-008 or SP2-193-009 is satisfied.		
007	Page: Stand-By: FC	*ENG	[0 to 999 / **100** / 1 page/step]
	Adjusts the threshold of the line position adjustment for FC printing mode in stand-by mode. The line position adjustment is done when the number of outputs in color printing mode reaches the value specified with this SP and the condition of SP2-193-008 or SP2-193-009 is satisfied.		
008	Temp.	*ENG	[0 to 100 / **5** / 1deg/step]
	Adjust the temperature change threshold for the line position adjustment (Mode b: adjustment once). The timing for line position adjustment depends on the combinations of several conditions.		
009	Time	*ENG	[1 to 1440 / **300** / 1 minute/step]
	Adjust the time threshold for the line position adjustment (Mode b: adjustment once). The timing for line position adjustment depends on the combinations of several conditions.		

010	Magnification	*ENG	[0.00 to 1.00 / **0.10** / 0.01%/step]
	Adjusts the magnification threshold for line position adjustment. If the length of the main scan is changed by this amount since the previous MUSIC, then MSUIC is done again.		
011	Temp. 2	*ENG	[0 to 100 / **10** / 1deg/step]
	Adjust the temperature change threshold for the line position adjustment (Mode a: adjustment twice). The timing for line position adjustment depends on the combinations of several conditions.		
012	Time 2	*ENG	[1 to 9999 / **600** / 1 minute/step]
	Adjust the time threshold for the line position adjustment (Mode a: adjustment twice). The timing for line position adjustment depends on the combinations of several conditions.		
013	Page: Power ON:BW+FC	*ENG	[0 to 999 / **200** / 1 page/step]
	Adjusts the threshold of the line position adjustment for BW and FC printing mode at power-on. The line position adjustment is done when the number of outputs in BW and color printing mode reaches the value specified with this SP and the condition of SP2-193-008 or SP2-193-009 is satisfied.		

2194	**[MUSIC Execution Result]** Line Position Adjustment: Execution Result		
001	Year	*ENG	[0 to 99 / - / 1 year/step]
	Displays the year of the last MUSIC execution.		
002	Month	*ENG	[1 to 12 / - / 1 month/step]
	Displays the month of the last MUSIC execution.		
003	Day	*ENG	[1 to 31 / - / 1 day/step]
	Displays the date of the last MUSIC execution.		
004	Hour	*ENG	[0 to 23 / - / 1 hour/step]
	Displays the time (hour) of the last MUSIC execution.		
005	Minute	*ENG	[0 to 59 / - / 1 minute/step]
	Displays the time (minute) of the last MUSIC execution.		
006	Temperature	*ENG	[0 to 100 / - / 1 deg/step]
	Displays the temperature of the last MUSIC execution.		

007	Execution Result	*ENG	[0 or 1 / - / 1 /step] 0: Completed successfully, 1: Failed
008	Number of Execution	*ENG	[0 to 999999 / - / 1 times/step]
009	Number of Failure	*ENG	[0 to 999999 / - / 1 times/step]
010	Error Result: M	*ENG	[0 to 9 / - / 1 /step] 0: Not done 1: Completed successfully 2: Cannot detect patterns 3: Fewer lines on the pattern than the target 4: Not used 5: Out of the adjustment range 6 to 9: Not used
011	Error Result: C	*ENG	
012	Error Result: Y	*ENG	

2197	**[MUSIC Start Time]**		
	-		
001	MUSIC Start Time(EDT)	*ENG	[10 to 40 / **20** / 10 ms/step]
002	TM Sensor Position	*ENG	[50.0 to 500.0 / **105.5** / 0.1 mm/step]

2198	**[Music A/D Interval]**		
	ADC Trigger Counter		
001	ADC Trigger Counter	*ENG	[7.5 to 20.0 / **10.0** / 0.1 µs/step]

2199	**[MUSIC Error Time Setting]**		
001	Error Detection Counter	*ENG	[0.5 to 3.0 / **2.5** / 0.1 sec/step]

2220	**[Skew Origin Set]**
	Executes the skew motor initialization in the laser optics unit.

001	M: Skew Motor	*ENG	[- / - / -] Execute
002	C: Skew Motor	*ENG	
003	Y: Skew Motor	*ENG	

2221	**[LD Power]** LD Power Control		
	Adjusts the fixed LD power for each line speed and color. These SPs are activated only when SP3-041-002 is set to "0". Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Plain: Bk	*ENG	[0 to 200 / **100** / 1%/step] Increasing this value makes the image density darker.
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	
005	Thick 1: Bk	*ENG	
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2&FINE: Bk	*ENG	
010	Thick 2&FINE: M	*ENG	
011	Thick 2&FINE: C	*ENG	
012	Thick 2&FINE: Y	*ENG	

2229	**[Development DC Vias]** Development DC Bias Adjustment
	Adjusts the development bias. Development bias is automatically adjusted during process control; therefore, adjusting these settings has no effect while Process Control (SP3-041-001 Default: ON) is activated. After deactivating Process Control with SP3-041-001, the values in these SP modes are used for printing. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed

001	Plain: Bk	*ENG	[0 to 800 / **550** / 10 -V/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	
005	Thick 1: Bk	*ENG	
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2&FINE:Bk	*ENG	
010	Thick 2&FINE:M	*ENG	
011	Thick 2&FINE:C	*ENG	
012	Thick 2&FINE:Y	*ENG	

2241	**[Temperature/Humidity: Display]**		
	Displays the environment temperature and humidity.		
001	Temperature	ENG	[-50.0 to 450.0 / **-** / 0.1deg/step]
002	Relative Humidity	ENG	[0.0 to 1000.0 / **-** / 0.1 %RH/step]
003	Absolute Humidity	ENG	[0.00 to 100.00 / **-** / 0.01 g/m^3/step]
004	AIT Temperature	ENG	[0.0 to 70.0 / **-** / 0.1deg/step]
005	Correction Coefficient A	*ENG	[0.0 to 70.0 / **1.0** / 0.1/step]
006	Correction Coefficient B	*ENG	[-70.0 to 70.0 / **0.0** /0.1/step]

2242	**[TS Operation Env. Log]**		
	Displays TS Operation Env. logs.		
001	TS <= 40	ENG	[0 to 99999999 / **-** / 1/mm]
002	40 < TS <= 45	ENG	[0 to 99999999 / **-** / 1/mm]
003	45 < TS	ENG	[0 to 99999999 / **-** / 1/mm]

004	Log Clear	ENG	[0 or 1 / **0** / 1/step] 1: Clear

2302	**[Environmental Correction: Transfer]** Environmental Correction: Image Transfer Belt Unit		
001	Current Environmental Display	ENG	Displays the current environment condition.
002	Forced Setting	*ENG	Sets the environment condition manually. [0 to 6 / **0** / 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)
003	Absolute Humidity: Threshold 1	*ENG	Adjusts the threshold value between LL and ML. [0.00 to 100.00 / **4.00** / 0.01 g/m^3/step]
004	Absolute Humidity: Threshold 2	*ENG	Adjusts the threshold value between ML and MM. [0.00 to 100.00 / **8.00** / 0.01 g/m^3/step]
005	Absolute Humidity: Threshold 3	*ENG	Adjusts the threshold value between MM and MH. [0.00 to 100.00 / **16.00** / 0.01 g/m^3/step]
006	Absolute Humidity: Threshold 4	*ENG	Adjusts the threshold value between MH and HH. [0.00 to 100.00 / **24.00** / 0.01 g/m^3/step]
007	Temp Threshold	*ENG	[-5 to 30 / **5** / 1 deg/step]

2308	**[Paper Size Correction]**
	Adjusts the threshold value for the paper size correction.

001	Threshold 1	*ENG	[0 to 350 / **297** / 1 mm/step] Threshold 1 ≤ paper: Paper is detected as "S1" size.
002	Threshold 2	*ENG	[0 to 350 / **257** / 1 mm/step] Threshold 2 ≤ paper ≤ Threshold 1: Paper is detected as "S2" size.
003	Threshold 3	*ENG	[0 to 350 / **210** / 1 mm/step] Threshold 3 ≤ paper ≤ Threshold 2: Paper is detected as "S3" size.
004	Threshold 4	*ENG	[0 to 350 / **148** / 1 mm/step] Threshold 4 ≤ paper ≤ Threshold 3: Paper is detected as "S4" size. Paper ≤ Threshold 4: Paper is detected as "S5" size.

2311	**[Non Image Area: Bias]**		
001	Image Transfer	*ENG	Adjusts the bias of the image transfer belt between images. This value is added to the value of the image transfer belt bias. [10 to 250 / **100** / 5 %/step]
002	Paper Transfer	*ENG	Adjusts the bias of the paper transfer roller between images. [0 to 2100 / **500** / 100 V/step]

2326	**[Transfer Roller CL: Bias]** Transfer Roller Cleaning: Bias Adjustment		
001	Positive	*ENG	[0 to 2100 / **500** / 100 V /step]
	Adjusts the positive voltage of the paper transfer roller for cleaning the paper transfer roller.		
002	Negative	*ENG	[10 to 400 / **100** / 10 %/step]
	Adjusts the negative current of the paper transfer roller for cleaning the paper transfer roller.		

003	Positive	*ENG	[0 to 2100 / **2000** / 100 V/step]
	Adjusts the negative current limit of the paper transfer roller for cleaning the paper transfer roller.		
004	Negative	*ENG	[10 to 400 / **100** / 10 %/step]

2351	**[Common: BW: Bias]** Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	ITB unit: Plain	*ENG	[0 to 80 / **P3c: 33, P3d: 41** / 1 µA]
	Adjusts the current for the image transfer belt in B/W mode for plain paper.		
002	ITB unit: Thick 1	*ENG	[0 to 80 / **25** / 1 µA]
	Adjusts the current for the image transfer belt in B/W mode for thick 1 paper.		
003	ITB unit: Thick 2 & FINE	*ENG	[0 to 80 / **12** / 1 µA]
	Adjusts the current for the image transfer belt in B/W mode for thick 2 paper or FINE mode.		

2357	**[Common: FC: Bias]** Image Transfer Belt: Full Color: Bias Adjustment Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	ITB unit: Plain: Bk	*ENG	[0 to 80 / **P3c: 30, P3d: 37** / 1 µA]
	Adjusts the current for the image transfer belt for Black in full color mode for plain paper.		
002	ITB unit: Plain: M	*ENG	[0 to 80 / **P3c: 30, P3d: 37** / 1 µA]
	Adjusts the current for the image transfer belt for Magenta in full color mode for plain paper.		
003	ITB unit: Plain: C	*ENG	[0 to 80 / **P3c: 30, P3d: 37** / 1 µA]
	Adjusts the current for the image transfer belt for Cyan in full color mode for plain paper.		
004	ITB unit: Plain: Y	*ENG	[0 to 80 / **P3c: 40, P3d: 50** / 1 µA]
	Adjusts the current for the image transfer belt for Yellow in full color mode for plain paper.		
005	ITB unit: Thick 1: Bk	*ENG	[0 to 80 / **22** / 1 µA]
	Adjusts the current for the image transfer belt for Black in full color mode for thick 1 paper.		

006	ITB unit: Thick 1: M	*ENG	[0 to 80 / **22** / 1 µA]
	Adjusts the current for the image transfer belt for Magenta in full color mode for thick 1 paper.		
007	ITB unit: Thick 1: C	*ENG	[0 to 80 / **22** / 1 µA]
	Adjusts the current for the image transfer belt for Cyan in full color mode for thick 1 paper.		
008	ITB unit: Thick 1: Y	*ENG	[0 to 80 / **30** / 1 µA]
	Adjusts the current for the image transfer belt for Yellow in full color mode for thick 1 paper.		
009	ITB unit: Thick 2 & FINE: Bk	*ENG	[0 to 80 / **11** / 1 µA]
	Adjusts the current for the image transfer belt for Black in full color mode for Thick 2 and fine.		
010	ITB unit: Thick 2 & FINE: M	*ENG	[0 to 80 / **11** / 1 µA]
	Adjusts the current for the image transfer belt for Magenta in full color mode for Thick 2 and fine.		
011	ITB unit: Thick 2 & FINE: C	*ENG	[0 to 80 / **11** / 1 µA]
	Adjusts the current for the image transfer belt for Cyan in full color mode for Thick 2 and fine.		
012	ITB unit: Thick 2 & FINE: Y	*ENG	[0 to 80 / **15** / 1 µA]
	Adjusts the current for the image transfer belt for Yellow in full color mode for Thick 2 and fine.		

2360	**[Common: BW Environment Correction]**		
001	ITB unit: Plain	*ENG	[1 to 60 / **52** / 1 /step]
002	ITB unit: Thick 1	*ENG	[1 to 60 / **1** / 1 /step]
003	ITB unit: Thick 2	*ENG	[1 to 60 / **1** / 1 /step]
004	ITB unit: Plain: Bk	*ENG	[1 to 60 / **13**/ 1 /step]
005	ITB unit: Plain: M	*ENG	[1 to 60 / **5** / 1 /step]
006	ITB unit: Plain: C	*ENG	[1 to 60 / **6** / 1 /step]

007	ITB unit: Plain: Y	*ENG	[1 to 60 / **8** / 1 /step]
008	ITB unit: Thick 1: Bk	*ENG	[1 to 60 / **31** / 1 /step]
009	ITB unit: Thick 1: M	*ENG	[1 to 60 / **2** / 1 /step]
010	ITB unit: Thick 1: C	*ENG	
011	ITB unit: Thick 1: Y	*ENG	
012	ITB unit: Thick 2: Bk	*ENG	[1 to 60 / **31** / 1 /step]
013	ITB unit: Thick 2: M	*ENG	[1 to 60 / **1** / 1 /step]
014	ITB unit: Thick 2: C	*ENG	[1 to 60 / **2** / 1 /step]
015	ITB unit: Thick 2: Y	*ENG	[1 to 60 / **2** / 1 /step]

2401	**[Plain: Bias]**		
	Adjusts the DC voltage of the discharge plate for plain paper. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: Plain: 2nd Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
003	Separation DC: 1200: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
004	Separation DC: 1200: 2nd Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]

2403	**[Plain: Bias: BW]**		
	Adjusts the current for the paper transfer roller for plain paper in black-and-white mode. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 30, P3d: 38** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	

003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / **7** / 1 -µA /step]
004	Paper Transfer: 1200: 2nd Side	*ENG	[0 to 250 / **12** / 1 -µA /step]

2407	**[Plain: Bias: FC]**		
	Adjusts the current for the paper transfer roller for plain paper in full color mode. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 32, P3d: 39** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / **P3c: 45, P3d: 55** / 1 -µA /step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / **13** / 1 -µA /step]
004	Paper Transfer: 1200: 2nd Side	*ENG	[0 to 250 / **16** / 1 -µA /step]

2411	**[Plain: Paper Size Correction]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2403 and SP2407 are multiplied by these SP values. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Paper Transfer: Plain : 1st Side: S1	*ENG	[100 to 600 / **100** / 5 %/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: Plain: 2nd Side: S1	*ENG	
003	Paper Transfer: 1200: 1st Side: S1	*ENG	
004	Paper Transfer: 1200: 2nd Side: S1	*ENG	
005	Paper Transfer: Plain: 1st Side: S2	*ENG	[100 to 600 / **105** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)

006	Paper Transfer: Plain: 2nd Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
007	Paper Transfer: 1200: 1st Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
008	Paper Transfer: 1200: 2nd Side: S2	*ENG	[100 to 600 / **150** / 5%/step]
009	Paper Transfer: Plain: 1st Side: S3	*ENG	[100 to 600 / **110** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
010	Paper Transfer: Plain: 2nd Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
011	Paper Transfer: 1200: 1st Side: S3	*ENG	
012	Paper Transfer: 1200: 2nd Side: S3	*ENG	[100 to 600 / **300** / 5%/step]
013	Paper Transfer: Plain: 1st Side: S4	*ENG	[100 to 600 / **115** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
014	Paper Transfer: Plain: 2nd Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
015	Paper Transfer: 1200: 1st Side: S4	*ENG	[100 to 600 / **240** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
016	Paper Transfer: 1200: 2nd Side: S4	*ENG	[100 to 600 / **340** / 5%/step]
017	Paper Transfer: Plain: 1st Side: S5	*ENG	[100 to 600 / **120** / 5%/step] 148 mm > S5 size (Paper width)
018	Paper Transfer: Plain: 2nd Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)
019	Paper Transfer: 1200: 1st Side: S5	*ENG	[100 to 600 / **300** / 5%/step] 148 mm > S5 size (Paper width)
020	Paper Transfer: 1200: 2nd Side: S5	*ENG	[100 to 600 / **400** / 5%/step]

2421	**[Plain: Leading Edge Correction]** Plain Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2403 and SP2407 are multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2422.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
004	Paper Transfer: 1200: 2nd side	*ENG	
2421	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2401 is multiplied by these SPs values. **Note** • The paper leading edge area can be adjusted with SP2422.		
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	
008	Separation DC: 1200: 2nd Side	*ENG	

2422	**[Plain: 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. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed

001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
004	Paper Transfer: 1200: 2nd side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	
008	Separation DC: 1200: 2nd Side	*ENG	

2423	**[Plain: Trailing Edge Correction]** Plain Paper: Trailing Edge Correction		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2403 and SP2407 are multiplied by these SP values. **Note** • The paper trailing edge area can be adjusted with SP2424.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
004	Paper Transfer: 1200: 2nd side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **160**/ 5%/step]

006	Separation DC: Plain: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]
007	Separation DC: 1200: 1st Side	*ENG	
008	Separation DC: 1200: 2nd Side	*ENG	

2424	**[Plain: Switch 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. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
004	Paper Transfer: 1200: 2nd side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / **8** / 2 mm/step]
006	Separation DC: Plain: 2nd Side	*ENG	[0 to 50 / **0** / 2 mm/step]
007	Separation DC: 1200: 1st Side	*ENG	
008	Separation DC: 1200: 2nd Side	*ENG	

2430	**[Plain: Environment Correction]**		
	-		
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / **29** / 1 /step]

002	Separation DC: Plain: 2nd Side	*ENG	[1 to 60 / **29** / 1 /step]
003	Paper Transfer: BW: 1st Side	*ENG	[1 to 60 / **52** / 1 /step]
004	Paper Transfer: BW: 2nd Side	*ENG	[1 to 60 / **55** / 1 /step]
005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / **P3c: 53, P3d: 58** / 1 /step]
006	Paper Transfer: FC: 2nd Side	*ENG	[1 to 60 / **P3c: 59, P3d: 54** / 1 /step]
007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
008	Separation DC: 1200: 2nd Side	*ENG	[1 to 60 / **29** / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
010	Paper Transfer: 1200: BW: 2nd Side	*ENG	[1 to 60 / **11** / 1 /step]
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / **49** / 1 /step]
012	Paper Transfer: 1200: FC: 2nd Side	*ENG	[1 to 60 / **49** / 1 /step]

2451	**[Thin: Bias]**		
	Adjusts the DC voltage of the discharge plate for thin paper. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / **3500** / 10 -V/step]
002	Separation DC: Plain: 2nd Side	*ENG	
003	Separation DC: 1200: 1st Side	*ENG	
004	Separation DC: 1200: 2nd Side	*ENG	

2453	**[Thin: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thin paper in black-and-white mode. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c:30, P3d:38** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / **11** / 1 -µA /step]
004	Paper Transfer: 1200: 2nd Side	*ENG	

2457	**[Thin: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thin paper in full color mode. Plain: High speed, Thick 1: Middle speed, Thick 2&Fine: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c:40, P3d:50** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / **15** / 1 -µA /step]
004	Paper Transfer: 1200: 2nd Side	*ENG	

2461	**[Thin: Paper Size Correction]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2453 and SP2457 are multiplied by these SP values. Plain: High speed		
001	Paper Transfer:1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: 2nd Side: S1	*ENG	

005	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
006	Paper Transfer: 2nd Side: S2	*ENG	
009	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
010	Paper Transfer: 2nd Side: S3	*ENG	
013	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
014	Paper Transfer: 2nd Side: S4	*ENG	
017	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / **150** / 5%/step]
018	Paper Transfer: 2nd Side: S5	*ENG	

2471	**[Thin: Leading Edge Correction]** Thin Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2453 and SP2457 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper leading edge area can be adjusted with SP2472.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
004	Paper Transfer: 1200: 2nd Side	*ENG	
2471	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2451 is multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2472.		

005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	
008	Separation DC: 1200: 2nd Side	*ENG	

2472	**[Thin: 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. Plain: High speed, 1200: Low speed,		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
004	Paper Transfer: 1200: 2nd Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	
008	Separation DC: 1200: 2nd Side	*ENG	

2473	**[Thin: Trailing Edge Correction]** Thin Paper: Trailing Edge Correction		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2453 and SP2457 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper trailing edge area can be adjusted with SP2474.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
004	Paper Transfer: 1200: 2nd Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
008	Separation DC: 1200: 2nd Side	*ENG	

2474	**[Thin: Switch 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. Plain: High speed, 1200: Low speed

001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
004	Paper Transfer: 1200: 2nd Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / **0** / 1 mm/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	
008	Separation DC: 1200: 2nd Side	*ENG	

2480	**[Thin: Environment Correction]** Plain: High speed, 1200: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / **40** / 1 /step]
002	Separation DC: Plain: 2nd Side	*ENG	
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
004	Paper Transfer: Plain: BW: 2nd Side	*ENG	
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]
006	Paper Transfer: Plain: FC: 2nd Side	*ENG	[1 to 60 / **41** / 1 /step]

007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / **26** / 1 /step]
008	Separation DC: 1200: 2nd Side	*ENG	
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
010	Paper Transfer: 1200: BW: 2nd Side	*ENG	
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]
012	Paper Transfer: 1200: FC: 2nd Side	*ENG	

2481	**[Glossy: Bias]**		
001	Separation DC: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
	Adjusts the DC voltage of the discharge plate for glossy paper.		

2482	**[Glossy: Bias: BW]**		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **12** / 1 -µA /step]
	Adjusts the current for the paper transfer roller for glossy paper in black-and-white mode.		

2483	**[Glossy: Bias: FC]**		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **15** / 1 -µA /step]
	Adjusts the current for the paper transfer roller for glossy paper in full color mode.		

2484	**[Glossy: Paper Size Correction]**		
001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step]
005	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **120** / 5%/step]
009	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **140** / 5%/step]
013	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **160** / 5%/step]

017	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / **180** / 5%/step]

2485	**[Plain: Leading Edge Correction]**		
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
005	Separation DC: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]]

2486	**[Plain: Switch Timing: Lead. Edge]**		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
005	Separation DC: 1st Side	*ENG	

2487	**[Plain: Trailing Edge Correction]**		
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5 %/step]
005	Separation DC: 1st Side	*ENG	

2488	**[Plain: Switch Trail. Edge]**		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
005	Separation DC: 1st Side	*ENG	

2489	**[Glossy: Environment Correction]**		
001	Separation DC: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
003	Paper Transfer: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]

2501	**[Thick 1: Bias]**
	Adjusts the DC voltage of the discharge plate for thick 1 paper. Plain: High speed, 1200: Low speed

001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: Plain: 2nd Side	*ENG	
003	Separation DC: 1200: 1st Side	*ENG	

2502	**[Thick 1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thick 1 paper in black-and-white mode. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **24** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Separation DC: 1200: 1st Side	*ENG	[0 to 250 / **12** / 1 -µA /step]

2507	**[Thick 1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thick 1 paper in full color mode. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **30** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Separation DC: 1200: 1st Side	*ENG	[0 to 250 / **15** / 1 -µA /step]

2511	**[Thick 1: Paper Size Correction]**
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2502 and SP2507 are multiplied by these SP values. Plain: High speed, 1200: Low speed

001	Paper Transfer: Plain: 1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: Plain: 2nd Side: S1	*ENG	
003	Paper Transfer: 1200: 1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
005	Paper Transfer: Plain: 1st Side: S2	*ENG	[100 to 600 / **105** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
006	Paper Transfer: Plain: 2nd Side: S2	*ENG	[100 to 600 / **130** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
007	Paper Transfer: 1200: 1st Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
009	Paper Transfer: Plain: 1st Side: S3	*ENG	[100 to 600 / **110** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
010	Paper Transfer: Plain: 2nd Side: S3	*ENG	[100 to 600 / **160** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
011	Paper Transfer: 1200: 1st Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
013	Paper Transfer: Plain 1: 1st Side: S4	*ENG	[100 to 600 / **115** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
014	Paper Transfer: Plain: 2nd Side: S4	*ENG	[100 to 600 / **190** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
015	Paper Transfer: 1200: 1st Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
017	Paper Transfer: Plain 1: 1st Side: S5	*ENG	[100 to 600 / **120** / 5%/step] 148 mm > S5 size (Paper width)
018	Paper Transfer: Plain: 2nd Side: S5	*ENG	[100 to 600 / **220** / 5%/step] 148 mm > S5 size (Paper width)

019	Paper Transfer: 1200: 1st Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)

2521	**[Thick 1: Leading Edge Correction]** Thick 1 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2502 and SP2507 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper leading edge area can be adjusted with SP2522.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]

2522	**[Thick 1: 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. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	

005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2523	**[Thick 1: Trail. Edge Correction]** Thick 1 Paper: Trailing Edge Correction		
	Adjusts the correction coefficient to the paper transfer roller current for the paper trailing edge in each mode. SP2502 and SP2507 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper trailing edge area can be adjusted with SP2524.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]
007	Separation DC: 1200: 1st Side	*ENG	

2524	**[Thick 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. Plain: High speed, 1200: Low speed

001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 1 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2530	**[Thick 1: Environment Correction]** Plain: High speed, 1200: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
002	Separation DC: Plain: 2nd Side	*ENG	
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
004	Paper Transfer: Plain: BW: 2nd Side	*ENG	
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]
006	Paper Transfer: Plain: FC:2nd Side	*ENG	[1 to 60 / **11** / 1 /step]
007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]

011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]

2551	**[Thick 2: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick 2 paper.		
001	Separation DC: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: 2nd Side	*ENG	

2553	**[Thick 2: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thick 2 paper in black-and-white mode.		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **7** / 1 -µA /step]
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / **12** / 1 -µA /step]

2558	**[Thick 2: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thick 2 paper in full color mode.		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **13** / 1 -µA /step]
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / **15** / 1 -µA /step]

2561	**[Thick 2: Paper Size Correction]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2553 and SP2558 are multiplied by these SP values.		
001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / **100** / 5 %/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: 2nd Side: S1	*ENG	
003	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **105** / 5 %/step] 297 mm > S2 size > 275 mm (Paper width)
004	Paper Transfer: 2nd Side: S2	*ENG	[100 to 600 / **160** / 5 %/step] 297 mm > S2 size > 275 mm (Paper width)
005	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **100** / 5 %/step] 275 mm > S3 size > 210 mm (Paper width)

006	Paper Transfer: 2nd Side: S3	*ENG	[100 to 600 / **240** / 5 %/step] 275 mm > S3 size > 210 mm (Paper width)
007	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **100** / 5 %/step] 210 mm > S4 size > 148 mm (Paper width)
008	Paper Transfer: 2nd Side: S4	*ENG	[100 to 600 / **360** / 5 %/step] 210 mm > S4 size > 148 mm (Paper width)
009	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / **140** / 5 %/step] 148 mm > S5 size (Paper width)
010	Paper Transfer: 2nd Side: S5	*ENG	[100 to 600 / **600** / 5 %/step] 148 mm > S5 size (Paper width)

2571	**[Thick 2: Leading Edge Correction]** Thick 2 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2553 and SP2558 are multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2572.		
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5 %/step]
002	Paper Transfer: 2nd Side	*ENG	
2571	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2551 is multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2572.		
003	Separation DC: 1st Side	*ENG	[0 to 400 / **100** / 5 %/step]
004	Separation DC: 2nd Side	*ENG	

2572	**[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.

001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd Side	*ENG	
003	Separation DC: 1st Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2573	**[Thick 2: Trail. Edge Correction]** Thick 2 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2553 and SP2558 are multiplied by these SP values. **Note** • The paper trailing edge area can be adjusted with SP2574.		
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: 2nd Side	*ENG	
003	Separation DC: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
004	Separation DC: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]

2574	**[Thick 2: Trail. Edge Correction]**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd Side	*ENG	
003	Separation DC: 1st Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2580	**[Thick 2 Environment Correction]**		
001	Separation DC: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
002	Separation DC: 2nd Side	*ENG	
003	Paper Transfer: BW: 1st Side	*ENG	[1o 60 / **11** / 1 /step]
004	Paper Transfer: BW: 2nd Side	*ENG	

005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / **50** / 1 /step]
006	Paper Transfer: FC: 2nd Side	*ENG	[1 to 60 / **11** / 1 /step]

2601	**[OHP: Bias]**		
	Adjusts the DC voltage of the discharge plate for OHP.		
001	Separation DC	*ENG	[0 to 4000 / **2200** / 10 -V/step]

2603	**[OHP: Bias: BW]**		
	Adjusts the current for the paper transfer roller for OHP in black-and-white mode.		
001	Paper Transfer	*ENG	[0 to 250 / **12** / 1 -µA /step]

2608	**[OHP: Bias: FC]**		
	Adjusts the current for the paper transfer roller for OHP in full color mode.		
001	Paper Transfer	*ENG	[0 to 250 / **15** / 1 -µA /step]

2611	**[OHP: Paper Size Correction]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2603 and SP2608 are multiplied by these SP values.		
001	Paper Transfer: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: S2	*ENG	[100 to 600 / **140** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
003	Paper Transfer: S3	*ENG	[100 to 600 / **600** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
004	Paper Transfer: S4	*ENG	[100 to 600 / **260** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
005	Paper Transfer: S5	*ENG	[100 to 600 / **330** / 5%/step] 148 mm > S5 size (Paper width)

2621	[OHP: Leading Edge Correction]		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2603 and SP2608 are multiplied by these SP values. Note • The paper leading edge area can be adjusted with SP2622.		
001	Paper Transfer	*ENG	[0 to 400 / **100** / 5%/step]
2621	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2601 is multiplied by these SP values. Note • The paper leading edge area can be adjusted with SP2622.		
002	Separation DC	*ENG	[0 to 400 / **100** / 5%/step]

2622	[OHP: Switch Timing: Leading 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.		
001	Paper Transfer	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Separation DC	*ENG	

2623	[OHP: Trailing Edge Correction]		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2603 and SP2608 are multiplied by these SP values. Note • The paper trailing edge area can be adjusted with SP2624.		
001	Paper Transfer	*ENG	[0 to 400 / **100** / 5%/step]
002	Separation DC	*ENG	

2624	[OHP: Trailing Edge Correction]		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer	*ENG	[0 to 50 / **0** / 1 mm/step]

002	Separation DC	*ENG	[0 to 50 / **0** / 2 mm/step]

2630	[OHP: Environment Correction]		
001	Separation DC	*ENG	[1 to 60 / **22** / 1 /step]
002	Paper Transfer: BW	*ENG	[1 to 60 / **11** / 1 /step]
003	Paper Transfer: FC	*ENG	[1 to 60 / **1** / 1 /step]

2650	[Thick3: Bias]		
	Adjusts the DC voltage of the discharge plate for thick paper 3.		
001	Separation DC: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: 2nd Side	*ENG	

2651	[Thick3: Bias: BW]		
	Adjusts the current for the paper transfer roller for thick paper 3 in black-and-white mode.		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **10** / 1 -µA /step]
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / **12** / 1 -µA /step]

2652	[Thick3: Bias: FC]		
	Adjusts the current for the paper transfer roller for thick paper 3 in full color mode.		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **11** / 1 -µA /step]
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / **15** / 1 -µA /step]

2653	[Thick3: Paper Size Correction]		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2651 and SP2652 are multiplied by these SP values.		
001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **100** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)

003	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **100** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
004	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
005	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / **100** / 5%/step] 148 mm > S5 size (Paper width)
006	Paper Transfer: 2nd Side: S1	*ENG	[100 to 600 / **260** / 5%/step] S1 size > 297 mm (Paper width)
007	Paper Transfer: 2nd Side: S2	*ENG	[100 to 600 / **100** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
008	Paper Transfer: 2nd Side: S3	*ENG	[100 to 600 / **430** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
009	Paper Transfer: 2nd Side: S4	*ENG	[100 to 600 / **100** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
010	Paper Transfer: 2nd Side: S5	*ENG	[100 to 600 / **600** / 5%/step] 148 mm > S5 size (Paper width)

2654	**[Thick 3: Leading Edge Correction]** Thick 3 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2651 and SP2652 are multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2655.		
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Separation DC: 1st Side	*ENG	
2654	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2650 is multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2655.		

003	Paper Transfer: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]
004	Separation DC: 2nd Side	*ENG	

2655	**[Thick 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.		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Separation DC: 1st Side	*ENG	
003	Paper Transfer: 2nd Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2656	**[Thick 3: Trail. Edge Correction]** Thick 3 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2651 and SP2652 are multiplied by these SP values. **Note** • The paper trailing edge area can be adjusted with SP2657.		
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: 2nd Side	*ENG	
003	Separation DC: 1st Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2657	**[Thick 3: Trail. Edge Correction]**		
	Adjusts the bias/voltage switch timing of the paper transfer roller/discharge plate at the paper trailing edge between the erase margin area and the image area.		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd Side	*ENG	
003	Separation DC: 1st Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2660	**[Thick 3: Environment Correction]** Thick 3 Paper: MM Environment Coefficient Adjustment		
	Adjusts the environment coefficient for each mode. When the environment is detected as MM, SP2651 and SP2652 are multiplied by these SP values.		
001	Separation DC: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
002	Separation DC: 2nd Side	*ENG	
2660	Adjusts the environment coefficient for each mode. When the environment is detected as MM, SP2650 is multiplied by these SP values.		
003	Paper Transfer: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
004	Paper Transfer: BW: 2nd Side	*ENG	
005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / **55** / 1 /step]
006	Paper Transfer: FC: 2nd Side	*ENG	[1 to 60 / **11** / 1 /step]

2670	**[Thick4: Bias]**		
	Adjusts the DC voltage of the discharge plate for thick paper 4.		
001	Separation DC: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: 2nd Side	*ENG	

2671	**[Thick4: Bias: BW]**		
	Adjusts the current for the paper transfer roller for thick paper 4 in black-and-white mode.		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **10** / 1 -µA /step]
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / **12** / 1 -µA /step]

2672	**[Thick4: Bias: FC]**		
	Adjusts the current for the paper transfer roller for thick paper 4 in full color mode.		
001	Paper Transfer: 1st Side	*ENG	[0 to 250 / **15** / 1 -µA /step]
002	Paper Transfer: 2nd Side	*ENG	[0 to 250 / **15** / 1 -µA /step]

2673	**[Thick4: Paper Size Correction]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2671 and SP2672 are multiplied by these SP values.		
001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: 2nd Side: S1	*ENG	[100 to 600 / **100** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
003	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **100** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
004	Paper Transfer: 2nd Side: S2	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
005	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **100** / 5%/step] 148 mm > S5 size (Paper width)
006	Paper Transfer: 2nd Side: S3	*ENG	[100 to 600 / **260** / 5%/step] S1 size > 297 mm (Paper width)
007	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **100** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
008	Paper Transfer: 2nd Side: S4	*ENG	[100 to 600 / **430** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
009	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / **100** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
010	Paper Transfer: 2nd Side: S5	*ENG	[100 to 600 / **600** / 5%/step] 148 mm > S5 size (Paper width)

2674	**[Thick 4: Leading Edge Correction]** Thick 4 Paper: Leading Edge Correction
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2671 and SP2672 are multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2675.

001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Separation DC: 1st Side	*ENG	
2674	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2670 is multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2655.		
003	Paper Transfer: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]
004	Separation DC: 2nd Side	*ENG	

2675	**[Thick 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.		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Separation DC: 1st Side	*ENG	
003	Paper Transfer: 2nd Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2676	**[Thick 4: Trail. Edge Correction]** Thick 4 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2671 and SP2672 are multiplied by these SP values. **Note** • The paper trailing edge area can be adjusted with SP2677.		
001	Paper Transfer: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: 2nd Side	*ENG	
003	Separation DC: 1st Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2677	**[Thick 4: 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.		
001	Paper Transfer: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: 2nd Side	*ENG	
003	Separation DC: 1st Side	*ENG	
004	Separation DC: 2nd Side	*ENG	

2680	**[Thick 4: Environment Correction]** Thick 4 Paper: MM Environment Coefficient Adjustment		
	Adjusts the environment coefficient for each mode. When the environment is detected as MM, SP2671 and SP2672 are multiplied by these SP values.		
001	Separation DC: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
002	Separation DC: 2nd Side	*ENG	
2680	Adjusts the environment coefficient for each mode. When the environment is detected as MM, SP2670 is multiplied by these SP values.		
003	Paper Transfer: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
004	Paper Transfer: BW: 2nd Side	*ENG	
005	Paper Transfer: FC: 1st Side	*ENG	[1 to 60 / **50** / 1 /step]
006	Paper Transfer: FC: 2nd Side	*ENG	[1 to 60 / **11** / 1 /step]

2690	**[ITB Contact Setting]**		
	Sets the image transfer belt contact for each paper type.		
001	Thick4	*ENG	[0 or 1 / **0** / 1 /step]

2751	**[Special1: Bias]**
	Adjusts the DC voltage of the discharge plate for special paper 1. Plain: High speed, Thick 1: Middle speed

001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: Plain: 2nd Side	*ENG	
003	Paper Transfer: Thick 1: 1st Side	*ENG	

2753	**[Special1: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 1 in black-and-white mode. Plain: High speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 30, P3d: 38** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **11** / 1 -µA /step]

2757	**[Special1: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 1 in full color mode. Plain: High speed, Fine: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 40, P3d: 50** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / **P3c: 45, P3d: 55** / 1 -µA /step]
003	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **15** / 1 -µA /step]

2761	**[Special1: Paper Size Correction]**
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2753 and SP2757 are multiplied by these SP values.

001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / **100** / 5 %/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: 2nd Side: S1	*ENG	
005	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
006	Paper Transfer: 2nd Side: S2	*ENG	
009	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
010	Paper Transfer: 2nd Side: S3	*ENG	
013	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
014	Paper Transfer: 2nd Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
017	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)
018	Paper Transfer: 2nd Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)

2771	**[Special 1: Leading Edge Correction]** Special 1 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2753 and SP2757 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper leading edge area can be adjusted with SP2772.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]

2771	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2751 is multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2772.		
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]

2772	**[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. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 50 / **0** / 1 mm/step]
005	Separation DC: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2773	**[Special 1: Trail. Edge Correction]** Special 1 Paper: Trailing Edge Correction		
	Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2753 and SP2757 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper trailing edge area can be adjusted with SP2774.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2774	**[Special 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. Plain: High speed, 1200: Low speed

001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2780	**[Special 1: Environment Correction]** Plain: High speed, 1200: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
002	Separation DC: Plain: 2nd Side	*ENG	[1 to 60 / **29** / 1 /step]
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
004	Paper Transfer: Plain: BW: 2nd Side	*ENG	
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]
006	Paper Transfer: Plain: FC:2nd Side	*ENG	[1 to 60 / **14** / 1 /step]
007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]

011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]

2801	**[Special2: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 2. Plain: High speed, 1200: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: Plain: 2nd Side	*ENG	
003	Separation DC: 1200: 1st Side	*ENG	

2803	**[Special2: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 2 in black-and-white mode. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 30, P3d: 38** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 200 / **11** / 1 -µA /step]

2807	**[Special2: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 2 in full color mode. Plain: High speed, Thick 2&Fine: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 40, P3d: 50** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / **P3c: 45, P3d: 55** / 1 -µA /step]

003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / **15** / 1 -µA /step]

2811	**[Special2: Paper Size Correction]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2803 and SP2807 are multiplied by these SP values.		
001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: 2nd Side: S1	*ENG	
005	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
006	Paper Transfer: 2nd Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
009	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
010	Paper Transfer: 2nd Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
013	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
014	Paper Transfer: 2nd Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
017	Paper Transfer: 1st Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)
018	Paper Transfer: 2nd Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)

2821	**[Special 2: Lead. Edge Correction]** Special 2 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2803 and SP2807 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper leading edge area can be adjusted with SP2822.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 400 / **100** / 5%/step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
2821	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2801 is multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2822.		
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 12001st Side	*ENG	

2822	**[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. Plain: High speed, 1200: Low speed

001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2823	**[Special 2: Trail. Edge Correction]** Special 2 Paper: Trailing Edge Correction Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2803 and SP2807 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper trailing edge area can be adjusted with SP2824.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2824	[Special 2: 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. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2830	[Special 2: Environment Correction] Plain: High speed, 1200: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
002	Separation DC: Plain: 2nd Side	*ENG	[1 to 60 / **29** / 1 /step]
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
004	Paper Transfer: Plain: BW: 2nd Side	*ENG	[1 to 60 / **11** / 1 /step]
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]
006	Paper Transfer: Plain: FC:2nd Side	*ENG	[1 to 60 / **14** / 1 /step]

007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]

2851	**[Special 3: Bias]**		
	Adjusts the DC voltage of the discharge plate for special paper 3. Plain: High speed, 1200: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[0 to 4000 / **2200** / 10 -V/step]
002	Separation DC: Plain: 2nd Side	*ENG	
003	Separation DC: 1200: 1st Side	*ENG	

2852	**[Special 3: Bias: BW]**		
	Adjusts the current for the paper transfer roller for special paper 3 in black-and-white mode. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 30, P3d: 38** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / **11** / 1 -µA /step]

2857	**[Special 3: Bias: FC]**		
	Adjusts the current for the paper transfer roller for special paper 3 in full color mode. Plain: High speed, 1200: Low speed		

001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 250 / **P3c: 40, P3d: 50** / 1 -µA /step]
002	Paper Transfer: Plain: 2nd Side	*ENG	[0 to 250 / **P3c: 45, P3d: 55** / 1 -µA /step]
003	Paper Transfer: 1200: 1st Side	*ENG	[0 to 250 / **15** / 1 -µA /step]

2861	**[Special 3: Paper Size Correction]**		
	Adjusts the size correction coefficient for the paper transfer roller current for each paper size. SP2852 and SP2857 are multiplied by these SP values.		
001	Paper Transfer: 1st Side: S1	*ENG	[100 to 600 / **100** / 5%/step] S1 size > 297 mm (Paper width)
002	Paper Transfer: 2nd Side: S1	*ENG	
005	Paper Transfer: 1st Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
006	Paper Transfer: 2nd Side: S2	*ENG	[100 to 600 / **120** / 5%/step] 297 mm > S2 size > 275 mm (Paper width)
009	Paper Transfer: 1st Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
010	Paper Transfer: 2nd Side: S3	*ENG	[100 to 600 / **140** / 5%/step] 275 mm > S3 size > 210 mm (Paper width)
013	Paper Transfer: 1st Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
014	Paper Transfer:: 2nd Side: S4	*ENG	[100 to 600 / **160** / 5%/step] 210 mm > S4 size > 148 mm (Paper width)
017	Paper Transfer:: 1st Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)
018	Paper Transfer:: 2nd Side: S5	*ENG	[100 to 600 / **180** / 5%/step] 148 mm > S5 size (Paper width)

2871	**[Special 3: Lead. Edge Correction]** Special 3 Paper: Leading Edge Correction		
	Adjusts the correction to the paper transfer roller current at the paper leading edge in each mode. SP2852 and SP2857 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper leading edge area can be adjusted with SP2872.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
2871	Adjusts the correction to the discharge plate current at the paper leading edge in each mode. SP2851 is multiplied by these SP values. **Note** • The paper leading edge area can be adjusted with SP2872.		
005	Separation DC: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2872	**[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. Plain: High speed, 1200: Low speed

001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2873	**[Special 3: Trail. Edge Correction]** Special 3 Paper: Trailing Edge Correction Adjusts the correction to the paper transfer roller current for the paper trailing edge in each mode. SP2852 and SP2857 are multiplied by these SP values. Plain: High speed, 1200: Low speed **Note** • The paper trailing edge area can be adjusted with SP2874.		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 400 / **100** / 5%/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2874	[Special 3: 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. Plain: High speed, 1200: Low speed		
001	Paper Transfer: Plain: 1st Side	*ENG	[0 to 50 / **0** / 2 mm/step]
002	Paper Transfer: Plain: 2nd Side	*ENG	
003	Paper Transfer: 1200: 1st Side	*ENG	
005	Separation DC: Plain: 1st Side	*ENG	
006	Separation DC: Plain: 2nd Side	*ENG	
007	Separation DC: 1200: 1st Side	*ENG	

2880	[Special 3: Environment Correction] Plain: High speed, 1200: Low speed		
001	Separation DC: Plain: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
002	Separation DC: Plain: 2nd Side	*ENG	[1 to 60 / **29** / 1 /step]
003	Paper Transfer: Plain: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
004	Paper Transfer: Plain: BW: 2nd Side	*ENG	
005	Paper Transfer: Plain: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]
006	Paper Transfer: Plain: FC:2nd Side	*ENG	[1 to 60 / **11** / 1 /step]

007	Separation DC: 1200: 1st Side	*ENG	[1 to 60 / **22** / 1 /step]
009	Paper Transfer: 1200: BW: 1st Side	*ENG	[1 to 60 / **11** / 1 /step]
011	Paper Transfer: 1200: FC: 1st Side	*ENG	[1 to 60 / **1** / 1 /step]

2901	**[OPC Drum Brake Time]**		
	-		
001	Plain	*ENG	[300 to 240000 / **500** / 10 msec/step]
002	Thick 1	*ENG	[300 to 1500 / **500** / 10 msec/step]
003	Thick 2 & FINE	*ENG	

2902	**[OPC Drum Reverse Time]**		
	Adjusts the time for how long the drum motor reverses after job end.		
001	All: BW	*ENG	[0 to 200 / **50** / 10 msec/step]
002	All: FC	*ENG	

2903	**[Image Transfer Brake time]**		
	-		
003	Plain	*ENG	[300 to 240000 / **500** / 10 msec/step]
004	Thick 1	*ENG	[300 to 1500 / **500** / 10 msec/step]
005	Thick 2 & FINE	*ENG	

2904	**[Image Transfer Reverse Time]**		
	Adjusts the time for how long the image transfer belt motor reverses after job end.		
001	All	*ENG	[0 to 200 / **40** / 10 msec/step]

2905	**[Dev Rvs Time]** Development Roller Reverse Time		
	Specified the time of the development roller reverse rotation after the development unit has stopped. The reverse rotation of the development roller is used for removing dust from the development roller.		
001	K	*ENG	[0 to 200 / **80** / 10 msec/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	
2905	**[Dev Rvs Threshold Counter]**		
	Specified the threshold distance for the development roller reverse mode. This SP refers to the counters for SP2905-006 to -009.		
005	All	*ENG	[0 to 400000 / **4000**/ 10 mm/step]
2905	**[Dev Rvs Counter]**		
006	K	*ENG	[0 to 999999999 / **-** / 1 mm/step]
007	M	*ENG	
008	C	*ENG	
009	Y	*ENG	

2906	**[Phase Angle]**		
	Displays the phase angle for amplitude control.		
001	Y Drum	*ENG	[0 to 359 / **-** / 1 deg/step]
002	C Drum	*ENG	
003	M Drum	*ENG	
004	B Drum	*ENG	
2906	**[Amplitude Setting]**		
	Displays the amplitude values for amplitude control.		

006	Y Drum	*ENG	[0.0 to 100.0 / - / 0.1 um/step]
007	C Drum	*ENG	
008	M Drum	*ENG	
009	B Drum	*ENG	

2907	[Acs Setting (FC to Bk)]		
	Adjusts the threshold for moving away the image transfer belt from the color PCDUs. This SP moves the image transfer belt away from the color PCDUs when the number of B/W image printouts reaches the number of sheets specified with this SP after consecutive full color image printouts in the full color mode. If this SP is set to "0", the image transfer belt does not move away.		
001	Continuous Bk Pages	*ENG	[0 to 10 / **0** / 1 sheet/step]
002	ON/OFF	*ENG	Sets ACS Setting On or Off. [0 or 1 / **0** / 1 /step]

2908	[Gain Adjust]		
	Gain Adjustment for the Image Transfer Belt Motor.		
001	255mm/sec	*ENG	[0 to 3 / **0** / 1 /step]
002	230mm/sec	*ENG	[0 to 3 / **0** / 1 /step]
003	205mm/sec	*ENG	[0 to 3 / **1** / 1 /step]
004	154mm/sec	*ENG	[0 to 3 / **2** / 1 /step]
005	77mm/sec	*ENG	[0 to 3 / **3** / 1 /step]

2911	[Offset Angle]		
	Offset angle for amplitude control		
001	Y Drum	*ENG	[0 to 359 / **0** / 1 deg/step]
002	C Drum	*ENG	
003	M Drum	*ENG	
004	B Drum	*ENG	

2912	[Offset Amp Set]		
	-		
001	Y Drum	*ENG	[0.0 to 100.0 / **0.0** / 0.1 um/step]
002	C Drum	*ENG	
003	M Drum	*ENG	
004	B Drum	*ENG	

2913	[Drum Control]		
	Sets the rotation direction for the drum.		
001	Rotation Direction	*ENG	[0 or 1 / **1** / 1 /step]

2920	[Trans Mot Control]		
001	0: Encorder 1 :FG	*ENG	[0 or 1 / **0** / 1 /step]
	Selects the speed control mode for the ITB. If SC443 occurs and machine does not recover, change this setting to "1".		
002	SC443-00 Count	*ENG	[0 to 3 / **0** / 1 /step]
	Displays the number of the ITB encodre error. SC443 is displayed if this counter counts to "3".		

2930	[SecondaryFB: Threshold] Paper Transfer Roller Feed-back: Threshold Adjustment		
	Adjusts the threshold between high resistance (division 1) and low resistance (division 2) at the paper transfer roller. This SP affects SP2931 to SP2939.		
001	Voltage	*ENG	[0 to 7000 / **6000** / 10 -V/step]

2960	[Process Interval]		
001	Additional Time	*ENG	[0 to 10 / **0** / 1 sec/step]
	Adjusts the additional time for ending the machine's process.		

2970	[Cleaning After JOB]

001	No Refresh	*ENG	[0 to 100 / **33** / 1 /step] 0: No cleaning
	Specifies the threshold sheets for the cleaning of the paper transfer roller without the refresh mode.		
002	Refresh	*ENG	[0 or 1 / **1** / 1 /step] 0: No cleaning, 1: Cleaning
003	Cleaning Counter	*ENG	[0 to 9999 / **0** / 1 page/step]

2971	[T1 Non Image Area ON Timing]		
001	Standard Speed	*ENG	[-300 to 260 / **P3c: 10** / 10 msec/step] [-240 to 240 / **P3d: 30** / 10 msec/step]
	Adjusts the timing for the non-image area bias of the image transfer roller.		
002	Medium Speed	*ENG	[-400 to 290 / **0** / 10 msec/step]
003	Low Speed	*ENG	[-790 to 410 / **0** / 10 msec/step]

2972	[B/W Image Request Timing]		
001	Standard Speed	*ENG	[0 to 4000 / **0** / 10 msec/step]
002	Medium Speed	*ENG	[0 to 4000 / **0** / 10 msec/step]
003	Low Speed	*ENG	[0 to 4000 / **0** / 10 msec/step]

2973	[Forced Process Down Threshold]		
001	-	*ENG	[0 to 5000 / **0** / 1 page/step]

2974	[OPC PreCharge Time Control]		
001	Standard Speed	*ENG	[0 to 1250 / **197** / 1 msec/step]
002	Medium Speed	*ENG	[0 to 1500 / **146** / 1 msec/step]
003	Low Speed	*ENG	[0 to 2600 / **0** / 1 msec/step]

2980	[Continuous Job Page]

001	-	*ENG	[0 to 300 / **100** / 10 page/step]
2980	**[OPC Drum Idling Time BW]**		
002	-	*ENG	[0 to 600 / **30** / 1 sec/step]
2980	**[OPC Drum Idling Time FC]**		
003	-	*ENG	[0 to 600 / **30** / 1 sec/step]

2981	**[OPC Drum Maintenance Type]**		
	-		
001	-	*ENG	[0 or 1 / **0** / 1 /step] 0: Drum Idling 1: Drum Refresh

2982	**[OPC Drum Refresh Mode]**		
	-		
001	Manual Execution	ENG	[- / **-** / -] Execution
002	Continuous Job page	*ENG	[0 to 999 / **200** / 10 page/step]
003	Coverage	*ENG	[0 to 100 / **30** / 5 %/step]
004	Refresh Time	*ENG	[0 to 600 / **30** / 1 sec/step]
005	Refresh Length	*ENG	[0.0 to 105.0 / **5.0** / 0.1 mm/step]
006	Image Coverage	*ENG	[0 to 100 / **25** / 1 %/step]

2990	**[Print Duty Control]**		
001	Duty Control State	*ENG	[0 or 1 / **-** / 1 /step] 0: No limit, 1: Limit
002	Exec Interval: Duty Control	*ENG	[60 to 3600 / **60** / 10 sec/step]
004	Forced CPM Down Thresh: No Duty Control	*ENG	[0 to 5000 / **0** / 1 page/step]

005	Drum Stop Time: No Duty Control	*ENG	[300 to 20000 / **500** / 10 msec/step]
006	ITB Stop Time: No Duty Control	*ENG	[300 to 20000 / **500** / 10 msec/step]
007	Forced CPM Down Thresh: Duty Control	*ENG	[0 to 5000 / **4** / 1 page/step]
008	Drum Stop Time: Duty Control	*ENG	[300 to 240000 / **80000** / 10 msec/step]
009	ITB Stop Time: Duty Control	*ENG	[300 to 240000 / **80000** / 10 msec/step]
011	Execution Temp. Threshold	*ENG	Sets the threshold of the duty control execution temperature. [20.0 to 70.0 / **40.0** / 0.1/step]
012	Cancellation Temp. Threshold	*ENG	Sets the threshold of the duty control cancellation temperature. [0.1 to 20.0 / **0.1** / 0.1/step]
013	ON/OFF Setting	*ENG	Turns duty control off or on. [0 or 1 / **1** / 1 /step] 0: OFF 1: ON

Engine SP Tables-3

SP3-XXX (Process)

3011	[Process Cont. Manual Execution]		
001	Normal	ENG	Executes the normal process control manually (potential control). Check the result with SP3-325-001 and 3-012-001 after executing this SP.
002	Density Adjustment	ENG	Executes the toner density adjustment manually.
003	Pre-ACC	ENG	Executes the process control that is normally done before ACC. The type of process control is selected with SP3-041-004.
004	Full MUSIC	ENG	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) twice.
005	Normal MUSIC	ENG	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) once.

3012	[Process Cont. Check Result] Process Control Self-check Result
	Displays the result of the latest process control self-check. All colors are displayed. The results are displayed in the order “Y C M K” e.g., 11 (Y) 99 (C) 11 (M) 11 (K): The self-check for Cyan failed but the others were successful. See "Process Control Self-Check Result" in the "Main chapters: 6. Troubleshooting: Process Control Error Conditions" for details.

001	History: Latest	*ENG	[1111 to 99999999 / - / 1/step]
002	Result: Latest 1	*ENG	
003	Result: Latest 2	*ENG	
004	Result: Latest 3	*ENG	
005	Result: Latest 4	*ENG	
006	Result: Latest 5	*ENG	
007	Result: Latest 6	*ENG	
008	Result: Latest 7	*ENG	
009	Result: Latest 8	*ENG	
010	Result: Latest 9	*ENG	

3013	**[T Sensor Initial Set: Exe]** Developer Initialization Setting		
001	Execution: ALL	ENG	Executes the developer initialization for each color. [-/ - / -] Execute
002	Execution: COL	ENG	
003	Execution: Bk	ENG	
004	Execution: M	ENG	
005	Execution: C	ENG	
006	Execution: Y	ENG	

3014	**[T Sensor Initial Set:Exe]** Developer Initialization Result: Display		
001	Display: YCMK	*ENG	[0 to 9999 / - / 1 /step] 1: Success, 2 to 9: Failure
	Displays the developer initialization result. See "Developer Initialization Result" in the "Main chapters: 6. Troubleshooting: Process Control Error Conditions" for details on the meaning of each code. All colors are displayed. Values are displayed in the order Y C M Bk. e.g., 1 (Y) 2 (C) 1 (M) 1 (Bk): Initialization of Cyan failed but the others succeeded.		

3015	**[Forced Toner Supply: Execute]** Forced Toner Supply ([Color])		
001	Execution: ALL	ENG	Executes the manual toner supply to the development unit. [-/ - / -] Execute
002	Execution: COL	ENG	
003	Execution: Bk	ENG	
004	Execution: M	ENG	
005	Execution: C	ENG	
006	Execution: Y	ENG	

3016	**[Forced Toner Supply: Setting]**		
	Specifies the manual toner supply time for each color.		
001	Supply Time: Bk	*ENG	[0 to 30 / **4** / 1 sec/step]
002	Supply Time: M	*ENG	
003	Supply Time: C	*ENG	
004	Supply Time: Y	*ENG	

3020	**[Vt Limit Error]**		
	-		
001	Delta Vt Threshold	*ENG	[0.00 to 5.00 / **5.00** / 0.01 V/step]
002	Upper Threshold	*ENG	[0.00 to 5.00 / **4.70** / 0.01 V/step]
003	Threshold of Upper counter	*ENG	[0 to 99 / **20** / 1 times/step]
004	Lower Threshold	*ENG	[0.00 to 5.00 / **5.00** / 0.01 V/step]
005	Threshold Num of Lower counter	*ENG	[0 to 99 / **10** / 1 times/step]
006	Upper Counter: Bk	*ENG	[0 to 99 / **0** / 1 times/step]
007	Upper Counter: M	*ENG	[0 to 99 / **0** / 1 times/step]
008	Upper Counter: C	*ENG	[0 to 99 / **0** / 1 times/step]
009	Upper Counter: Y	*ENG	[0 to 99 / **0** / 1 times/step]

010	Lower Counter: Bk	*ENG	[0 to 99 / **0** / 1 times/step]
011	Lower Counter: M	*ENG	[0 to 99 / **0** / 1 times/step]
012	Lower Counter: C	*ENG	[0 to 99 / **0** / 1 times/step]
013	Lower Counter: Y	*ENG	[0 to 99 / **0** / 1 times/step]

3021	**[TD Sensor Initial Set]** Developer Initialization Setting		
	Specifies the developer agitation time for each color at the developer initialization.		
001	Agitation Time: Bk	*ENG	[0 to 200 / **30** / 1 sec/step]
002	Agitation Time: M	*ENG	
003	Agitation Time: C	*ENG	
004	Agitation Time: Y	*ENG	
3021	**[TD Sensor Initial Set]**		
	Sets the execution flag of the developer initialization for each color.		
005	Execution Flag: Bk	*ENG	[0 or 1/ **0** / 1 /step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: M	*ENG	
007	Execution Flag: C	*ENG	
008	Execution Flag: Y	*ENG	
009	Set Prohibition	*ENG	Enables or disables developer initialization. [0 or 1/ **0** / 1 /step] 0: Enable 1: Disable

3022	**[Tonner Replenishment Mode]**		
	-		
001	Supply Number of times: Bk	*ENG	[0 to 30 / **8** / 1 sec/step]
002	Supply Number of times: M	*ENG	[0 to 30 / **6** / 1 sec/step]
003	Supply Number of times: C	*ENG	
004	Supply Number of times: Y	*ENG	

3022	[Tonner Replenishment Mode]		
	Sets the toner supply flag of each color.		
005	Execution Flag: Bk	*ENG	[0 or 1/ **0** / 1 /step] 0: Flag OFF, 1: Flag ON This flag is cleared after executing TD sensor initialization.
006	Execution Flag: M	*ENG	
007	Execution Flag: C	*ENG	
008	Execution Flag: Y	*ENG	

3041	[Process Control Type]		
001	Voltage Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (Use the fixed values for the charge DC bias and development DC bias set with SP2-005 and SP2-229.) 1: CONTROL
	Enables or disables potential control.		
002	LD Power Control	*ENG	[0 or 1 / **1** / 1/step] Alphanumeric 0: FIXED (at the value in SP2221-xxx) 1: CONTROL (adjusted by process control)
	Selects the LD power control mode.		
003	AutoControl Prohibition Set	*ENG	[0 or 1 / **0** / 1/step] 0: Permit, 1: Forbid
	Enables or disables the automatic process control prohibition.		
004	Pre-ACC Process Control	*ENG	[0 to 3 / **2** / 1/step] 0: Not Executed 1: Process Control 2: TC Control (TD Adjustment) 3: Not used
	Selects the process control mode that is done before ACC.		

005	Pattern Calculation Method	*ENG	[0 to 2 / **2** / 1/step] 0: FIXED 1: INITIALIZED 2: CALCULATED
	Selects the process control method.		

3043	[TD Adjustment Mode]		
001	Repeat Number: Power ON	*ENG	[0 to 9 / **4** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at power on. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
002	Repeat Number: Initialization	*ENG	[0 to 9 / **3** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at the developer initialization. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
003	Repeat Number: Non-use	*ENG	[0 to 9 / **0** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment in stand by mode. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		

004	Repeat Number: ACC	*ENG	[0 to 9 / **3** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at ACC. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
005	Repeat Number: Recovery	*ENG	[0 to 9 / **0** / 1 time/step]
	Not used		
006	Repeat Number: Job End	*ENG	[0 to 9 / **4** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment at job end. 0: Disabled, 1 to 3: Repeat number, 4: Repeat three times (No consumption mode) 5: Repeat three times (Toner is supplied only when the toner density is too low, and toner is consumed only when the toner density is too dark.) 6 to 9: Disabled		
007	Repeat Number: Interrupt	*ENG	[0 to 9 / **0** / 1 time/step]
	Specifies the maximum number of repeats of the toner density adjustment during printing. **DFU**		
008	Toner Supply Coefficient	*ENG	[0.0 to 25.5 / **10.0** / 0.1 sec/step]
	Adjusts the time for the toner supply mode when a toner density is detected to be low.		
009	Consumption pattern: Bk	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the black toner density when toner density is detected to be low at the toner density adjustment.		
010	Consumption pattern: M	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the magenta toner density when toner density is detected to be low at the toner density adjustment.		
011	Consumption pattern: C	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the cyan toner density when toner density is detected to be low at the toner density adjustment.		

012	Consumption pattern: Y	*ENG	[0 to 255 / **5** / 1 time/step]
	Specifies the belt mark generating time for checking the yellow toner density when toner density is detected to be low at the toner density adjustment.		
013	T1 Bias: Bk	*ENG	[0 to 80 / **P3c: 30, P3d: 37** / 1 µA/step]
	Adjusts the image transfer belt bias for Black.		
014	T2 Bias: M	*ENG	[0 to 80 / **P3c: 33, P3d: 41** / 1 µA/step]
	Adjusts the image transfer belt bias for Magenta.		
015	T3 Bias: C	*ENG	[0 to 80 / **P3c: 30, P3d: 37**/ 1 µA/step]
	Adjusts the image transfer belt bias for Cyan.		
016	T4 Bias: Y	*ENG	[0 to 80 / **P3c: 38, P3d: 47** / 1 µA/step]
	Adjusts the image transfer belt bias for Yellow.		
017	Developer Mixing Time	*ENG	[0 to 250 / **10** / 1 sec/step]
	Specifies the developer mixing time at the toner density adjustment.		
018	Consumption Pat: LD: DUTY: Bk	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-001) exceed the target values (SP3611-005) by more than the specified thresholds (SP3239-009).		
019	Consumption Pat: LD: DUTY: M	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-002) exceed the target values (SP3611-006) by more than the specified thresholds (SP3239-009).		

020	Consumption Pat: LD: DUTY: C	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-003) exceed the target values (SP3611-007) by more than the specified thresholds (SP3239-009).		
021	Consumption Pat: LD: DUTY: Y	*ENG	[0 to 15 / **15** / 1 /step]
	Adjusts the LD duty for the toner consumption mode at the toner density adjustment. In toner consumption mode, toner is discharged when the detected development gamma values (SP3611-004) exceed the target values (SP3611-008) by more than the specified thresholds (SP3239-009).		

3044	**[Toner Supply Type]**		
	Selects the toner supply method type.		
001	Bk	*ENG	[0 to 4 / **4** / 1/step] Alphanumeric 0: FIXED (with the supply rates stored with SP 3401) 1: PID (Vtref_Fixed) 2: PID (Vtref_Control) 3: Not used 4: MBD (Vtref_Control)
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3045	**[Toner End Detection: Set]**		
	Enables/disables the toner alert display on the LCD.		
001	ON/OFF	*ENG	[0 or 1 / **0** / 1/step] 0: Detect, 1: Not Detect

3072	**[TD. Sens Check]**		
	Executes the TD Sensor checking.		
001	Exe All Colors	ENG	[-/ **-** / -] Execute

3073	[TD. Sens Chk:Disp]		
	Displays the TD Sensor checking result for each sensor.		
001	Vt:K	ENG	[0.00 to 5.00 / - / 0.01 V/step]
002	Vt:C	ENG	
003	Vt:M	ENG	
004	Vt:Y	ENG	

3101	[Toner End/Near End]		
	Displays the amount of each color toner.		
001	Toner Replenishment: Bk	*ENG	[1 to 600 / **510** / 1 g/step]
002	Toner Replenishment: M	*ENG	[1 to 600 / **400** / 1 g/step]
003	Toner Replenishment: C	*ENG	
004	Toner Replenishment: Y	*ENG	
3101	[Toner End/Near End]		
	Displays the consumed amount of each color toner.		
005	Toner Consumption: Bk	*ENG	[0.000 to 3000.000 / **0.000** / 0.001 g/step]
006	Toner Consumption: M	*ENG	
007	Toner Consumption: C	*ENG	
008	Toner Consumption: Y	*ENG	
3101	[Toner End/Near End]		
	Displays the remaining amount of each color toner. These are calculated by the operating times of the toner supply pumps.		
009	Toner Remaining: Bk	*ENG	[-50000.000 to 600.000 / **0.000** / 0.001 g/step]
010	Toner Remaining: M	*ENG	
011	Toner Remaining: C	*ENG	
012	Toner Remaining: Y	*ENG	

3101	**[Toner End/Near End]**		
	Adjusts the threshold of toner near end for each color. The toner near end message appears on the LCD when the remaining toner amount reaches this threshold. When one of these SPs (SP3-101-009 to 012 or -032 to -035) reaches this threshold, toner near end is detected.		
013	Near End Threshold: Bk	*ENG	[0 to 600 / **36** / 1 g/step]
014	Near End Threshold: M	*ENG	[0 to 600 / **30** / 1 g/step]
015	Near End Threshold: C	*ENG	
016	Near End Threshold: Y	*ENG	
3101	**[Toner End/Near End]**		
	-		
017	Cartridge Error Threshold: Bk	*ENG	[-50000 to 0 / **-50000** / 1 g/step]
018	Cartridge Error Threshold: M	*ENG	
019	Cartridge Error Threshold: C	*ENG	
020	Cartridge Error Threshold: Y	*ENG	
021	Delta Vt Threshold	*ENG	[0.00 to 5.00 / **0.30** / 0.01 V/step]
	This SP is the threshold for toner end. Delta Vt: Vt-Vtref When both this SP and SP3-101-026 occur at same time, toner end is determined.		
3101	**[Toner End/Near End]**		
	Displays the total delta Vt (Vt-Vtref) value for each color. These are calculated by pixel counting.		
022	Delta Vt Sum: Bk	*ENG	[0.00 to 655.00 / **0.00** / 0.01 V/step]
023	Delta Vt Sum: M	*ENG	
024	Delta Vt Sum: C	*ENG	
025	Delta Vt Sum: Y	*ENG	
026	Delta Vt Sum Threshold	*ENG	[0 to 255 / ***5*** / 1 V/step]

3101	**[Toner End/Near End]**		
	Displays the consumed toner amount calculated with the pixel count for each color.		
028	Pixel: Consumption: Bk	*ENG	[0.000 to 3000.000 / **0.000** / 0.001 g/step]
029	Pixel: Consumption: M	*ENG	
030	Pixel: Consumption: C	*ENG	
031	Pixel: Consumption: Y	*ENG	
3101	**[Toner End/Near End]**		
	Displays the remaining toner amount for each color, using pixel count.		
032	Pixel: Remaining: Bk	*ENG	[-50000.000 to 600.000 / **0.000** / 0.001 g/step]
033	Pixel: Remaining: M	*ENG	
034	Pixel: Remaining: C	*ENG	
035	Pixel: Remaining: Y	*ENG	
3101	**[Toner End/Near End]**		
	-		
036	End Threshold: Bk	*ENG	[-600 to 600 / **-600** / 1 g/step]
037	End Threshold: M	*ENG	
038	End Threshold: C	*ENG	
039	End Threshold: Y	*ENG	
3101	**[Toner End/Near End]**		
	Displays the pixel M/A for each color.		
040	Pixel: M/A: Bk	*ENG	[0.000 to 1.000 / **0.400** / 0.001 mg/cm^2/step]
041	Pixel: M/A: M	*ENG	
042	Pixel: M/A: C	*ENG	
043	Pixel: M/A: Y	*ENG	

044	Delta Bt Threshold Before Near End	*ENG	[0.00 to 5.00 / **0.50** / 0.01 V/step] Adjusts the delta Vt (Vt–Vtref) of toner end before toner near end is detected.
045	Delta Vt Sum Threshold Before Near End	*ENG	[0 to 255 / **10** / 1 V/step] Adjusts the total delta Vt (Vt – Vtref) of toner end before toner near end is detected.
3101	**[Toner End/Near End]**		
	Adjusts the threshold of the remaining toner for the toner near-end detection.		
046	Mohno Off Time: Bk	*ENG	[0 to 0xFFFFFFFF / **0** / 1 /step]
047	Mohno Off Time: M	*ENG	
048	Mohno Off Time: C	*ENG	
049	Mohno Off Time: Y	*ENG	

3102	**[Toner End Recovery]**		
	Adjusts the number of times toner supply is attempted for each color when the TD sensor continues to detect toner end during toner recovery.		
001	Repeat: Bk	*ENG	[1 to 20 / **5** / 1 time/step]
002	Repeat: M	*ENG	
003	Repeat: C	*ENG	
004	Repeat: Y	*ENG	
005	Bottle Pre-Rotation Control Threshold	*ENG	[0 to 255 / **P3c: 110, P3d: 80** / 1 time/step]

3131	**[TE Count m: Display]**		
	Display the number of toner end detections for each color.		
001	Bk	*ENG	[0 to 99 / **-** / 1 time/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3201	[TD Sensor: Vt Display]		
	Display the current voltage of the TD sensor for each color.		
001	Current: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Current: M	*ENG	
003	Current: C	*ENG	
004	Current: Y	*ENG	

3211	[Vt Shift: Display/Set]		
	Adjusts the Vt correction value for each line speed. Thick 1: 154 mm/sec, Thick 2&Fine: 77 mm/sec		
001	Thick 1 Shift: Bk	*ENG	[0.00 to 5.00 / **P3c: 0.14, P3d: 0.46** / 0.01 V/step]
002	Thick 1 Shift: M	*ENG	[0.00 to 5.00 / **P3c: 0.13, P3d: 0.43** / 0.01 V/step]
003	Thick 1 Shift: C	*ENG	[0.00 to 5.00 / **P3c: 0.11 P3d: 0.41** / 0.01 V/step]
004	Thick 1 Shift: Y	*ENG	[0.00 to 5.00 / **P3c: 0.17 P3d: 0.46** / 0.01 V/step]
005	Thick 2 & FINE Shift: Bk	*ENG	[0.00 to 5.00 / **P3c: 0.47 P3d: 0.84** / 0.01 V/step]
006	Thick 2 & FINE Shift: M	*ENG	[0.00 to 5.00 / **P3c: 0.43 P3d: 0.79** / 0.01 V/step]
007	Thick 2 & FINE Shift: C	*ENG	[0.00 to 5.00 / **P3c: 0.40 P3d: 0.75** / 0.01 V/step]
008	Thick 2 & FINE Shift: Y	*ENG	[0.00 to 5.00 / **P3c: 0.42 P3d: 0.76** / 0.01 V/step]

009	Mid TCShift: Bk	*ENG	[-0.50 to 0.50 / **0.00** / 0.01 V/step]
010	Mid TCShift: M	*ENG	
011	Mid TCShift: C	*ENG	
012	Mid TCShift: Y	*ENG	
013	Low TCShift: Bk	*ENG	[-0.50 to 0.50 / **0.00** / 0.01 V/step]
014	Low TCShift: M	*ENG	
015	Low TCShift: C	*ENG	
016	Low TCShift: Y	*ENG	

3221	**[Vtcnt: Display/Set]**		
	Displays or adjusts the current Vtcnt value for each color.		
001	Current: Bk	*ENG	[2.00 to 5.00 / **3.86** / 0.01 V/step]
002	Current: M	*ENG	
003	Current: C	*ENG	
004	Current: Y	*ENG	
005-008	Displays or adjusts the Vtcnt value for each color at developer initialization. **DFU**		
005	Initial: Bk	*ENG	[2.00 to 5.00 / **3.86** / 0.01 V/step]
006	Initial: M	*ENG	
007	Initial: C	*ENG	
008	Initial: Y	*ENG	

3222	**[Vtref: Display/Set]**		
	Displays or adjusts the current Vtref value for each color.		
001	Current: Bk	*ENG	[0 to 5.5 / **3.00** / 0.01 V/step]
002	Current: M	*ENG	
003	Current: C	*ENG	
004	Current: Y	*ENG	

005-008	Displays or adjusts the Vtref value for each color at developer initialization. **DFU**		
005	Initial: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
006	Initial: M	*ENG	
007	Initial: C	*ENG	
008	Initial: Y	*ENG	
009-012	Displays and adjusts Vtref correction by pixel coverage for each color. **DFU**		
009	Pixel Correction: Bk	*ENG	[-5.00 to 5.50 / - / 0.01 V/step]
010	Pixel Correction: M	*ENG	
011	Pixel Correction: C	*ENG	
012	Pixel Correction: Y	*ENG	

3223	**[Vtref Upper Lower: Set]**		
	Adjusts the lower or upper limit value of Vtref for each color.		
001	Lower: Bk	*ENG	[0.00 to 5.00 / **2.00** / 0.01 V/step]
002	Lower: M	*ENG	
003	Lower: C	*ENG	
004	Lower: Y	*ENG	
005	Upper: Bk	*ENG	[0.00 to 5.00 / **4.00** / 0.01 V/step]
006	Upper: M	*ENG	
007	Upper: C	*ENG	
008	Upper: Y	*ENG	
009	Initial TC	*ENG	[1.0 to 15.0 / **7.0** / 0.1 wt%/step] Adjusts the initial toner concentration.
010	Upper TC	*ENG	[1.0 to 15.0 / **9.5** / 0.1 wt%/step] Adjusts the upper limit of the toner concentration.

011	Lower TC	*ENG	[1.0 to 15.0 / **4.0** / 0.1 wt%/step] Adjusts the lower limit of the toner concentration.
3223	**[TD. Sens Sensitivity]**		
012	Upper Sensitivity	*ENG	[0.200 to 0.440 / **0.440** / 0.001 V/wt%/step] Adjusts the upper limit of the TD sensor sensitivity.
013	Lower Sensitivity	*ENG	[0.200 to 0.500 / **0.209** / 0.001 V/wt%/step] Adjusts the lower limit of the TD sensor sensitivity.
014	Toner Density Between H and M	*ENG	[1.0 to 10.0 / **2.8** / 0.1 wt%/step] Adjusts the toner density of the TD sensor sensitivity between high and medium.
015	Toner Density Between M and L	*ENG	[1.0 to 10.0 / **3.8** / 0.1 wt%/step] Adjusts the toner density of the TD sensor sensitivity between medium and low.
3223	**[Vtref Upper Lower: Set]**		
	Adjusts the upper limit of the toner concentration for each color.		
016	Upper TC:K	*ENG	[1.0 to 15.0 / **8.5** / 0.1 wt%/step]
017	Upper TC:M	*ENG	
018	Upper TC:C	*ENG	
019	Upper TC:Y	*ENG	

3224	**[Vtref Correction: Pixel]**
	Adjusts the coefficient of Vtref correction for each coverage and color.

001	Low Coverage Coefficient: Bk	*ENG	[0.0 to 5.0 / **0.2** / 0.1 /step]
002	Low Coverage Coefficient: M	*ENG	
003	Low Coverage Coefficient: C	*ENG	
004	Low Coverage Coefficient: Y	*ENG	
005	High Coverage Coefficient: Bk	*ENG	[0.0 to 5.0 / **0.3** / 0.1 /step]
006	High Coverage Coefficient: M	*ENG	
007	High Coverage Coefficient: C	*ENG	
008	High Coverage Coefficient: Y	*ENG	
009	Low Coverage Threshold	*ENG	[0.0 to 20.0 / **3.0** / 0.1 %/step] Adjusts the threshold of the low coverage.
010	High Coverage Threshold	*ENG	[0 to 100 / **60** / 1 %/step] Adjusts the threshold of the high coverage.
011	TC Upper Limit Correction	*ENG	[0.0 to 5.0 / **0.5** / 0.1 wt%/step]
012	Upper Limit TC: Display: Bk	*ENG	[1.0 to 15.0 / **10.0** / 0.1 wt%/step]
013	Upper Limit TC: Display: M	*ENG	
014	Upper Limit TC: Display: C	*ENG	
015	Upper Limit TC: Display: Y	*ENG	
016	Procon Execution Threshold	*ENG	[0 to 255 / **50** / 1 times/step]

3225	**[Vtref Upper Correction]**
	Defines Vtref upper / upper maximum correction amount for each color.

001	Upper Correction: K	*ENG	[0.00 to 1.00 / **0.00** / 0.01 V/step]
002	Upper Correction: M	*ENG	
003	Upper Correction: C	*ENG	
004	Upper Correction: Y	*ENG	
005	Upper Max Correction: K	*ENG	[0.0 to 1.0 / **0.4** / 0.1 V/step]
006	Upper Max Correction: M	*ENG	
007	Upper Max Correction: C	*ENG	
008	Upper Max Correction: Y	*ENG	

3230	**[TonerSupply_MBD]**		
	-		
001	ADD_TIME	*ENG	[0 to 1000 / **200** / 10 msec/step]
002	ADD_K	*ENG	[0.00 to 2.00 / **1.00** / 0.01 /step]
003	ADD_M	*ENG	
004	ADD_C	*ENG	
005	ADD_Y	*ENG	
006	ADD_MidSpd	*ENG	[0.00 to 5.00 / **1.00** / 0.01 /step]
007	ADD_LowSpd	*ENG	[0.00 to 5.00 / **1.00** / 0.01 /step]
008	MSEC_V	*ENG	[0.000 to 1.000 / **0.080** / 0.001 /step]
009	N_Delay	*ENG	[0 to 200 / **8** / 1 /step]
030	PID_I_K	*ENG	[0.00 to 100.00 / **P3c: 0.32, P3d: 0.40** / 0.01 /step]
031	PID_I_M	*ENG	
032	PID_I_C	*ENG	
033	PID_I_Y	*ENG	

034	PID_P_K	*ENG	[0.00 to 100.00 / **P3c: 6.40, P3d: 8.00** / 0.01 /step]
035	PID_P_C	*ENG	
036	PID_P_M	*ENG	
037	PID_P_Y	*ENG	
038	PID_I_MidSpd	*ENG	[0.00 to 5.00 / **P3c: 0.75, P3d: 0.60** / 0.01 /step]
039	PID_I_LowSpd	*ENG	[0.00 to 5.00 / **P3c: 0.38, P3d: 0.30** / 0.01 /step]
040	PID_P_MidSpd	*ENG	[0.00 to 5.00 / **P3c: 0.75, P3d: 0.60** / 0.01 /step]
041	PID_P_LowSpd	*ENG	[0.00 to 5.00 / **P3c: 0.38, P3d: 0.30** / 0.01 /step]
060	AWILOW_K	*ENG	[-1.0000 to 1.0000 / **P3c: 0.1560, P3d: 0.1250** / 0.0001 /step]
061	AWILOW_M	*ENG	
062	AWILOW_C	*ENG	
063	AWILOW_Y	*ENG	
064	AWPUP_K	*ENG	[-1.0000 to 1.0000 / **1.0000** / 0.0001 / step]
065	AWPUP_M	*ENG	
066	AWPUP_C	*ENG	
067	AWPUP_Y	*ENG	
068	AWILOW_MidSpd	*ENG	[0.00 to 100.00 / **P3c: 1.33, P3d: 1.66** / 0.01 /step]
069	AWPUP_MidSpd	*ENG	[0.00 to 100.00 / **1.00** / 0.01 /step]
070	AWILOW_LowSpd	*ENG	[0.00 to 100.00 / **P3c: 2.66, P3d: 3.31** / 0.01 /step]
071	AWPUP_LowSpd	*ENG	[0.00 to 100.00 / **1.00** / 0.01 /step]

090	SMITH_K	*ENG	[0.00 to 2.00 / **P3c: 0.09, P3d: 0.07** / 0.01 /step]
091	SMITH_M	*ENG	
092	SMITH_C	*ENG	
093	SMITH_Y	*ENG	
094	SMITH_MidSpd	*ENG	[0.00 to 5.00 / **P3c: 1.33, P3d: 1.71** / 0.01 /step]
095	SMITH_LowSpd	*ENG	[0.00 to 5.00 / **P3c: 2.66, P3d: 3.42** / 0.01 /step]
100	Int_conserve_I_K	ENG	[-1000.0000 to 1000.0000 / **0.0000** / 0.0001 /step]
101	Int_conserve_I_M	ENG	
102	Int_conserve_I_C	ENG	
103	Int_conserve_I_Y	ENG	
110	ANC_ref_conserve_K	ENG	[-1000.0000 to 1000.0000 / **0.0000** / 0.0001 /step]
111	ANC_ref_conserve_M	ENG	
112	ANC_ref_conserve_C	ENG	
113	ANC_ref_conserve_Y	ENG	
120	ANC_A3_K	*ENG	[0.000 to 1.000 / **P3c: 0.120, P3d: 0.150** / 0.001 /step]
121	ANC_A3_M	*ENG	
122	ANC_A3_C	*ENG	
123	ANC_A3_Y	*ENG	
124	ANCA4T_K	*ENG	[0.000 to 1.000 / **P3c: 0.110, P3d: 0.140** / 0.001 /step]
125	ANCA4T_C	*ENG	
126	ANCA4T_M	*ENG	
127	ANCA4T_Y	*ENG	
128	ANC_A3_MidSpd	*ENG	[0.00 to 5.00 / **P3c: 0.66, P3d: 0.53** / 0.01 /step]

129	ANCA4T_MidSpd	*ENG	[0.00 to 5.00 / **P3c: 0.72, P3d: 0.57** / 0.01 /step]
130	ANC_A3_LowSpd	*ENG	[0.00 to 5.00 / **P3c: 0.41, P3d: 0.33** / 0.01 /step]
131	ANCA4T_LowSpd	*ENG	[0.00 to 5.00 / **P3c: 0.36, P3d: 0.28** / 0.01 /step]
150	AWPNI_K	*ENG	[-10.000 to 10.000 / **0.200** / 0.001 / step]
151	AWPNI_M	*ENG	
152	AWPNI_C	*ENG	
153	AWPNI_Y	*ENG	
154	PID	*ENG	[0.00 to 5.00 / **1.00** / 0.01 /step]
180	ANCLA_K	*ENG	[0.000 to 1.000 / **P3c: 0.160, P3d: 0.210** / 0.001 /step]
181	ANCLA_M	*ENG	
182	ANCLA_C	*ENG	
183	ANCLA_Y	*ENG	
184	ANCLB_K	*ENG	[0.000 to 1.000 / **P3c: 0.210, P3d: 0.250** / 0.001 /step]
185	ANCLB_M	*ENG	
186	ANCLB_C	*ENG	
187	ANCLB_Y	*ENG	
188	ANCLA_MidSpd	*ENG	[0.00 to 5.00 / **P3c: 0.75, P3d: 0.57** / 0.01 /step]
189	ANCLB_MidSpd	*ENG	[0.00 to 5.00 / **P3c: 0.71, P3d: 0.60** / 0.01 /step]
190	ANCLA_LowSpd	*ENG	[0.00 to 5.00 / **P3c: 0.37, P3d: 0.28** / 0.01 /step]
191	ANCLB_LowSpd	*ENG	[0.00 to 5.00 / **P3c: 0.28, P3d: 0.24** / 0.01 /step]

210	PIX_TBL_1	*ENG	[0.00 to 5.00 / **1.00** / 0.01 /step]
211	PIX_TBL_2	*ENG	
212	PIX_TBL_3	*ENG	
213	PIX_TBL_4	*ENG	
214	PIX_TBL_5	*ENG	
215	PIX_TBL_6	*ENG	
216	PIX_TBL_7	*ENG	[0.00 to 5.00 / **1.00** / 0.01 /step]
217	PIX_TBL_8	*ENG	
218	PIX_TBL_9	*ENG	
219	PIX_TBL_10	*ENG	
220	PIX_TBL_11	*ENG	
221	PIX_TBL_12	*ENG	
222	PIX_COR_K	*ENG	[0.00 to 5.00 / **1.00** / 0.01 /step]
223	PIX_COR_M	*ENG	
224	PIX_COR_C	*ENG	
225	PIX_COR_Y	*ENG	
226	SEL_PIX_AVE	*ENG	[0 to 5 / **2** / 1 /step]
231	PID_I_LIM1_Std	*ENG	[0.000 to 1.000 / **P3c: 0.093, P3d: 0.113** / 0.001 /step]
232	PID_I_LIM1_MidSpd	*ENG	[0.000 to 1.000 / **0.068** / 0.001 /step]
233	PID_I_LIM1_LowSpd	*ENG	[0.000 to 1.000 / **0.036** / 0.001 /step]
234	PID_I_LIM2_Std	*ENG	[0.000 to 1.000 / **P3c: 0.093, P3d: 0.113** / 0.001 /step]
235	PID_I_LIM2_MidSpd	*ENG	[0.000 to 1.000 / **0.068** / 0.001 /step]
236	PID_I_LIM2_LowSpd	*ENG	[0.000 to 1.000 / **0.036** / 0.001 /step]
237	PID_P_LIM1_Std	*ENG	[0.000 to 1.000 / **P3c: 0.093, P3d: 0.113** / 0.001 /step]

238	PID_P_LIM1_MidSpd	*ENG	[0.000 to 1.000 / **0.068** / 0.001 /step]
239	PID_P_LIM1_LowSpd	*ENG	[0.000 to 1.000 / **0.036** / 0.001 /step]
240	PID_P_LIM2_Std	*ENG	[0.000 to 1.000 / **P3c: 0.093, P3d: 0.113** / 0.001 /step]
241	PID_P_LIM2_MidSpd	*ENG	[0.000 to 1.000 / **0.068** / 0.001 /step]
242	PID_P_LIM2_LowSpd	*ENG	[0.000 to 1.000 / **0.036** / 0.001 /step]
243	PID_I_STDtoLOW	*ENG	[0.00 to 5.00 / **P3c: 0.38, P3d: 0.30** / 0.01 /step]
244	PID_I_LOWtoSTD	*ENG	[0.00 to 5.00 / **P3c: 2.66, P3d: 3.31** / 0.01 /step]
245	PID_I_STDtoMID	*ENG	[0.00 to 5.00 / **P3c: 0.75, P3d: 0.60** / 0.01 /step]
246	PID_I_MIDtoSTD	*ENG	[0.00 to 5.00 / **P3c: 1.33, P3d: 1.66** / 0.01 /step]
247	PID_I_MIDtoLOW	*ENG	[0.00 to 5.00 / **0.50** / 0.01 /step]
248	PID_I_LOWtoMID	*ENG	[0.00 to 5.00 / **2.00** / 0.01 /step]

3231	**[Toner Supply: Setting]**		
	Adjusts the coefficient of the toner supply time for each color.		
001	Conversion Coefficient: Bk	*ENG	[0.50 to 9.99 / **1.66** / 0.01 /step]
002	Conversion Coefficient: M	*ENG	
003	Conversion Coefficient: C	*ENG	
004	Conversion Coefficient: Y	*ENG	

3232	**[Toner Supply Coef: Setting]**
	-

001	Vt Proportion: Bk	*ENG	[0 to 2550 / **50** / 1 /step]
002	Vt Proportion: M	*ENG	
003	Vt Proportion: C	*ENG	
004	Vt Proportion: Y	*ENG	
005	Pixel Proportion: Bk	*ENG	[0.00 to 2.55 / **0.47** / 0.01 /step]
006	Pixel Proportion: M	*ENG	
007	Pixel Proportion: C	*ENG	
008	Pixel Proportion: Y	*ENG	
009	Vt Integral Control: Bk	*ENG	[0 to 2550 / **500** / 1 /step]
010	Vt Integral Control: M	*ENG	
011	Vt Integral Control: C	*ENG	
012	Vt Integral Control: Y	*ENG	
013	Vt Sum Times: Bk	*ENG	[0 to 255 / **20** / 1 times/step]
014	Vt Sum Times: M	*ENG	
015	Vt Sum Times: C	*ENG	
016	Vt Sum Times: Y	*ENG	

3233	**[Pixel Proportion Coef2:Set]**		
	-		
001	Correction Coeffient 1	*ENG	[0.00 to 2.55 / **1.00** / 0.01 /step]
002	Correction Coeffient 2	*ENG	[0.00 to 2.55 / **0.50** / 0.01 /step]
003	Correction Coeffient 3	*ENG	[0.00 to 2.55 / **0.00** / 0.01 /step]
004	Correction Coeffient 4	*ENG	[0.00 to 2.55 / **0.25** / 0.01 /step]
005	Correction Coeffient 5	*ENG	[0.00 to 2.55 / **0.50** / 0.01 /step]

3234	**[Pixel Proportion Coef3:Set]**
	Sets the supply coefficient for pixel proportion.

001	Correction Value 1	*ENG	[-0.001 to 0.000 / **0.000** / 0.001 /step]
002	Correction Value 2	*ENG	[0.000 to 0.010 / **0.000** / 0.001 /step]

3235	[Toner Supply Coef:Display]		
	-		
001	Pixel Proportion 2: Bk	*ENG	[0.00 to 2.55 / **1.00** / 0.01 /step]
002	Pixel Proportion 2: M	*ENG	
003	Pixel Proportion 2: C	*ENG	
004	Pixel Proportion 2: Y	*ENG	
005	Pixel Proportion 3: Bk	*ENG	[0.70 to 1.30 / **1.00** / 0.01 /step]
006	Pixel Proportion 3: M	*ENG	
007	Pixel Proportion 3: C	*ENG	
008	Pixel Proportion 3: Y	*ENG	
009	Vt Integral Value: Bk	*ENG	[-255.00 to 255.00 / **0.00** / 0.01 /step]
010	Vt Integral Value: M	*ENG	
011	Vt Integral Value: C	*ENG	
012	Vt Integral Value: Y	*ENG	

3236	[Toner Supply Consumption:Disp]		
	Displays the toner amount of the latest toner supply for each color.		
001	Latest: Bk	*ENG	[0.0 to 40000.0 / **0.0** / 0.1 mg/step]
002	Latest: M	*ENG	
003	Latest: C	*ENG	
004	Latest: Y	*ENG	

3237	[Developer Mixing Setting]		
	Displays the toner amount of the latest toner supply for each color.		

001	Mixing Time	*ENG	[0 to 200 / **5** / 1 sec/step]

3238	**[Vt Target Setting]**		
	Displays the Vt target value at developer initialization.		
001	Bk	*ENG	[0.00 to 5.00 / **2.30** / 0.01 V/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3239	**[Vtref Correction: Setting]**		
	Adjusts the parameter for Vtref correction at the process control.		
001	(+)Consumption: Bk	*ENG	[0.00 to 1.00 / **0.04** / 0.01 V/step]
002	(+)Consumption: M	*ENG	
003	(+)Consumption: C	*ENG	
004	(+)Consumption: Y	*ENG	
005	(-)Consumption: Bk	*ENG	
006	(-)Consumption: M	*ENG	
007	(-)Consumption: C	*ENG	
008	(-)Consumption: Y	*ENG	
009-012	Threshold for development gamma rank.		
009	P Rank 1 Threshold	*ENG	[0.00 to 2.00 / **0.20** / 0.01 /step]
010	P Rank 2 Threshold	*ENG	[0.00 to 2.00 / **0.05** / 0.01 /step]
011	P Rank 3 Threshold	*ENG	[-2.00 to 0.00 / **-0.05** / 0.01 /step]
012	P Rank 4 Threshold	*ENG	[-2.00 to 0.0 / **-0.20** / 0.01 /step]
013-014	Threshold for image density rank on the image transfer belt.		
013	T Rank 1 Threshold	*ENG	[-1.00 to 0.00 / **-0.20** / 0.01 V/step]
014	T Rank 2 Threshold	*ENG	[0.00 to 1.00 / **0.20** / 0.01 V/step]

021-028	Sets the correction coefficient of the Vtref correction.		
021	Correction Coefficient 1: Bk	*ENG	[0.0 to 1.0 / **0.5** / 0.1/step]
022	Correction Coefficient 1: M	*ENG	
023	Correction Coefficient 1: C	*ENG	
024	Correction Coefficient 1: Y	*ENG	
025	Correction Coefficient 2: Bk	*ENG	[0.0 to 1.0 / **0.5** / 0.1/step]
026	Correction Coefficient 2: M	*ENG	
027	Correction Coefficient 2: C	*ENG	
028	Correction Coefficient 2: Y	*ENG	

3241	**[Background Potential Setting]**		
001	Coefficient: Bk	*ENG	These are parameters for calculating the charge bias referring to the development bias at process control. [-1000 to 1000 / **0** / 1 /step] DC charge bias = Development bias x (1 + 0.001 x these vales) + SP3-241-005 to -008
002	Coefficient: M	*ENG	
003	Coefficient: C	*ENG	
004	Coefficient: Y	*ENG	
005	Offset: Bk	*ENG	These are additional values for calculating the charge bias referring to the development bias at process control. [0 to 255 / **140** / 1 V/step] DC charge bias = Development bias x (1 + 0.001 x SP3-241-001 to -004) + these values
006	Offset: M	*ENG	
007	Offset: C	*ENG	
008	Offset: Y	*ENG	

3242	**[LD Power Setting]**
	Adjusts the coefficient for LD power control value at the process control.

001	StdSpd:Coefficient: Bk	*ENG	[-1000 to 1000 / **142** / 1 /step]
002	StdSpd:Coefficient: M	*ENG	
003	StdSpd:Coefficient: C	*ENG	
004	StdSpd:Coefficient: Y	*ENG	
005	StdSpd:Offset: Bk	*ENG	[-1000 to 1000 / **4** / 1 /step]
006	StdSpd:Offset: M	*ENG	
007	StdSpd:Offset: C	*ENG	
008	StdSpd:Offset: Y	*ENG	
009	MidSpd:coef:Bk	*ENG	[-1000 to 1000 / **118** / 1 /step]
010	MidSpd:Coef:M	*ENG	[-1000 to 1000 / **117** / 1 /step]
011	MidSpd:Coef:C	*ENG	[-1000 to 1000 / **79** / 1 /step]
012	MidSpd:Coef:Y	*ENG	[-1000 to 1000 / **92** / 1 /step]
013	MidSpd:offset:Bk	*ENG	[-1000 to 1000 / **47** / 1 /step]
014	MidSpd:offset:M	*ENG	[-1000 to 1000 / **41** / 1 /step]
015	MidSpd:offset:C	*ENG	[-1000 to 1000 / **72** / 1 /step]
016	MidSpd:offset:Y	*ENG	[-1000 to 1000 / **59** / 1 /step]
017	LowSpd:Coef:Bk	*ENG	[-1000 to 1000 / **98** / 1 /step]
018	LowSpd:Coef:M	*ENG	[-1000 to 1000 / **104** / 1 /step]
019	LowSpd:Coef:C	*ENG	[-1000 to 1000 / **78** / 1 /step]
020	LowSpd:Coef:Y	*ENG	[-1000 to 1000 / **84** / 1 /step]
021	LowSpd:offset:Bk	*ENG	[-1000 to 1000 / **59** / 1 /step]
022	LowSpd:offset:M	*ENG	[-1000 to 1000 / **45** / 1 /step]
023	LowSpd:offset:C	*ENG	[-1000 to 1000 / **69** / 1 /step]
024	LowSpd:offset:Y	*ENG	[-1000 to 1000 / **65** / 1 /step]

3243	[DevBias_SpdCorrectSetting]		
	Adjusts the coefficient or offset value for development bias correction for each speed.		
001	MidSpd:Coef:Bk	*ENG	[0.50 to 1.50 / **1.00** / 0.01 /step]
002	MidSpd:Coef:M	*ENG	
003	MidSpd:Coef:C	*ENG	
004	MidSpd:Coef:Y	*ENG	
005	MidSpd:offset:Bk	*ENG	[-128 to 127 / **0** / 1 V/step]
006	MidSpd:offset:M	*ENG	
007	MidSpd:offset:C	*ENG	
008	MidSpd:offset:Y	*ENG	
009	LowSpd:Coef:Bk	*ENG	[0.50 to 1.50 / **0.87** / 0.01 /step]
010	LowSpd:Coef:M	*ENG	[0.50 to 1.50 / **0.96** / 0.01 /step]
011	LowSpd:Coef:C	*ENG	
012	LowSpd:Coef:Y	*ENG	
013	LowSpd:offset:Bk	*ENG	[-128 to 127 / **0** / 1 V/step]
014	LowSpd:offset:M	*ENG	[-128 to 127 / **-20** / 1 V/step]
015	LowSpd:offset:C	*ENG	
016	LowSpd:offset:Y	*ENG	

3251	[Coverage]		
	These (-001 to -016) are coefficients for SP3-222-009 to -012.		
001	Latest Pixel: Bk	*ENG	Displays the latest coverage for each color. [0 to 9999 / **-** / 1 cm^2/step]
002	Latest Pixel: M	*ENG	
003	Latest Pixel: C	*ENG	
004	Latest Pixel: Y	*ENG	

005-008	Displays the average coverage of each color for the Vtref correction. "Average S" is defined when the number of developed pages does not reach the number specified with SP3251-017.		
005	Average S: Bk	*ENG	[0.00 to 100.00 / - / 0.01 %/step]
006	Average S: M	*ENG	
007	Average S: C	*ENG	
008	Average S: Y	*ENG	
009-012	Displays the average coverage of each color for the Vtref correction. "Average M" is defined when the number of developed pages does not reach the number specified with SP3251-018.		
009	Average M: Bk	*ENG	[0.00 to 100.00 / - / 0.01 %/step]
010	Average M: M	*ENG	
011	Average M: C	*ENG	
012	Average M: Y	*ENG	
013-016	Displays the average coverage of each color for the Vtref correction. "Average L" is defined when the number of developed pages does not reach the number specified with SP3-251-019.		
013	Average L: Bk	*ENG	[0.00 to 100.00 / - / 0.01 %/step]
014	Average L: M	*ENG	
015	Average L: C	*ENG	
016	Average L: Y	*ENG	
017-019	Adjusts the threshold for SP3-251-005 to -016.		
017	Total Page Setting: S	*ENG	[1 to 100 / **10** / 1 sheet/step]
018	Total Page Setting: M	*ENG	[1 to 500 / **10** / 1 sheet/step]
019	Total Page Setting: L	*ENG	[1 to 999 / **50** / 1 sheet/step]
020-023	Adjusts the threshold for SP3-251-024 to -027.		
020	Total Page Setting: S2	*ENG	[1 to 100 / **40** / 1 sheet/step]

021	Total Page Setting: M2	*ENG	[1 to 500 / **10** / 1 sheet/step]
022	Total Page Setting: L2	*ENG	[1 to 999 / **50** / 1 sheet/step]
024-027	Displays the latest coverage ratio for each color.		
024	Latest Coverage: Bk	*ENG	[0.00 to 100.00 / **-** / 0.01 %/step]
025	Latest Coverage: M	*ENG	
026	Latest Coverage: C	*ENG	
027	Latest Coverage: Y	*ENG	
028	Displays the threshold of whether to perform developer churning or not.		
	DevMix Threshold	*ENG	[0 to 100 / **20** / 1 %/step]

3311	**[ID Sensor DetectValue: Vofset]**		
	Displays the ID sensor (regular) offset voltage for Vsg adjustments.		
001	Voffset reg: Bk	*ENG	[0.00 to 5.00 / **-** / 0.01 V/step]
002	Voffset reg: M	*ENG	[0.00 to 5.50 / **-** / 0.01 V/step]
003	Voffset reg: C	*ENG	
004	Voffset reg: Y	*ENG	
005-007	Displays the ID sensor (diffusion) offset voltage for Vsg adjustments.		
005	Voffset dif: M	*ENG	[0.00 to 5.50 / **-** / 0.01 V/step]
006	Voffset dif: C	*ENG	
007	Voffset dif: Y	*ENG	
008-010	Displays the ID sensor offset voltage for Vsg adjustments.		
008	Voffset TM (Front)	*ENG	[0.00 to 5.50 / **-** / 0.01 V/step]
009	Voffset TM (Center)	*ENG	
010	Voffset TM (Rear)	*ENG	

3321	**[Vsg Adjustment: Execution]**

010	P/TM Sensor All	ENG	Execute the ID sensor initialization setting for all sensors [- / - / -] Execute

3322	[Vsg Adjustment Result: Vsg]		
	Displays the result value of the Vsg adjustment for each sensor.		
001	Vsg reg: Bk	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
002	Vsg reg: M	*ENG	
003	Vsg reg: C	*ENG	
004	Vsg reg: Y	*ENG	
005	Vsg dif: M	*ENG	
006	Vsg dif: C	*ENG	
007	Vsg dif: Y	*ENG	
008	Vsg TM (Front)	*ENG	
009	Vsg TM (Center)	*ENG	
010	Vsg TM (Rear)	*ENG	

3323	[Vsg Adjustment Result:Ifsg]		
	Displays the result value of the Vsg adjustment for each sensor.		
001	Ifsg:Bk	*ENG	[0.0 to 50.0 / - / 0.1 mA/step]
002	Ifsg:M	*ENG	
003	Ifsg:C	*ENG	
004	Ifsg:Y	*ENG	
005	Ifsg: TM(Front)	*ENG	
006	Ifsg: TM(Center)	*ENG	
007	Ifsg: TM(Rear)	*ENG	

3324	[Vsg Adjustment: Set]		
	-		
003	Vsg Error Counter	*ENG	[0 to 99 / **-** / 1 times/step]
004	Set Vofset Threshold	*ENG	[0.00 to 5.00 / **1.00** / 0.01 V/step]
005	Vsg Upper Threshold	*ENG	[0.00 to 5.00 / **4.50** / 0.01 V/step]
006	Vsg Lower Threshold	*ENG	[0.00 to 5.00 / **3.50** / 0.01 V/step]

3325	[Vsg Adjustment Result]		
	Displays the result of the Vsg adjustment. The displayed numbers mean the result of each sensor (sensor for Front, sensor for Bk, sensor for Cyan, sensor for Center, sensor for Magenta, sensor for Yellow and sensor for Rear).		
001	Latest	*ENG	[111 to 999 / **-** / 1 /step] 9: Unexpected error 3: Offset voltage error 2: Vsg adjustment value error 1: O.K
002	Result: Latest 1	*ENG	
003	Result: Latest 2	*ENG	
004	Result: Latest 3	*ENG	
005	Result: Latest 4	*ENG	
006	Result: Latest 5	*ENG	
007	Result: Latest 6	*ENG	
008	Result: Latest 7	*ENG	
009	Result: Latest 8	*ENG	
010	Result: Latest 9	*ENG	

3361	[ID Sensor Sensitivity: Display]
	-

001	K2K (Latest)	*ENG	[0.0000 to 5.0000 / - / 0.0001 /step]
002	K5K (Latest)	*ENG	
003	K2M (Latest)	*ENG	
004	K5M (Latest)	*ENG	
005	K2C (Latest)	*ENG	
006	K5C (Latest)	*ENG	
007	K2Y (Latest)	*ENG	
008	K5Y (Latest)	*ENG	

3362	[ID Sensor Sensitivity: Setting]		
	-		
001	K2: Upper	*ENG	[0.00 to 1.00 / **0.32** / 0.01 /step]
002	K2: Lower	*ENG	[0.00 to 1.00 / **0.22** / 0.01 /step]
003	K5: Upper	*ENG	[0.00 to 10.00 / **5.00** / 0.01 /step]
004	K5: Lower	*ENG	[0.00 to 1.00 / **0.50** / 0.01 /step]
005	Kn: Lower	*ENG	[0.00 to 1.00 / **0.08** / 0.01 /step]
006	Kn: Upper	*ENG	[0.00 to 1.00 / **1.00** / 0.01 /step]
007	K5: Edit Point	*ENG	[0.00 to 1.00 / **0.15** / 0.01 /step]
008	K5 Target Voltage	*ENG	[0.00 to 5.00 / **1.63** / 0.01 V/step]
009	K5 Approximate Method	*ENG	[0 or 1 / **1** / 1 /step]
010	K2: Upper/Lower Limit Coef 1	*ENG	[0.00 to 1.00 / **0.00** / 0.01 /step]
011	K2: Upper Limit Correction	*ENG	[-0.20 to 0.40 / **0.03** / 0.01 /step]
012	K2: Lower Limit Correction	*ENG	[-0.40 to 0.20 / **-0.03** / 0.01 /step]
013	Diffusion Correction: M	*ENG	[0.75 to 1.35 / **1.00** / 0.01 /step]
014	Diffusion Correction: C	*ENG	[0.75 to 1.35 / **1.00** / 0.01 /step]

015	Diffusion Correction: Y	*ENG	[0.75 to 1.35 / **1.00** / 0.01 /step]
016	K2: Check: M	*ENG	[0.000 to 1.000 / **0.250** / 0.001 /step]
017	K2: Check: C	*ENG	[0.000 to 1.000 / **0.250** / 0.001 /step]
018	K2: Check: Y	*ENG	[0.000 to 1.000 / **0.250** / 0.001 /step]

3363	**[ID Pattern Timing]**		
	-		
001	Scan: YCMBk	*ENG	[-50.0 to 50.0 / **0.0** / 0.1 mm/step]
002	Detection Delay Time	*ENG	[0 to 2500 / **0** / 1 msec/step]
003	Delay Time	*ENG	[0 to 2500 / **880** / 1 msec/step]
004	MUSIC Delay Time	*ENG	[-2500 to 2500 / **300** / 1 msec/step]

3371	**[M/A Calculation]**		
	Sets the correction coefficient for adhesion amount.		
001	Correction Coefficient: Bk	*ENG	[0.50 to 2.00 / **1.00** / 0.01 /step]
002	Correction Coefficient: M	*ENG	[0.50 to 2.00 / **1.00** / 0.01 /step]
003	Correction Coefficient: C	*ENG	[0.50 to 2.00 / **0.95** / 0.01 /step]
004	Correction Coefficient: Y	*ENG	[0.50 to 2.00 / **0.89** / 0.01 /step]
005	Correction Coefficient: Bk	*ENG	[0.50 to 2.00 / **1.00** / 0.01 /step]
006	Correction Coefficient: M	*ENG	[0.50 to 2.00 / **1.00** / 0.01 /step]
007	Correction Coefficient: C	*ENG	[0.50 to 2.00 / **0.92** / 0.01 /step]
008	Correction Coefficient: Y	*ENG	[0.50 to 2.00 / **1.06** / 0.01 /step]

3401	**[Fixed Supply Mode]**		
	Adjusts the toner supply rate in the fixed toner supply mode.		

001	Fixed Rate: Bk	*ENG	[0 to 100 / **5** / 1 %/step] These SPs are used only when SP3-044 is set to "1".
002	Fixed Rate: M	*ENG	
003	Fixed Rate: C	*ENG	
004	Fixed Rate: Y	*ENG	

3411	**[Toner Supply Rate: Display]**		
	Displays the current toner supply rate.		
001	Latest: Bk	*ENG	[0 to 100 / - / 1 %/step]
002	Latest: M	*ENG	
003	Latest: C	*ENG	
004	Latest: Y	*ENG	

3421	**[Toner Supply Range]**		
001	Upper Limit: Bk	*ENG	Adjusts the toner supply rate during printing. [0 to 100 / **100** / 1%/step]
002	Upper Limit: M	*ENG	
003	Upper Limit: C	*ENG	
004	Upper Limit: Y	*ENG	
005	Minimum Supply Time: Bk	*ENG	Adjusts the minimum toner supply time. [0 to 1000 / **0** / 1 msec/step]
006	Minimum Supply Time: M	*ENG	
007	Minimum Supply Time: C	*ENG	
008	Minimum Supply Time: Y	*ENG	

3451	**[Toner Supply Carry Over:Disp]**		
001	Bk	*ENG	Displays the toner supply time carried over from a previous toner supply mode for each color. [0 to 10000 / **0** / 1 msec/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3452	[Toner Supply Carry Over: Set]		
001	Maximum: Bk	*ENG	Adjusts the maximum time carried over from a previous toner supply mode. [0 to 10000 / **1000** / 1 msec/step]
002	Maximum: M	*ENG	
003	Maximum: C	*ENG	
004	Maximum: Y	*ENG	

3501	[Process Control Target M/A]		
	Adjusts the target M/A of the full coverage in single color printer mode.		
001	Maximum M/A: Bk	*ENG	[0.000 to 1.000 / **0.411** / 0.001 mg/cm^2/step]
002	Maximum M/A: M	*ENG	[0.000 to 1.000 / **0.476** / 0.001 mg/cm^2/step]
003	Maximum M/A: C	*ENG	[0.000 to 1.000 / **0.422** / 0.001 mg/cm^2/step]
004	Maximum M/A: Y	*ENG	[0.000 to 1.000 / **0.417** / 0.001 mg/cm^2/step]

3510	[ImageQuality Adj. Counter:Disp]
	Displays the total page counter for each adjustment mode.

001	Potential Control: BW	*ENG	[0 to 2000 / - / 1 page/step]
002	Potential Control: FC	*ENG	
003	Power ON: BW	*ENG	
004	Power ON: FC	*ENG	
005	MUSIC: BW	*ENG	
006	MUSIC: FC	*ENG	
007	Vsg Adj.	*ENG	
008	Charge AC Control	*ENG	
009	MUSIC: Power ON: BW	*ENG	
010	MUSIC: Power ON: FC	*ENG	

3511	**[Execution Interval: Setting]**		
	Adjusts the threshold for each adjustment mode.		
001	Job End: Potential Control: BW	*ENG	[0 to 2000 / **250** / 1 page/step]
002	Job End: Potential Control: FC	*ENG	[0 to 2000 / **100** / 1 page/step]
003	Interrupt: Potential Cont: BW	*ENG	[0 to 2000 / **500** / 1 page/step]
004	Interrupt: Potential Cont: FC	*ENG	[0 to 2000 / **200** / 1 page/step]
005	Initial: Potential Control: BW	*ENG	[0 to 2000 / **250** / 1 page/step]
006	Initial: Potential Control: FC	*ENG	[0 to 2000 / **100** / 1 page/step]
007	Vsg Adj. Counter	*ENG	[0 to 2000 / **0** / 1 page/step]
008	Charge AC Control Counter	*ENG	[0 to 2000 / **0** / 1 page/step]
019	Environmental Correction	*ENG	[0 or 1 / **1** / 1 /step] 0: Not Correct (OFF) 1: Correct (ON)

020	Gamma Correction	*ENG	[0 or 1 / **1** / 1 /step] 0: Not Correct (OFF) 1: Correct (ON)
021	Non-use Time Correction	*ENG	[0 or 1 / **1** / 1 /step] 0: Not Correct (OFF) 1: Correct (ON)
022	Correction Coef 1: JE: BW	*ENG	[0.00 to 1.00 / **0.20** / 0.01 page/step]
023	Correction Coef 2: JE: BW	*ENG	[0.00 to 1.00 / **1.00** / 0.01/step]
024	Correction Coef 1: JE: FC	*ENG	[0.00 to 1.00 / **0.50** / 0.01/step]
025	Correction Coef 2: JE: FC	*ENG	[0.00 to 1.00 / **1.00** / 0.01/step]
026	Cor Coef 1: Interrupt: BW	*ENG	[0.00 to 1.00 / **0.10** / 0.01/step]
027	Cor Coef 2: Interrupt: BW	*ENG	[0.00 to 1.00 / **1.00** / 0.01/step]
028	Cor Coef 1: Interrupt: FC	*ENG	[0.00 to 1.00 / **0.25** / 0.01/step]
029	Cor Coef 2: Interrupt: FC	*ENG	[0.00 to 1.00 / **1.00** / 0.01/step]
030	Max. Number Cor Threshold	*ENG	[0 to 99 / **5** / 1/step]
031	Max. Number Correction Counter	*ENG	[0 to 255 / **-** / 1/step]

3512	**[Image Quality Adj.: Interval]**		
	Adjusts the timing for execution of process control and line position adjustment.		
001	During Job	*ENG	[0 to 100 / **30** / 1 page/step]
002	During Stand-by	*ENG	[0 to 100 / **10** / 1 minute/step]

3513	**[PCU Motor Stop Time: Bk]**		
	Displays the last time that the PCDU motors stopped. These are used for process control execution timing.		
001	Year	*ENG	[0 to 99 / **-** / 1/step]
002	Month	*ENG	[1 to 12 / **-** / 1/step]

003	Date	*ENG	[1 to 31 / - / 1/step]
004	Hour	*ENG	[0 to 23 / - / 1/step]
005	Minute	*ENG	[0 to 59 / - / 1/step]

3514	**[Environmental Display: Job End]**		
	Displays the environmental conditions for the last job. These are used for process control execution timing.		
001	Temperature	*ENG	[-1280 to 1270 / - / 0.1°C/step]
002	Relative Humidity	*ENG	[0 to 1000 / - / 0.1%RH/step]
003	Absolute Humidity	*ENG	[0 to 1000 / - / 0.1 g/m^3/step]
004	AIT Temperature	*ENG	[-1280 to 1270 / - / 0.1 deg/step]

3515	**[Execution Interval: Display]**		
	Displays the current interval for process control execution. When the machine calculates the timing for process control, it uses a number of conditions. These are the results after considering all the conditions.		
001	Job End: Pot Control: BW	*ENG	[0 to 2000 / - / 1 page/step]
002	Job End: Pot Control: FC	*ENG	[0 to 2000 / - / 1 page/step]
003	Interrupt: Pot Control: BW	*ENG	[0 to 2000 / - / 1 page/step]
004	Interrupt: Pot Control: FC	*ENG	[0 to 2000 / - / 1 page/step]

3516	**[Refresh Mode]**
	While making prints with low coverage, the developer is agitated with less toner consumption and the toner carrier attraction tends to increase. This may cause low image density or poor transfer (white dots). To prevent this, the coagulated toner or overcharged toner has to be consumed by performing the refresh mode.

001	Dev. Motor Rotation: Dis: Bk	*ENG	[0.0 to 1000.0 / - / 0.1 m/step]
002	Dev. Motor Rotation: Dis: M	*ENG	
003	Dev. Motor Rotation: Dis: C	*ENG	
004	Dev. Motor Rotation: Dis: Y	*ENG	
005	Rotation Threshold	*ENG	[0.0 to 1000.0 / **1.0** / 0.1 m/step]
006	Pixel Coverage Sum: Bk	*ENG	[0 to 65535 / - / 1 cm^2/step]
007	Pixel Coverage Sum: M	*ENG	
008	Pixel Coverage Sum: C	*ENG	
009	Pixel Coverage Sum: Y	*ENG	
010	Required Area: Bk	*ENG	[0 to 65535 / **0** / 1 cm^2/step]
011	Required Area: M	*ENG	
012	Required Area: C	*ENG	
013	Required Area: Y	*ENG	
014	Refresh Threshold: Bk	*ENG	[0 to 255 / **34** / 1 cm^2/m/step]
015	Refresh Threshold: M	*ENG	
016	Refresh Threshold: C	*ENG	
017	Refresh Threshold: Y	*ENG	
018	Pattern Generation Number: Bk	*ENG	[0 to 255 / **0** / 1 time/step]
019	Pattern Generation Number: M	*ENG	
020	Pattern Generation Number: C	*ENG	
021	Pattern Generation Number: Y	*ENG	
022	Pat Gen Number: Upper limit	*ENG	[0 to 255 / **0** / 1 time/step]
023	Toner Consumption Pattern Area	*ENG	[10 to 2550 / **300** / 10 cm^2 /step]

024	Supply Coefficient	*ENG	[0.00 to 2.55 / **1.00** / 0.01 /step]
025	Job End Area Coefficient	*ENG	[0.1 to 25. 5 / **1.0** / 0.1 /step]
026	Job End Vb Coefficient	*ENG	[0 to 100 / **40** / 1 %/step]
027	Job End Length	*ENG	[0 to 56 / **12** / 1 mm/step]
028	Job End Supply	*ENG	[0.000 to 1.000 / **0.450** / 0.001 mg/cm^2/step]

3517	**[Blade damage prevention mode]**		
	Adjusts the threshold temperature for preventing the cleaning blade in the transfer belt cleaning unit from being damaged. If the temperature is above this value, toner is applied to the transfer belt at set intervals during the job to prevent the blade from flipping over.		
001	Execution Temp. Threshold	*ENG	[0 to 50 / **40** / 1°C/step]

3518	**[ImageQualityAdj.:ExeFlag]**		
	-		
001	Toner End Recovery: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON
002	Toner End Recovery: M	*ENG	
003	Toner End Recovery: C	*ENG	
004	Toner End Recovery: Y	*ENG	
005	Vsg Adj.	*ENG	
006	Developer Mixing	*ENG	
007	Process Control	*ENG	[0 to 2 / **0** / 1 /step]
008	MUSIC	*ENG	0: OFF 1: ON (once) 2: ON (twice)
009	MUSIC (Skew Correction)	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON
010	Charge AC Control	*ENG	
011	Blade Damage Prevention	*ENG	

012	Vsgave Outside	*ENG	[0 or 1 / **0** / 1 /step] Sets "1", when the following values show. Vsg_reg_ave: 3.5 < Vsg_reg_ave < 4.5 or Vsg_dif_ave: 0.0 < Vsg_dif_ave < 0.5

3519	**[Toner End Prohibition Setting]**		
	Enables or disables each adjustment at toner near end.		
001	Process Control	*ENG	[0 or 1 / **1** / 1/step] 0: Permit (adjustment is done even toner near end condition) 1: Forbid (adjustment is not done at toner near end condition)
002	MUSIC	*ENG	
003	TC Adj.	*ENG	

3520	**[ITB Idling Number]**		
	Specifies the number of the ITB idling rotation for each condition.		
001	Temperature: H	*ENG	[0.0 to 3.0 / **0.0** / 0.1 revolution/step]
002	Temperature: M	*ENG	
003	Temperature: L	*ENG	
004	Temperature: L: Power ON	*ENG	

3521	**[Temperature Threshold]**		
	Specifies the threshold temperature for each condition. These settings affect the conditions of SP3-520. t1: Threshold between L (low temp.) and M (medium temp.) t2: Threshold between M (medium temp.) and H (high temps)		
001	Threshold: t2	*ENG	[20 to 30 / **25** / 1 deg/step]
002	Threshold: t1	*ENG	[0 to 15 / **15** / 1 deg/step]

3522	**[Initial Process Control Set]**		
	Adjusts the threshold for the process control at power on. When the current condition has changed by more than the values of these SPs when compared with the conditions at the previous operation, the process control at power on is executed.		
002	Non-use Time Setting	*ENG	[0 to 1440 / **360** / 1 minute/step]
003	Temperature Range	*ENG	[0 to 99 / **10** / 1°C/step]
004	Relative Humidity Range	*ENG	[0 to 99 / **50** / 1 %RH/step]
005	Absolute Humidity Range	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
006	AIT Temperature Range	*ENG	[0 to 99 / **25** / 1°C/step]
007	Vtref Temperature Range	*ENG	[0 to 99 / **20** / 1°C/step]

3531	**[Non-use Time Process Control Set]**		
	Adjusts the threshold for the process control at stand-by. When the current condition has changed by more than the values of these SPs when compared with the conditions at the previous operation, the process control at stand-by is executed.		
001	Non-use Time Setting	*ENG	[0 to 1440 / **360** / 1 minute/step]
002	Temperature Range	*ENG	[0 to 99 / **10** / 1°C/step]
003	Relative Humidity Range	*ENG	[0 to 99 / **50** / 1 %RH/step]
004	Absolute Humidity Range	*ENG	[0 to 99 / **6** / 1 g/m^3/step]
005	Maximum Execution Number	*ENG	Adjusts the maximum execution time for the process control at stand-by. [0 to 99 / **10** / 1 time/step]

3611	**[Development Gamma: Display/Set]**

001	Bk (Current)	*ENG	Displays the current development gamma for each color. [0.00 to 5.00 / **-** / 0.01 mg/cm^2/kV / step]
002	M (Current)	*ENG	
003	C (Current)	*ENG	
004	Y (Current)	*ENG	
005	Bk (Target Display)	*ENG	Displays the target development gamma for each color. [0.00 to 5.00 / **-** / 0.01 mg/cm^2/kV / step]
006	M (Target Display)	*ENG	
007	C (Target Display)	*ENG	
008	Y (Target Display)	*ENG	
009	Bk (Standard Target Set)	*ENG	Displays the standard target development gamma for each color. [0.00 to 5.00 / **0.80** / 0.01 mg/cm^2/kV / step]
010	M (Standard Target Set)	*ENG	[0.00 to 5.00 / **0.95** / 0.01 mg/cm^2/kV / step]
011	C (Standard Target Set)	*ENG	[0.00 to 5.00 / **0.83** / 0.01 mg/cm^2/kV / step]
012	Y (Standard Target Set)	*ENG	[0.00 to 5.00 / **0.79** / 0.01 mg/cm^2/kV / step]
013	Environmental Correction	*ENG	Turns on or off the environmental correction for target development gamma. [0 or 1 / **1** / 1 /step] 0: Not Correct, 1: Correct
014	K (Max Correction)	*ENG	Adjusts the maximum correction value for each color. These SPs are effective only when the setting of SP3-611-013 is set to "1". [0.10 to 5.00 / **0.17** / 0.01 mg/cm^2/kv/ step]

015	M (Max Correction)	*ENG	[0.00 to 5.00 / **0.06** / 0.01 mg/cm^2/kv/step]
016	C (Max Correction)	*ENG	
017	Y (Max Correction)	*ENG	
018	K (Max Abs Hum)	*ENG	Adjusts the maximum humidity correction value for each color. These SPs are effective only when the setting of SP3-611-013 is set to "1". [1 to 99 / **9** / 1 g/m^3/step]
019	M (Max Abs Hum)	*ENG	
020	C (Max Abs Hum)	*ENG	
021	Y (Max Abs Hum)	*ENG	
022	K (Min Correction)	*ENG	[0.00 to 0.10 / **0.00** / 0.01 mg/cm^2/kv/step]

3612	**[Vk Display]**		
	Displays Vk for each color.		
001	Bk	*ENG	[-300 to 300 / **-** / 1 V/step]
002	M	*ENG	
003	C	*ENG	
004	Y	*ENG	

3621	**[Development DC Control: Disp]** Plain: High speed, Thick 1: Middle speed, Thick 2 & FINE: Low speed		
	Displays the development DC bias adjusted with the process control for each line speed and color.		
001	Plain: Bk	*ENG	[0 to 800 / **-** / 1 -V/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	

005	Thick 1: Bk	*ENG	[0 to 800 / - / 1 -V/step]
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2 & FINE: Bk	*ENG	[0 to 800 / - / 1 -V/step]
010	Thick 2 & FINE: M	*ENG	
011	Thick 2 & FINE: C	*ENG	
012	Thick 2 & FINE: Y	*ENG	

3622	[Development DC Control]		
	Adjusts the limit of VB.		
001	VB Limit	*ENG	[0 to 500 / **20** / 1 V/step]

3623	[Development DC Control:Set]		
	Sets the upper limit of VB.		
001	Vb Upper	*ENG	[550 to 800 / **750** / 1 -V/step]

3631	[Charge DC Control: Display] Plain: High speed, Thick 1: Middle speed, Thick 2 & FINE: Low speed		
	Displays the charge DC voltage adjusted with the process control for each line speed and color.		
001	Plain: Bk	*ENG	[0 to 2000 / - / 1 -V/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	

005	Thick 1: Bk	*ENG	[0 to 2000 / - / 1 -V/step]
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2 & FINE: Bk	*ENG	[0 to 2000 / - / 1 -V/step]
010	Thick 2 & FINE: M	*ENG	
011	Thick 2 & FINE: C	*ENG	
012	Thick 2 & FINE: Y	*ENG	

3641	[Charge AC Control: Display] Plain: High speed		
	Displays the charge AC voltage adjusted with the process control for each color.		
001	Plain: Bk	*ENG	[0.00 to 3.00 / - / 0.01 kV/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	

3651	[LD Power Control: Display] Plain: High speed, Thick 1: Middle speed, Thick 2 & FINE: Low speed		
	Displays the LD power adjusted for each environment.		
001	Plain: Bk	*ENG	[0 to 200 / - / 1 %/step]
002	Plain: M	*ENG	
003	Plain: C	*ENG	
004	Plain: Y	*ENG	

005	Thick 1: Bk	*ENG	[0 to 200 / - / 1 %/step]
006	Thick 1: M	*ENG	
007	Thick 1: C	*ENG	
008	Thick 1: Y	*ENG	
009	Thick 2 & FINE: Bk	*ENG	[0 to 200 / - / 1 %/step]
010	Thick 2 & FINE: M	*ENG	
011	Thick 2 & FINE: C	*ENG	
012	Thick 2 & FINE: Y	*ENG	

3710	**[HST Concentration Control: Set]** TD Sensor: Toner Concentration Control Setting		
	Selects the toner concentration control method by HST memory, which is in the TD sensor.		
001	Control Method: Selection	*ENG	[0 or 1 / **1** / 1 /step] 0: Not Use, 1: Use

3711	**[HST Concentration Control: Bk]**		
	Displays the factory settings of the black PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	
006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	

011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 mg/cm^2/kV / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3712	[HST Concentration Control: M]		
	Displays the factory settings of the magenta PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	
006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 mg/cm^2/kV / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3713	[HST Concentration Control: C]		
	Displays the factory settings of the cyan PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	
006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 mg/cm^2/kV / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3714	[HST Concentration Control: Y]		
	Displays the factory settings of the yellow PCDU.		
001	Vcnt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
002	Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
003	Sensitivity: HL	*ENG	[1.22 to 3.77 / - / 0.01 V/step]
004	Sensitivity: HM	*ENG	[0.00 to 2.55 / - / 0.01 V/step]
005	Sensitivity: ML	*ENG	

006	Set Detection	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
007	Without Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
008	With Developer	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
009	Serial Number 1	*ENG	[0 to 255 / - / 1 /step]
010	Serial Number 2	*ENG	
011	Adjustment: Vt	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
012	Adjustment: Vtref	*ENG	[0.0 to 5.0 / - / 0.1 V/step]
013	Adjustment: Vtcnt	*ENG	[0.00 to 5.00 / - / 0.01 V/step]
014	Adjustment: Gamma	*ENG	[0.00 to 2.55 / - / 0.01 mg/cm^2/kV / step]
015	Adjustment: Vcnt Result	*ENG	[0 to 9 / - / 1 /step]

3800	**[Waste Toner Full Detection]**		
	Displays/ adjusts the toner collection bottle detection settings. These SPs are used for NRS.		
001	Condition	*ENG	[0 to 4 / - / 1 /step]
002	Detection Times	*ENG	[0 to 50 / - / 1 time/step]
003	Print Page After Near Full	*ENG	[0 to 1000 / - / 1 sheet/step]
004	Pixel Count After Near Full	*ENG	[0 to 200000 / - / 1 cm^2/step]
005	Pixel Count After Replacement	*ENG	Displays the pixel counter after replacement of toner collection bottle. [0 to 200000 / - / 1 cm^2/step]
008	Coefficient	*ENG	[0.1 to 1.5 / **1.0** / 0.1 /step]

011	Notice Setting	*ENG	Enables or disables the calling for @Remote. [0 or 1 / **1** / 1 /step] 0: Enable @Remote calling 1: Disable @Remote calling
	NOTE: If the toner collection bottle has been replaced before the machine detects used toner near full when this setting is set to "0", the machine cannot detect toner collection bottle near full. In that case, set SP3-902-017 to "1".		
012	Day Threshold: Toner Collection bottle:NF	*ENG	[1 to 30 / **3** / 1 day/step]
	Sets the threshold days for the near-full display. The near-full of the toner collection bottle is displayed after the toner collection full sensor has detected the actuator in the toner collection bottle.		
013	Total:Toner Collection Bottle	*ENG	Displays the total amount of the used toner. [0 to 999999999 / **-** / 1 /step]
014	Mechanism Full Detection Date	*ENG	Displays the date of the full detection for the toner collection bottle.

3900	**[Waste Toner New Detection]**		
	Turns toner collection bottle full detection on or off.		
001	ON/OFF Setting	*ENG	[0 or 1 / **1** / 1 /step] 0: OFF, 1: ON

3901	**[New PCU Detection]**		
	Turns new PCDU detection on or off.		
001	ON/OFF Setting	*ENG	[0 or 1 / **1** / 1 /step] 0: OFF, 1: ON

3902	**[Manual New Unit Set]**
	Turns the new unit detection flag for each PM unit on or off. The use of these counters is explained in the PM section and in the relevant parts of section 3 (Replacement and Adjustment).

001	Development Unit: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
002	Development Unit: Y	*ENG	
003	Development Unit: C	*ENG	
004	Development Unit: M	*ENG	
005	Developer: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
006	Developer: Y	*ENG	
007	Developer: C	*ENG	
008	Developer: M	*ENG	
009	PCU: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
010	PCU: Y	*ENG	
011	PCU: C	*ENG	
012	PCU: M	*ENG	
013	Image Transfer Unit	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON Do not use 3902-013 if you only change the cleaning unit. 3902-015: This is for the image transfer belt cleaning unit.
014	Fusing Unit	*ENG	
015	Cleaning Unit	*ENG	
016	Paper Transfer Unit	*ENG	
017	Toner Collection Bottle	*ENG	
018	Fusing Belt Unit	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON "Fusing Roller" is designated as "Heating Roller" in this manual.
019	Pressure Roller	*ENG	
020	Toner Supply Unit: Bk	*ENG	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
021	Toner Supply Unit: M	*ENG	
022	Toner Supply Unit: C	*ENG	
023	Toner Supply Unit: Y	*ENG	

Engine SP Tables-4

SP4-XXX (Scanner)

There are no Group 4 SP modes for this machine.

Engine SP Tables-5

SP5-XXX (Mode)

5024	[mm/inch Display Selection]		
	Display units (mm or inch) for custom paper sizes.		
001	0:mm 1:inch	*CTL	[0 or 1 / **P3c:1(NA), 2 (EU, ASIA, CHN, TW), P3d:1(NA), 2(EU, ASIA,TW)** / 1 /step] 0: mm (Europe/Asia) 1: inch (USA)

RTB 18
SP5045:
Modified

5045	[Accounting counter]		
	Selects the counting method. **Note** • The counting method can be changed only once, regardless of whether the counter value is negative or positive.		
001	Counter Method	*CTL	[0 or 1 / **0** / 1 /step] 0: Developments 1: Prints

5047	[Paper Display]		
	Turns on or off the printed paper display on the LCD.		
001	Backing Paper	*CTL	[0 or 1 / **-** / 1 /step] 0: OFF, 1: ON

5051	[TonerRefillDetectionDisplay]		
	Enables or disables the toner refill detection display.		
001	-	*CTL	[0 or 1 / **0** / 1 /step] Alphanumeric 0: ON 1: OFF

5055	[Display IP Address]		
	Display or does not display the IP address on the LCD.		
001	-	*CTL	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON

5061	[Toner Remaining Icon Display Change]		
	Display or does not display the remaining toner display icon on the LCD.		
001	-	*CTL	[0 or 1 / **0** / 1] 0: Not display, 1: Display

5062	[Parts Replacement Alert Display]		
	Display or does not display the PM part yield on the LCD.		
001	Drum Unit: Bk	*CTL	[0 or 1 / **1** / 1] 0: Not display, 1: Display
002	Drum Unit: M	*CTL	
003	Drum Unit: C	*CTL	
004	Drum Unit: Y	*CTL	
005	Development Unit: Bk	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display
006	Development Unit: M	*CTL	
007	Development Unit: C	*CTL	
008	Development Unit: Y	*CTL	
009	Developer: Bk	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display
010	Developer: M	*CTL	
011	Developer: C	*CTL	
012	Developer: Y	*CTL	

013	Image Transfer Belt	*CTL	[0 or 1 / **0** / -] 0: Not display, 1: Display
014	Image Transfer Cleaning Unit	*CTL	
015	Fusing Unit	*CTL	
016	Paper Transfer Roller Unit	*CTL	
017	Waster Toner bottle	*CTL	
018	Fusing Roller	*CTL	
019	Pressure Roller	*CTL	

5074	**[Home Screen Login]**		
	Sets the application that appears when the home key is pressed.		
002	Home Screen Login Setting	*CTL	[FFh / **0x0** / 1hex /step]
091	(0:OFF 1:SDK 2:Reserve)	*CTL	[0 to 2 / **0** / 1/step] 0: Function disable 1: SDK application 2: Legacy application (reserved)
092	Product ID	*CTL	Sets the Application product ID. [0x00 to 0xffff / **0** / 1/step]
093	Application ID	*CTL	[0 to 255 / **0** / 1/step]
	Sets the display category of the application that is specified in the SP5075-001,002		

5075	**[USB Keyboard]**		
	Sets the function of the external keyboard.		
001	Function Setting	*CTL	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5083	Toner Near End LED Setting

001	-	*CTL	[0 or 1 / **0** / 1 /step] 0:LED Off 1:LED On

5104	**[Counter: Size Setting]**		
	Specifies whether the counter is doubled for A3/DLT. "Yes" counts except from the bypass tray. When "Yes" is selected, A3 and DLT paper are counted twice, that is A4 x2 and LT x2 respectively. **Default setting: Yes**		
001	Double Count	*CTL	[0 or 1 / **0** / 1/step]
002	Bypass Custom Paper Size	*CTL	[0 or 1 / **0** / 1/step]

5112	**[Non-Standard Paper Selection]**		
001	0:OFF 1:ON	*CTL	[0 or 1 / **1** / -]

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).		
001	-	*ENG	[0 to 2 / **P3c:1(NA), 2 (EU, ASIA, CHN, TW), P3d:1(NA), 2(EU, ASIA,TW)** / 1 / step]

5148	**[Size Detection Off]**	*CTL	[**0**: OFF/ 1: ON]
001	0: Detect 1: Not Detect		

5169	**[CE Login]**		
	If you will change the printer bit switches, you must 'log in' to service mode with this SP before you go into the printer SP mode.		
001	CE Login	*CTL	[0 or 1 / **0** / -] 0: Disabled 1: Enabled

5195	[Limitless SW]		
	Sets limitless paper feed.		
001	Limitless SW	*CTL	[0 or 1 / **0** / 1/step] 0: Productivity priority 1: Limitless

5181	[Size Adjust]		
	Adjusts the paper size for each tray.		
001	TRAY 1	*ENG	[0 to 3 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF, 2: B5 LEF, 3: A5 LEF
002	TRAY 2: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF
003	TRAY 2: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A3, 1: DLT
004	TRAY 2: 3	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B4, 1: LG
005	TRAY 2: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B5 LEF, 1: Exe LEF
006	TRAY 3/T-LCT: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF
007	TRAY 3: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A3, 1: DLT

008	TRAY 3: 3	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B4, 1: LG
009	TRAY 3: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B5 LEF, 1: Exe LEF
010	TRAY 4: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4 LEF, 1: LT LEF
011	TRAY 4: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A3, 1: DLT
012	TRAY 4: 3	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B4, 1: LG
013	TRAY 4: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: B5 LEF, 1: Exe LEF
014	TRAY 5: 1	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step]
015	TRAY 5: 2	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step]
016	TRAY 5: 3	*ENG	[0 or 1 / **P3c 0(EU,ASIA,CHN,TW), P3d 1(NA)** / 1 /step]
017	TRAY 5: 4	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step]
018	LCT	*ENG	[0 or 1 / **P3c 0(EU, ASIA, CHN,TW), P3d 1(NA)** / 1 /step] 0: A4LEF, 1: LTLEF, 2: B5LEF

5186	**[RK 4]**		
	Enables or disables the prevention for RK4 (accounting device) disconnection. If the RK4 is disconnected for 10 seconds when this SP is set to "1 (Enable)", the machine automatically jams a sheet of paper and stops.		
001	-	*ENG	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5191	**[Mode Set]**		
	Enables or disables the STR (Suspend to RAM) mode.		
001	-	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On

5199	**[Paper Exit After Staple End.]**		
001	-	CTL	[0 or 1 / **0** / 1 /step] 0: OFF, 1: ON
	Enables or disables the paper feeding out from the finisher without stapling. • If this setting is "1: ON", paper is fed out without stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number). • If this setting is "0: OFF", paper is fed out with stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number).		

5302	**[Set Time]**		
	Adjusts the RTC (real time clock) time setting for the local time zone. Examples: For Japan (+9 GMT), enter 540 (9 hours x 60 min.) DOM: +540 (Tokyo) NA: -300 (New York) EU: + 60 (Paris) CH: +480 (Peking) TW: +480 (Taipei) AS: +480 (Hong Kong) KO: +540 (Korea)		
002	Time Difference	*CTL	[-1440 to 1440 / **-300** / 1 min./step]

SP5305
RTB 13b
f/w ver 1.05

5307	**[Summary Time]**		
001	Setting	*CTL	[0 to 1 / **NA, EU, ASIA** / 1 /step] 0: Disabled 1: Enabled NA and EUR: 1, ASIA: 0
	Enables or disables the summer time mode. **Note** • Make sure that both SP5-307-3 and -4 are correctly set. Otherwise, this SP is not activated even if this SP is set to "1".		

003	Rule Set (Start)	*CTL	-
	Specifies the start setting for the summer time mode. There are 8 digits in this SP. For months 1 to 9, the "0" cannot be input in the first digit, so the eight-digit setting for -2 or -3 becomes a seven-digit setting. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [1 to 5] 4th digit: The day of the week. [0 to 6 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] 7th digit: The length of the advanced time. [0 to 9 / 1 hour /step] 8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step] • The digits are counted from the left. • Make sure that SP5-307-1 is set to "1".		
	For example: 3500010 (EU default) The timer is advanced by 1 hour at am 0:00 on the 5th Sunday in March		
004	Rule Set (End)	*CTL	-
	Specifies the end setting for the summer time mode. There are 8 digits in this SP. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [0 to 5] 4th digit: The day of the week. [0 to 7 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] The 7th and 8 digits must be set to "00". • The digits are counted from the left. • Make sure that SP5-307-1 is set to "1".		

5401	[Access Control]		
103	Default Document ACL	*CTL	[0 to 3 / **0** / 1/step] 0: Read Only 1: Edit 2: Edit/Delete 3: Full control

104	Authentication Time	*CTL	[0 to 255 / **0** / 1sec/step]
162	ExtAuth Detail	*CTL	[- / **0x00** / 0x01/step]
200	SDK1 UniqueID	*CTL	[0 to 0xffffffff / **0** / 1/step]
201	SDK1 Certification Method	*CTL	[0 to 0xff / **0** / 1/step]
210	SDK2 UniqueID	*CTL	[0 to 0xffffffff / **0** / 1/step]
211	SDK2 Certification Method	*CTL	[0 to 0xff / **0** / 1/step]
220	SDK3 UniqueID	*CTL	[0 to 0xffffffff / **0** / 1/step]
221	SDK3 Certification Method	*CTL	[0 to 0xff / **0** / 1/step]
230	SDK Certification Device	*CTL	[- / **0** / -] 0-1: SDK authentication available 0-0: Disable all functions 1: Reserved 2-1: Administrator login 2-0: Disable 3~7-0: Reserved (set "0" only)
240	Detail Option	*CTL	[/ **0x00** / 0x01/step] 0: Logout confirm option -1: ON, 0: OFF 2~1: Auto-logout timer(retry timer) -11: 30sec, 10: 20sec, 01: 10sec, 00: 60sec 3: personal authority / Group authority and operation -1: ON, 0: OFF 7: Logout failed panel lock -1: ON, 0: OFF

5402	**[Access Control]**

101	SDKJ1 Limit Setting	*CTL	[/ **0x00** / 0x01/step] bit0: SDKJ Authentication -0: Panel Type -1: Remote Type bit1: Using user code setup -0: OFF, 1: ON bit2: Using key-counter setup -0: OFF, 1: ON bit3: Using billing external device setup -0: OFF, 1: ON bit3: Using external billing device setup -0: OFF, 1: ON bit4: Using extended external billing device setup -0: OFF, 1: ON bit5~6: Not used bit7: Using extended function J limit users -0: OFF, 1: ON
102	SDKJ2 Limit Setting	*CTL	
103	SDKJ3 Limit Setting	*CTL	
104	SDKJ4 Limit Setting	*CTL	
105	SDKJ5 Limit Setting	*CTL	

106	SDKJ6 Limit Setting	*CTL	[/ **0x00** / 0x01/step] bit0: SDKJ Authentication -0: Panel Type -1: Remote Type bit1: Using user code setup -0: OFF, 1: ON bit2: Using key-counter setup -0: OFF, 1: ON bit3: Using billing external device setup -0: OFF, 1: ON bit3: Using external billing device setup -0: OFF, 1: ON bit4: Using extended external billing device setup -0: OFF, 1: ON bit5~6: Not used bit7: Using extended function J limit users -0: OFF, 1: ON
107	SDKJ7 Limit Setting	*CTL	
108	SDKJ8 Limit Setting	*CTL	
109	SDKJ9 Limit Setting	*CTL	
110	SDKJ10 Limit Setting	*CTL	

111	SDKJ11 Limit Setting	*CTL	[/ **0x00** / 0x01/step] bit0: SDKJ Authentication -0: Panel Type -1: Remote Type bit1: Using user code setup -0: OFF, 1: ON bit2: Using key-counter setup -0: OFF, 1: ON bit3: Using billing external device setup -0: OFF, 1: ON bit3: Using external billing device setup -0: OFF, 1: ON bit4: Using extended external billing device setup -0: OFF, 1: ON bit5~6: Not used bit7: Using extended function J limit users -0: OFF, 1: ON
112	SDKJ12 Limit Setting	*CTL	
113	SDKJ13 Limit Setting	*CTL	
114	SDKJ14 Limit Setting	*CTL	
115	SDKJ15 Limit Setting	*CTL	

116	SDKJ16 Limit Setting	*CTL	[/ **0x00** / 0x01/step] bit0: SDKJ Authentication -0: Panel Type -1: Remote Type bit1: Using user code setup -0: OFF, 1: ON bit2: Using key-counter setup -0: OFF, 1: ON bit3: Using billing external device setup -0: OFF, 1: ON bit3: Using external billing device setup -0: OFF, 1: ON bit4: Using extended external billing device setup -0: OFF, 1: ON bit5~6: Not used bit7: Using extended function J limit users -0: OFF, 1: ON
117	SDKJ17 Limit Setting	*CTL	
118	SDKJ18 Limit Setting	*CTL	
119	SDKJ19 Limit Setting	*CTL	
120	SDKJ20 Limit Setting	*CTL	

121	SDKJ21 Limit Setting	*CTL	[/ **0x00** / 0x01/step] bit0: SDKJ Authentication -0: Panel Type -1: Remote Type bit1: Using user code setup -0: OFF, 1: ON bit2: Using key-counter setup -0: OFF, 1: ON bit3: Using billing external device setup -0: OFF, 1: ON bit3: Using external billing device setup -0: OFF, 1: ON bit4: Using extended external billing device setup -0: OFF, 1: ON bit5~6: Not used bit7: Using extended function J limit users -0: OFF, 1: ON
122	SDKJ22 Limit Setting	*CTL	
123	SDKJ23 Limit Setting	*CTL	
124	SDKJ24 Limit Setting	*CTL	
125	SDKJ25 Limit Setting	*CTL	

126	SDKJ26 Limit Setting	*CTL	[/ **0x00** / 0x01/step] bit0: SDKJ Authentication -0: Panel Type -1: Remote Type bit1: Using user code setup -0: OFF, 1: ON bit2: Using key-counter setup -0: OFF, 1: ON bit3: Using billing external device setup -0: OFF, 1: ON bit3: Using external billing device setup -0: OFF, 1: ON bit4: Using extended external billing device setup -0: OFF, 1: ON bit5~6: Not used bit7: Using extended function J limit users -0: OFF, 1: ON
127	SDKJ27 Limit Setting	*CTL	
128	SDKJ28 Limit Setting	*CTL	
129	SDKJ29 Limit Setting	*CTL	
130	SDKJ30 Limit Setting	*CTL	
141	SDKJ1 ProductID	*CTL	[0 to 0xffffffff / **0** / 1/step]
142	SDKJ2 ProductID	*CTL	
143	SDKJ3 ProductID	*CTL	
144	SDKJ4 ProductID	*CTL	
145	SDKJ5 ProductID	*CTL	
146	SDKJ6 ProductID	*CTL	[0 to 0xffffffff / **0** / 1/step]
147	SDKJ7 ProductID	*CTL	
148	SDKJ8 ProductID	*CTL	
149	SDKJ9 ProductID	*CTL	
150	SDKJ10 ProductID	*CTL	

151	SDKJ11 ProductID	*CTL	[0 to 0xffffffff / **0** / 1/step]
152	SDKJ12 ProductID	*CTL	
153	SDKJ13 ProductID	*CTL	
154	SDKJ14 ProductID	*CTL	
155	SDKJ15 ProductID	*CTL	
156	SDKJ16 ProductID	*CTL	[0 to 0xffffffff / **0** / 1/step]
157	SDKJ17 ProductID	*CTL	
158	SDKJ18 ProductID	*CTL	
159	SDKJ19 ProductID	*CTL	
160	SDKJ20 ProductID	*CTL	

5404	**[User Code Count Clear]**		
001	UCodeCtrClr	CTL	[- / **-** / -] [Execute]
	Clears all counters for users.		

5411	**[LDAP Certification]**		
004	Easy Certification	*CTL	[0 or 1 / **1** / -] 1: On, 0: Off
	Determines whether easy LDAP certification is done.		
005	Password Null Not Permit	*CTL	[0 or 1 / **0** / -] 0: Password NULL not permitted. 1: Password NULL permitted.
	This SP is referenced only when SP5411-4 is set to "1" (On).		
006	Detail Option	*CTL	**0: OFF**, 1: ON
	Determines whether LDAP option (anonymous certification) is turned on or off.		

5412	**[Krb-Certification]**

100	Encrypt Mode	*CTL	[- / **0x1F** / 1bit/step] 0x01:AES256-CTS-HMAC-SHA1-96 0x02:AES128-CTS-HMAC-SHA1-96 0x04:DES3-CBC-SHA1 0x08:RC4-HMAC 0x10:DES-CBC-MD5 0xFF(0x1F):ALL

5413	**[Lockout Setting]**		
001	Lockout On/Off	*CTL	[0 or 1 / **0** / -] 0: Off, 1: On
	Switches on/off the lock on the local address book account.		
002	Lockout Threshold	*CTL	[1 to 10 / **5** / 1/step]
	Sets a limit on the frequency of lockouts for account lockouts.		
003	Cancellation On/Off	*CTL	[0 or 1 / **0** / -] 0: Off (no wait time, lockout not cancelled) 1: On (system waits, cancels lockout if correct user ID and password are entered.
	Determines whether the system waits the prescribed time for input of a correct user ID and password after an account lockout has occurred.		
004	Cancellation Time	*CTL	[1 to 999 / **60** / 1 min./step]
	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).		

5414	**[Access Mitigation]**		
001	Mitigation On/Off	*CTL	[0 or 1 / **0** / -] 0: Off, 1: On
	Switches on/off masking of continuously used IDs and passwords that are identical.		

002	Mitigation Time	*CTL	[0 to 60 / **15** / 1 min./step]
	Sets the length of time for excluding continuous access for identical user IDs and passwords.		

5415	[Password Attack]		
001	Permissible Number	*CTL	[0 to 100 / **30** / 1 attempt/step]
	Sets the number of attempts to attack the system with random passwords to gain illegal access to the system.		
002	Detect Time	*CTL	[1 to 10 / **5** / 1 sec./step]
	Sets the time limit to stop a password attack once such an attack has been detected.		

5416	[Access Information]		
001	Access User Max Num	*CTL	[50 to 200 / **200** / 1 users/step]
	Limits the number of users used by the access exclusion and password attack detection functions.		
002	Access Password Max Num	*CTL	[50 to 200 / **200** / 1 password/step]
	Limits the number of passwords used by the access exclusion and password attack detection functions.		
003	Monitor Interval	*CTL	[1 to 10 / **3** / 1 sec./step]
	Sets the processing time interval for referencing user ID and password information.		

5417	[Access Attack]		
001	Access Permissible Number	*CTL	[0 to 500 / **100** / 1/step]
	Sets a limit on access attempts when an excessive number of attempts are detected for MFP features.		
002	Attack Detect Time	*CTL	[10 to 30 / **10** / 1 sec./step]
	Sets the length of time for monitoring the frequency of access to MFP features.		

003	Productivity Fall Wait	*CTL	[0 to 9 / **3** / 1 sec./step]
	Sets the wait time to slow down the speed of certification when an excessive number of access attempts have been detected.		
004	Attack Max Num	*CTL	[50 to 200 / **200** / 1 attempt/step]
	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.		

5420	**[User Authentication]**		
	These settings should be done with the System Administrator. **Note**: These functions are enabled only after the user access feature has been enabled.		
001	Copy	*CTL	[0 to 1 / **0** /1] 0: On, 1: Off
	Determines whether certification is required before a user can use the copy applications.		
002	Color Security Setting	*CTL	-
	Enables or disables the color copy limitation for each copy mode when the user authentication is "ON". **0: Enable (default)**, 1: Disable Bit0: B/W mode Bit1: Mono color mode Bit2: Two colors mode Bit3: Full color mode Bit4: Automatic color mode Bit5 to 7: Reserved		
011	DocumentServer	*CTL	[0 or 1/ **0** /1] 0: On, 1: Off
	Determines whether certification is required before a user can use the document server.		
021	Fax	*CTL	[0 or 1/ **0** /1] 0: On, 1: Off
	Determines whether certification is required before a user can use the fax application.		

031	Scanner	*CTL	[0 or 1/ **0** /1] 0: On, 1: Off
	Determines whether certification is required before a user can use the scan applications.		
041	Printer	*CTL	[0 or 1/ **0** /1] 0: On, 1: Off
	Determines whether certification is required before a user can use the printer applications.		
051	SDK1	*CTL	[0 or 1 / **0** / 1] 0: ON. 1: OFF
	Determines whether certification is required before a user can use the SDK application.		
061	SDK2	*CTL	[0 or 1 / **0** / 1] 0: ON. 1: OFF
	Determines whether certification is required before a user can use the SDK application.		
071	SDK3	*CTL	[0 or 1 / **0** / 1] 0: ON. 1: OFF
	Determines whether certification is required before a user can use the SDK application.		

5430	**[Auth Dialog Message Change]**		
	Displays the Authentication dialog message or not.		
001	Message Change On/Off	*CTL	[0 or 1 / **0** / 1/step] 0: OFF 1: ON
002	Message Text Download	CTL	[- / **-** / -] [Execute]
003	Message Text ID	CTL	[characters(max.16Byte) / **-** / -]

5481	**[Authentication Error Code]**
	These SP codes determine how the authentication failures are displayed.

001	System Log Disp	*CTL	[0 or 1/ **0** /1] 0: Off, 1: On
	Determines whether an error code appears in the system log after a user authentication failure occurs.		
002	Panel Disp	*CTL	[0 or 1/ **1** /1] 1: On, 0: Off
	Determines whether an error code appears on the operation panel after a user authentication failure occurs.		

5501	**[PM Alarm Interval]**		
001	PM Alarm Level	*CTL	[0 to 9999 / **0** / 1 /step] 0: Alarm off 1 to 9999: Alarm goes off when **Value (1 to 9999) x 1000 > PM counter**
002	Original Count Alarm	*CTL	[0 or 1 / **0** / 1 /step] 0: No alarm sounds 1: Alarm sounds after the number of originals passing through the ARDF > 10,000

5504	**[Jam Alarm Interval]**		
	Sets the alarm to sound for the specified jam level (document misfeeds are not included).		
001	-	*CTL	[0 to 3 / **3** / 1 /step] 0: Zero (Off) 1: Low (2.5K jams) 2: Medium (3K jams) 3: High (6K jams)

5505	**[Error Alarm]**		
	Sets the error alarm level. The error alarm counter counts "1" when any SC is detected. However, the error alarm counter decreases by "1" when an SC is not detected during a set number of copied sheets (for example, default 1500 sheets). The error alarm occurs when the SC error alarm counter reaches "5".		
001	-	*CTL	[0 to 255 / **P3c: 25, P3d: 35** / 100 copies / step]

5507	**[Supply Alarm]**		
	Enables or disables notifying a supply call via @Remote.		
001	Paper Supply Alarm	*CTL	[0 or 1 / **0** / 1 /step] 0: Off 1: On
002	Staple Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On
003	Toner Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On
005	DrumLifeRemain Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On
006	WasteTonerBottle Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On
007	Tensya Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On
008	Fuser Supply Alarm	*CTL	[0 or 1 / **1** / 1 /step] 0: Off 1: On
080	Toner Call Timing	*CTL	Changes the timing of the "Toner Supply Call" via @Remote, when the following conditions occur. [0 or 1 / **0** / 1 /step] 0: At replacement 1: At near end

128	Interval :Others	*CTL	[00250 to 10000 / **1000** / 1 /step]
132	Interval :A3	*CTL	
133	Interval :A4	*CTL	
134	Interval :A5	*CTL	
141	Interval :B4	*CTL	
142	Interval :B5	*CTL	
160	Interval :DLT	*CTL	
164	Interval :LG	*CTL	
166	Interval :LT	*CTL	
172	Interval :HLT	*CTL	

5508	**[CC Call]**		
001	Jam Remains	*CTL	[0 or 1 / **1** / 1 /step] 0: Disable, 1: Enable
	Enables/disables initiating a call for an unattended paper jam.		
002	Continuous Jams	*CTL	[0 or 1 / **1** / - /step] 0: Disable, 1: Enable
	Enables/disables initiating a call for consecutive paper jams.		
003	Continuous Door Open	*CTL	[0 or 1 / **1** / - /step] 0: Disable, 1: Enable
	Enables/disables initiating a call when the front door remains open.		
011	Jam Detection: Time Length	*CTL	[3 to 30 / **10** / 1 minute /step]
	Sets the time a jam must remain before it becomes an “unattended paper jam”. This setting is enabled only when SP5508-004 is set to "1".		
012	Jam Detection: Continuous Count	*CTL	[2 to 10 / **5** / 1 /step]
	Sets the number of consecutive paper jams required to initiate a call. This setting is enabled only when SP5508-004 is set to "1".		

013	Door Open: Time Length	*CTL	[3 to 30 / **10** / 1 /step]
	Sets the length of time the door remains open before the machine initiates a call. This setting is enabled only when SP5-508-004 is set to "1".		

5515	**[SC/Alarm Setting]**		
	With NRS (New Remote Service) in use, these SP codes can be set to issue an SC call when an SC error occurs. If this SP is switched off, the SC call is not issued when an SC error occurs.		
001	SC Call	*CTL	[0 or 1 / **1** / -] 0: Off 1: On
002	Service Parts Near End Call	*CTL	
003	Service Parts End Call	*CTL	
004	User Call	*CTL	
006	Communication Test Call	*CTL	[0 or 1 / **1** / -] 0: Off 1: On
007	Machine Information Notice	*CTL	
008	Alarm Notice	*CTL	
009	Non Genuine Tonner Alarm	*CTL	
010	Supply Automatic Ordering Call	*CTL	
011	Supply Management Report Call	*CTL	
012	Jam/Door Open Call	*CTL	

5516	**[Individual PM Part Alarm Call]**		
	With @Remote in use, these SP codes can be set to issue an PM alarm call when one of SP parts reaches its yield.		
001	Disable/Enable Setting (0: Not send, 1: Send)	*CTL	[0 or 1 / **1** / -] 0: Not send, 1: Send

004	Percent yield for triggering PM alert	*CTL	[1 to 255 / **75** / 1 %/step]

5730	[Extended Function Setting]		
010	Expiration Prior Alarm Set	*CTL	[0 to 999 / **20** / 1days/step]

5731	[Counter Effect]		
001	Change MK1 Cnt (Paper->Combine)	*CTL	[0 or 1 / **0** / 1/step]

5745	[Deemed Power Consumption]		
	Displays the status of each mode.		
211	Controller Standby	*CTL	[0 to 9999 / **0** / 1 /step]
212	STR	*CTL	[0 to 9999 / **0** / 1 /step]
213	Main Power Off	*CTL	[0 to 9999 / **0** / 1 /step]
214	Scanning and Printing	*CTL	[0 to 9999 / **0** / 1 /step]
215	Printing	*CTL	[0 to 9999 / **0** / 1 /step]
216	Scanning	*CTL	[0 to 9999 / **0** / 1 /step]
217	Engine Standby	*CTL	[0 to 9999 / **0** / 1 /step]
218	Low Power Consumption	*CTL	[0 to 9999 / **0** / 1 /step]
219	Silent Consumption	*CTL	[0 to 9999 / **0** / 1 /step]
220	Fusing off standby	*CTL	[0 to 9999 / **0** / 1 /step]

5746	[BMLinkS]		
001	available	*CTL	[0 or 1 / **1** / 1/step]
002	Interval:mon	*CTL	[10 to 3600 / **60** / 1/step]
004	available:log	*CTL	[0 or 1 / **1** / 1/step]

5749	[Import/Export]

001	Export	*CTL	[- / - / -] Target: [System] [Printer] [Fax] [Scanner] Option: [Unique] [Secret] Crypt config: [Encryption] [Execute]
101	Import	CTL	[- / - / -] Option: [Unique] Crypt config: [Encryption] Encryption key (if selected) [Execute]
251	Export Result Print (SP)	CTL	[- / - / -] [Execute]
252	Import Result Print (SP)	CTL	[- / - / -] [Execute]

5750	[Job Access Log]		
	-		
001	ChgLogMaxNum	*CTL	[0 or 1 / 0 / 1/step] 0: Default Num 1: Change Num

5801	[Memory Clear]		
001	All Clear	CTL	[- / - / -] [Execute]
	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.		
002	Engine	ENG	[- / - / -] [Execute]
	Clears the engine settings.		

003	SCS	CTL	[- / - / -] [Execute]
	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.		
004	IMH Memory Clr	CTL	[- / - / -] [Execute]
	-		
005	MCS	CTL	Initializes the MCS settings. [- / - / -] [Execute]
008	Printer Application	CTL	[- / - / -] [Execute]
	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		
010	Web Service	CTL	[- / - / -] [Execute]
	Deletes the network file application management files and thumbnails, and initializes the job login ID.		
011	NCS	CTL	[- / - / -] [Execute]
	All setting of Network Setup (User Menu) (NCS: Network Control Service)		

014	DCS Memory Clr	CTL	[- / - / -] [Execute]
	Initializes the DCS (Delivery Control Service) settings.		
015	Clear UCS Setting	CTL	[- / - / -] [Execute]
	Initializes the UCS (User Information Control Service) settings.		
016	MIRS Memory Clr	CTL	[- / - / -] [Execute]
	Initializes the MIRS (Machine Information Report Service) settings.		
017	CCS	CTL	Initializes the CCS (Certification and Charge-control Service) settings. [- / - / -] [Execute]
018	SRM Memory Clr	CTL	Initializes the SRM (System Resource Manager) settings. [- / - / -] [Execute]
019	LCS Memory Clr	CTL	[- / - / -] [Execute]
	Initializes the LCS settings.		
021	ECS	CTL	Initializes the ECS settings. [- / - / -] [Execute]
025	websys	CTL	[- / - / -] [Execute]
	-		

5802	[FreeRun]		
	Performs a free run on the copier engine. Note • The machine starts free run in the same condition as the sequence of A4/LT, A3 or A4 SEF printing from the 1st or 2nd tray. Therefore, the correct paper should be loaded in the 1st tray or 2nd tray, but paper is not fed. • The main switch has to be turned off and on after using the free run mode for a test.		
001	B/W A4 LEF	ENG	[0 or 1 / **1** / 1/step]
002	FC A4 LEF	ENG	
003	FC A3	ENG	

5803	[Input Check]
	See "Input Check Table"(☛p.408).

5804	[Output Check]
	See "Output Check Table"(☛p.408).

5805	[Anti-Condensation Heater]		
001	0:OFF / 1:ON	*ENG	[0 or 1 / **0** / 1/step] 0:OFF 1:ON

5810	[SC Reset]		
	Resets a type A service call condition. Note • Turn the main switch off and on after resetting the SC code.		
001	Fusing SC Reset	ENG	[0 or 1 / **0** / 1/step]
002	Hard High Temp. Detection	ENG	

5811	[MachineSerial]
	Machine Serial Number Display

002	Display	*ENG	[0 to 255 / **0** / 1/step]
	Displays the machine serial number.		
004	BCU	ENG	[0 to 255 / **0** / 1/step]
	Inputs		
005	Novita	ENG	[0 to 255 / **0** / 1/step]
	Inputs		

5812	**[Service Tel. No. Setting]**		
001	Service	*CTL	-
	Sets the telephone number for a service representative. This number is printed on the Counter List, which can be printed with the user's "Counter" menu. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
002	Facsimile	*CTL	-
	Sets the fax or telephone number for a service representative. This number is printed on the Counter List. This can be up to 20 characters (both numbers and alphabetic characters can be input).		
003	Supply	*CTL	-
	Use this to input the telephone number of your supplier for consumables. Enter the number and press #.		
004	Operation	*CTL	-
	Use this to input the telephone number of your sales agency. Enter the number and press #.		
101	Disp Inquiry	*CTL	[0 or 1 / **0** / 1/step] 0: Does not display 1: Displays
	Display or doesn't display the service phone number.		

5816	**[Remote Service]**

001	I/F Setting	*CTL	[0 to 2 / **2** / 1 /step] 0: Remote service off 1: CSS remote service on 2: NRS remote service on
	Selects the remote service setting.		
002	CE Call	*CTL	[0 or 1 / **1** / 1 /step] 0: Start of the service 1: End of the service
	Performs the CE Call at the start or end of the service. **Note** • This SP is activated only when SP 5816-001 is set to "2".		
003	Function Flag	*CTL	[0 or 1 / **0** / 1 /step] 0: Disabled 1: Enabled
	Enables or disables the remote service function.		
004	Communication Test Call	CTL	[- / **-** / -] [Execute]
	This SP issues a test call from a GW machine to determine whether it can communicate successfully with the call center after it has been set up for NRS. Successful return will be in the range 0 to 99.		
005	Device Information Call	CTL	[- / **-** / -] [Execute]
	This SP issues a call to notify the NRS device information to the call center. Successful return will be in the range 0 to 99.		
007	SSL Disable	*CTL	[0 or 1 / **0** / 1 /step] 0: Yes. SSL not used. 1: No. SSL used.
	Controls if RCG (Remote Communication Gate) confirmation is done by SSL during an RCG send for the @Remote over a network interface.		

008	RCG Connect Timeout	*CTL	[1 to 90 / **30** / 1 second /step]
	Sets the length of time (seconds) for the time-out when the RCG (Remote Communication Gate) connects during a call via the @Remote network.		
009	RCG Write Timeout	*CTL	[1 to 100 / **60** / 1 second /step]
	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.		
011	Port 80 Enable	*CTL	[0 or 1 / **0** / 1 /step] 0: No. Access denied 1: Yes. Access granted.
	Controls if permission is given to get access to the SOAP method over Port 80 on the @Remote network.		
012	@Remote Communication Permission Setting	*CTL	[0 or 1 / **1** / 1 /step] 0: Not permitted 1:Permitted
	-		
013	RFU Timing	*CTL	[0 or 1 / **1** / 1 /step] 0: Any status of a target machine 1: Sleep or panel off mode only
	Selects the timing for the remote firmware updating.		
014	RCG Error Cause	CTL	[0 or 1 / **0** / 1 /step]
	0: Normal 1: Fails to reflect the client/server certificate settings by network failure to reboot. Transitions to 0 on restarting the machine.		
021	RCG – C Registed	*CTL	[0 or 1 / **0** / 1 /step] 0: Installation not completed 1: Installation completed
	This SP displays the RCG-N installation end flag.		

023	Connect Type (N/M)	*CTL	[0 or 1 / **0** / 1 /step] 0: Internet connection 1: Dial-up connection
	This SP displays and selects the RCG-N connection method.		
061	Cert Expire Timing **DFU**	*CTL	[0 to 0xffffffff / **0** / 1 /step]
	Proximity of the expiration of the certification.		
062	Use Proxy	*CTL	[0 or 1 / **0** / 1 /step] 0: Not use 1: Use
	This SP setting determines if the proxy server is used when the machine communicates with the service center.		
063	Proxy Host	*CTL	-
	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. **Note** • The address display is limited to 128 characters. Characters beyond the 128 character are ignored. • This address is customer information and is not printed in the SMC report.		
064	Proxy PortNumber	*CTL	[0 to 0xffff / **0** / 1 /step]
	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. **Note** • This port number is customer information and is not printed in the SMC report.		

065	Proxy User Name	*CTL	-
	This SP sets the HTTP proxy certification user name. Note • The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored. • This name is customer information and is not printed in the SMC report.		
066	Proxy Password	*CTL	-
	This SP sets the HTTP proxy certification password. Note • The length of the password is limited to 31 characters. Any character beyond the 31st character is ignored. • This name is customer information and is not printed in the SMC report.		

067	CERT:Up State		*CTL	[0 to 255 / **0** / 1 /step]
	Displays the status of the certification update.			
	0	The certification used by RCG-N 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 an certification error has been received, and the rescue certification is being recorded.		
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.		

068	CERT:Error	*CTL	[0 to 255 / **0** / 1 /step]
	Displays a number code that describes the reason for the request for update of the certification.		
	0	Normal. There is no request for certification update in progress.	
	1	Request for certification update in progress. The current certification has expired.	
	2	An SSL error notification has been issued. Issued after the certification has expired.	
	3	Notification of shift from a common authentication to an individual certification.	
	4	Notification of a common certification without ID2.	
	5	Notification that no certification was issued.	
	6	Notification that GW URL does not exist.	
069	CERT:Up ID	*CTL	-
	The ID of the request for certification.		
083	Firm Up Status	*CTL	[0 to 5 / **0** / 1 /step]
	Displays the status of the firmware update.		
085	Firm Up User Check	*CTL	-
	This SP setting determines if the operator can confirm the previous version of the firmware before the firmware update execution. If the option to confirm the previous version is selected, a notification is sent to the system manager and the firmware update is done with the firmware files from the URL.		
086	Firmware Size	*CTL	-
	Allows the service technician to confirm the size of the firmware data files during the firmware update execution.		
087	CERT: Macro Ver.	CTL	-
	Displays the macro version of the @Remote certification.		
088	CERT: PAC Ver.	CTL	-
	Displays the PAC version of the @Remote certification.		

089	CERT: ID2 Code	CTL	-
	Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_). Asteriskes (****) indicate that no @Remote certification exists.		
090	CERT: Subject	CTL	-
	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.		
091	CERT: Serial No	CTL	-
	Displays serial number for the NRS certification. Asterisks (****) indicate that no DESS exists.		
092	CERT: Issuer	CTL	-
	Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asteriskes (****)indicate that no DESS exists.		
093	CERT: Valid Start	CTL	-
	Displays the start time of the period for which the current @Remote certification is enabled.		
094	CERT: Valid End	CTL	-
	Displays the end time of the period for which the current @Remote certification is enabled.		

102	CERT: Strength	CTL	[1 or 2 / **1** / 1 /step] 1: 512 bit 2: 2048 bit
	Displays cryptic strength of the NRS certification.		
	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.		
200	Manual Polling	CTL	-
	Executes the manual polling.		
201	Regist Status	CTL	[0 to 4 / **0** / 1 /step]
	Displays a number that indicates the status of the @Remote service device. 0: Neither the registered device by the external nor embedded RCG device is set. 1: The embedded RCG device is being set. Only Box registration is completed. In this status, this unit cannot answer a polling request from the external RCG. 2. The embedded RCG device is set. In this status, the external RCG unit cannot answer a polling request. 3. The registered device by the external RCG is being set. In this status the embedded RCG device cannot be set. 4 The registered module by the external RCG has not started.		
202	Letter Number	*CTL	-
	Allows entry of the number of the request needed for the RCG-N device.		
203	Confirm Execute	CTL	-
	Executes the inquiry request to the @Remote GW URL.		
204	Confirm Result	CTL	[0 to 255 / **0** / 1 /step]

	Displays a number that indicates the result of the inquiry executed with SP5816 203. **0**: Succeeded 1: Inquiry number error 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Inquiry executing		
205	Confirm Place	CTL	-
	Displays the result of the notification sent to the device from the GW URL in answer to the inquiry request. Displayed only when the result is registered at the GW URL.		
206	Register Execute	CTL	-
	Executes "Embedded RCG Registration".		
207	Register Result	CTL	[0 to 255 / **0** / 1 /step]
	Displays a number that indicates the registration result. 0: Succeeded 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Registration executing		

208	Error Code	CTL	[-2147483647 to 2147483647 / **0** / -]
	Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.		
	Cause	**Code**	**Meaning**
	Illegal Modem Parameter	-11001	Chat parameter error
		-11002	Chat execution error
		-11003	Unexpected error
		-11004	
		-11005	
	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.
	Operation Error, Incorrect Setting	-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	ID2 mismatch between an individual certification and NVRAM
		-12010	Certification area is not initialized.

208	Error Caused by Response from GW URL	-2385	Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387	Not supported at the Service Center
		-2389	Database out of service
		-2390	Program out of service
		-2391	Two registrations for same device
		-2392	Parameter error
		-2393	Basil not managed
		-2394	Device not managed
		-2395	Box ID for Basil is illegal
		-2396	Device ID for Basil is illegal
		-2397	Incorrect ID2 format
		-2398	Incorrect request number format
209	Instal Clear	CTL	-
	Releases the machine from its embedded RCG setup		
250	CommLog Print	CTL	-
	Prints the communication log.		

5821	**[Remote Service Address]**		
002	RCG IP Address	*CTL	[00000000h to FFFFFFFFh / **00000000h** / 1 /step]
	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		
003	RCG Port	*CTL	[0 to 65535 / **443** / 1 /step]
	Sets the port number of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		

004	RCG URL Path	*CTL	[0 to 16 characters / **/RCG/services/** / - / step]
	Sets the URL path of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		

5824	**[NV-RAM Data Upload]**		
	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card. For details, see "NVRAM Data Upload/Download" in the "Main chapters: 5. System Maintenance".		
001	NV-RAM Data Upload	CTL	-

5825	**[NV-RAM Data Download]**		
	Downloads the UP and SP mode data from an SD card to the NVRAM. For details, see "NVRAM Data Upload/Download" in the "Main chapters: 5. System Maintenance".		
001	NV-RAM Download	CTL	[- / **-** / -] [Execute]

5828	**[Network Setting]**		
001	IPv4 Address (Ethernet/ IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 address for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
002	IPv4 Subnet Mask (Ethernet/IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 subnet mask for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
003	IPv4 Default Gateway (Ethernet/IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 default gateway used by the network for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
006	DHCP	*CTL	[0 to 1 / **1** / 1 /step] 0: Not used (manual setting) 1: Used
	This SP code allows you check and change the setting that determines whether the IP address is used with DHCP on an Ethernet or wireless (802.11) LAN network.		

021	Active IPv4 Address	CTL	This SP allows you to check the IPv4 address that was used when the machine started up with DHCP.
022	Active IPv4 Subnet Mask	CTL	This SP allows you to check the IPv4 subnet mask setting that was used when the machine started up with DHCP.
023	Active IPv4 Gateway Address	CTL	This SP allows you to check the IPv4 default gateway setting that was used when the machine started up with DHCP.
050	1284 Compatibility (Centro)	*CTL	Enables or disables 1284 Compatibility. [0 or 1 / **1** / 1 /step] 0: Disabled, 1: Enabled
052	ECP (Centro)	*CTL	[0 or 1 / **1** / 1 /step] 0: Disabled, 1: Enabled
	Enables or disables ECP Compatibility. **Note** • This SP is activated only when SP5-828-50 is set to "1".		
065	Job Spooling	*CTL	Switches the job spooling on and off. [0 to 1 / **0** / 1 /step] 0: No spooling 1: Spooling enabled
066	Job Spooling Clear: Start Time	*CTL	[0 to 1 / **1** / 1 /step] 1: OFF Resumes printing spooled job. 0: ON Clears spooled job.
	This SP determines whether the job interrupted at power off is resumed at the next power on. This SP operates only when SP5828-065 is set to "1".		

<table>
<tr><td rowspan="6">069</td><td colspan="2">Job Spooling (Protocol)</td><td>*CTL</td><td colspan="2">[0 to 1 / 1 / 1 /step]
0: No spooling
1: Spooling enabled</td></tr>
<tr><td colspan="5">This SP determines whether job spooling is enabled or disabled for each protocol. This is an 8-bit setting.</td></tr>
<tr><td>0</td><td>LPR</td><td>4</td><td colspan="2">BMLinks (Japan Only)</td></tr>
<tr><td>1</td><td>FTP (Not Used)</td><td>5</td><td colspan="2">DIPRINT</td></tr>
<tr><td>2</td><td>IPP</td><td>6</td><td colspan="2">Reserved (Not Used)</td></tr>
<tr><td>3</td><td>SMB</td><td>7</td><td colspan="2">Reserved (Not Used)</td></tr>
<tr><td rowspan="2">087</td><td colspan="2">Protocol Usingage</td><td>*CTL</td><td colspan="2">[0 or 1 / 0x00000000 / 1/step]</td></tr>
<tr><td colspan="5">Shows which protocols have been used with the network.
0: Off (Not used the network with the protocol.)
1: On (Used the network with the protocol once or more.)
bit0: IPsec, bit1: IPv6, bit2: IEEE 802. 1X, bit3:Wireless LAN,
bit4: Security mode level setting, bit5:Appletalk, bit6: DHCP,
bit7: DHCPv6, bit8: telnet, bit9: SSL, bit10: HTTPS,
bit11: BMLinkS printing, bit12: diprint printing, bit13: LPR printing,
bit14: ftp printing, bit15: rsh printing, bit16: SMB printing,
bit17: WSD-Printer, bit18: WSD-Scanner, bit19: Scan to SMB,
bit20: Scan to NCP, bit21: Reserve, bit22: Bluetooth,
bit23: IEEE 1284, bit24: USB printing, bit25: Dynamic DNS,
bit26: Netware printing, bit27: LLTD, bit28: IPP printing,
bit29: IPP printing (SSL), bit30: ssh, bit31: sftp</td></tr>
<tr><td>090</td><td colspan="2">TELNET (0: OFF 1: ON)</td><td>*CTL</td><td colspan="2">Enables or disables the Telnet protocol.
[0 or 1 / 1 / 1/step]
0: Disable, 1: Enable</td></tr>
<tr><td>091</td><td colspan="2">Web (0: OFF 1: ON)</td><td>*CTL</td><td colspan="2">Enables or disables the Web operation.
[0 or 1 / 1 / 1/step]
0: Disable, 1: Enable</td></tr>
</table>

145	Active IPv6 Link Local Address	CTL	This is the IPv6 local address link referenced on the Ethernet or wireless LAN (802.11b) in the format: "Link Local Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
147	Active IPv6 Stateless Address 1	CTL	These SPs are the IPv6 status addresses (1 to 5) referenced on the Ethernet or wireless LAN (802.11b) in the format: "Status Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
149	Active IPv6 Stateless Address 2	CTL	
151	Active IPv6 Stateless Address 3	CTL	
153	Active IPv6 Stateless Address 4	CTL	
155	Active IPv6 Stateless Address 5	CTL	
156	IPv6 Manual Address	*CTL	This SP is the IPv6 manually set address referenced on the Ethernet or wireless LAN (802.11b) in the format: "Manual Set Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
158	IPv6 Gateway Address	*CTL	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.
159		CTL	This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN (802.11b). The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
161	IPv6 Stateless Auto Setting	*CTL	Enables or disables the automatic setting for IPv6 stateless. [0 or 1 / **1** / 1 /step] 0: Disable, 1: Enable

236	Web Item visible	*CTL	[0 x 0000 to 0 x ffff / **0 x ffff** / - /step] 0: Not displayed 1: Displayed
	Displays or does not display the Web system items. bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)		
237	Web shopping link visible	*CTL	[0 to 1 / **1** / 1 /step] 0: Not display 1:Display
	Displays or does not display the link to Net RICOH on the top page and link page of the web system.		
238	Web supplies Link visible	*CTL	[0 to 1 / **1** / 1 /step] 0: Not display 1:Display
	Displays or does not display the link to Consumable Supplier on the top page and link page of the web system.		
239	Web Link1 Name	*CTL	-
	This SP confirms or changes the URL1 name on the link page of the web system. The maximum characters for the URL name are 31 characters.		
240	Web Link1 URL	*CTL	-
	This SP confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.		
241	Web Link1 visible	*CTL	[0 to 1 / **1** / - /step] 0: Not display 1:Display
	Displays or does not display the link to URL1 on the top page of the web system.		
242	Web Link2 Name	*CTL	-
	Same as "-239"		

243	Web Link2 URL	*CTL	-
	Same as "-240"		
244	Web Link2 visible	*CTL	-
	Same as "-241"		
247	DHCPv6 Address	CTL	[00000000000000000000000000000000h~ FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFh / - / - / step]
	Gets DHCPv6 address.		
249	DHCPv6 DUID	CTL	[00000000000000000000000000000000h~ FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFh / **00000000000000000000000000000000h (0000:0000:0000:0000:0000:0000:0000:0000 / 0)** / - /step]
	Sets DHCPv6 DUID.		
252		*CTL	[0 to 1 / **1** / -]

5832	**[HDD]** HDD Initialization

001	HDD Formatting (ALL)	CTL	Initializes the hard disk. Use this SP mode only if there is a hard disk error. [- / - / -] [Execute]
002	HDD Formatting (IMH)	CTL	
003	HDD Formatting (Thumbnail)	CTL	
004	HDD Formatting (Job Log)	CTL	
005	HDD Formatting (Printer Fonts)	CTL	
006	HDD Formatting (User Info1)	CTL	
007	HDD Formatting (User Info2)	CTL	
008	HDD Formatting (Scanner Mail)	CTL	
009	HDD Formatting (Data for a Design)	CTL	
010	HDD Formatting (Log)	CTL	
011	HDD Formatting (Ridoc I/F)	CTL	

5840	**[IEEE 802.11]**		
006	Channel MAX	*CTL	**Range:** DOM 1-14 NA/CHN/TW 1-11 EU 1-13 **Default:** DOM **14** NA/CHN/TW **11** EU **13**

007	Channel MIN	*CTL	**Range:** DOM 1-14 NA/CHN/TW 1-11 EU 1-13 **Default: 1**
008	Transmission Speed	*CTL	[0 x 00 to 0 x FF / **0 x FF to Auto** / -] **0 x FF to Auto** [Default] 0 x 11 – 55M Fix 0 x 10 – 48M Fix 0 x 0F – 36M Fix 0 x 0E – 18M Fix 0 x 0D – 12M Fix 0 x 0B – 9M Fix 0 x 0A – 6M Fix 0 x 07 – 11M Fix 0 x 05 – 5.5M Fix 0 x 08 – 1M Fix 0 x 13 – 0 x FE (reserved) 0 x 12 – 72M (reserved) 0 x 09 – 22M (reserved)
011	WEP Key Select	*CTL	-
013	RTS/CTS Thresh	*CTL	[0 to 3000 / **2432** / 1/step]
	Adjusts the RTS/CTS threshold for the IEEE802.11 card. This SP is displayed only when the IEEE802.11 card is installed.		
042	Fragment Thresh	*CTL	[256 to 2346 / **2346** / 1/step]
	Adjusts the fragment threshold for the IEEE802.11 card. This SP is displayed only when the IEEE802.11 card is installed.		

043	11g CTS to Self	*CTL	[0 or 1 / **1** / 1/step] 0: OFF, 1: ON
	Determines whether the CTS self function is turned on or off. This SP is displayed only when the IEEE802.11 card is installed.		
044	11g Slot Time	*CTL	[0 or 1 / **0** / 1/step] 0: 20 um, 1: 9 um
	Selects the slot time for IEEE802.11.		
045	WPA Debug Lvl	*CTL	[1 to 3 / **3** / 1/step] 1: Info 2: warning 3: error
	Selects the debug level for WPA authentication application. This SP is displayed only when the IEEE802.11 card is installed.		

5841	**[Supply Name Setting]**
	Specifies supply names. These appear on the screen when the user presses the Inquiry button in the user tools screen.

001	Toner Name Setting: Black	*CTL	[0 to 20 / **0** / 1byte/step]
002	Toner Name Setting: Cyan	*CTL	
003	Toner Name Setting: Yellow	*CTL	
004	Toner Name Setting: Magenta	*CTL	
007	OrgStamp	*CTL	
011	Staple Std1	*CTL	
012	Staple Std2	*CTL	
013	Staple Std3	*CTL	
014	Staple Std4	*CTL	
021	Staple Bind 1	*CTL	
022	Staple Blind2	*CTL	
023	Staple Blind 3	*CTL	

5842	**[GWWS Analysis]**		
001	Setting 1	*CTL	[8bit assign / **00000000** / bit switch] 0bit[LSB]: system, other group 1bit: capture related group 2bit: authentication related group 3bit: address book related group 4bit: device management related group 5bit: output related(print, FAX, and delivery) group 6bit: repository, F0,etc. document related group 7bit: debug log level suppression
	Default: **00000000** – do not change Netfiles: Jobs to be printed from the document server using a PC and the DeskTopBinder software		

002	Setting 2	*CTL	[8bit assign / **00000000** / bit switch] 0~6bit: unused 7bit: time stamp setting for 5682mmesg log. (1: min./sec/msec, 0: day/hour/min./sec)
	Optional settings for debug output mode for each NFA process.		

5844	**[USB]**		
005	Fixed USB Port	*CTL	[0 to 2 / **0** / 1 /step] 0: OFF 1: Level 1 2: Level 2
	This SP standardizes for common use the model name and serial number for USB PnP (Plug & Play). It determines whether the driver requires re-installation.		
006	PnP Model Name	*CTL	Default: **Laser Printer** (up to 20 characters allowed).
	This SP sets the model name to be used by the USB PnP when "Function Enable (Level 2) is set so the USB Serial No. can have a common name (SP5844-5).		
007	PnP Serial Number	*CTL	Default: **None** (up to 12 characters allowed for entry).
	This SP sets the serial number to be used by the USB PnP when "Function Enable (Level 2) set so the USB Serial No. can have a common name (SP5844-5). • Make sure that this entry is the same as the serial number in use. • At initialization the serial number generated from the model name is used, not the setting of this SP code. • At times other than initialization, the value set for this SP code is used.		

100	Notify Unsupport	*CTL	[0 to 1 / **1** / 1 /step] 0: Function enable 1: Function disable
	This SP determines whether an alert message appears on the control panel when a USB device (unsupported device) that cannot use an A-connector is connected. • An unsupported device is a device that cannot use the functions of the USB device. For example, a USB mouse cannot be used even if connected. • If the PictBridge option is not mounted, even if a digital camera is connected it cannot be used because it is an unsupported device.		

5845	**[Delivery Server Setting]**		
	Provides items for delivery server settings.		
022	Rapid Sending Control	*CTL	[0 or 1 / **1** / 1 /step] 0: Disable 1: Enable
	Enables or disables the prevention function for the continuous data sending error.		

5846	**[UCS Setting]**		
010	LDAP Search Timeout	*CTL	[1 to 255 / **60** / 1 /step]
	Sets the length of the timeout for the search of the LDAP server.		

041	Fill Addr Acl Info.	CTL	-
	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. 4. The address book and its initial data are created on the HDD automatically. 5. However, at this point the address book can be accessed by only the system administrator or key operator. 6. Enter the SP mode and do SP5846-041. After this SP executes successfully, any user can access the address book.		
043	Addr Book Media	*CTL	[0 to 30 / **0** / 1 /step] 0: Unconfirmed 1: SD Slot 1 2: SD Slot 2 4: USB Flash ROM 20: HDD 30: Nothing
	Displays the slot number where an address book data is in.		
047	Initialize Local Addr Book	CTL	[- / **-** / -] [Execute]
	Clears the local address book information, including the user code.		
049	Initialize LDAP Addr Book	CTL	[- / **-** / -] [Execute]
	Clears the LDAP address book information, except the user code.		

050	Initialize All Addr Book	CTL	[- / - / -] [Execute]
	Clears all directory information managed by UCS, including all user codes.		
051	Backup All Addr Book	CTL	[- / - / -] [Execute]
	Uploads all directory information to the SD card.		
052	Restore All Addr Book	CTL	[- / - / -] [Execute]
	Downloads all directory information from the SD card.		
053	Clear Backup Info	CTL	[- / - / -] [Execute]
	Deletes the address book data from the SD card in the service slot. Deletes only the files that were uploaded from this machine. This feature does not work if the card is write-protected. **Note** • After you do this SP, go out of the SP mode, and then turn the power off. • Do not remove the SD card until the Power LED stops flashing.		
060	Search option	*CTL	[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 0: Checks both upper/lower case characters 1: Japan Only 2: Japan Only 3: Japan Only 4 to 7: Not Used		

062	Complexity option 1	*CTL	[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. **Note** • This SP does not normally require adjustment. • This SP is enabled only after the system administrator has set up a group password policy to control access to the address book.		
063	Complexity Option 2 **DFU**	*CTL	[0 to 32 / **0** / 1 /step]
064	Complexity Option 3 **DFU**	*CTL	[0 to 32 / **0** / 1 /step]
065	Complexity Option 4 **DFU**	*CTL	[0 to 32 / **0** / 1 /step]
094	Encryption Stat	*CTL	[0 to 255 / **-** / 1 /step]
	Shows the status of the encryption function for the address book data.		

5848	**[Web Service]**		
	5848 2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router. 5848 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.		
004	Access Control: udirectory (Only Lower 4 bits)	*CTL	Switches access control on and off. [0000 or 0001 / **0000** / 1/step] 0000: No access control 0001: Access control
009	Access Ctrl: Job Ctrl (Lower 4 bits)	*CTL	
011	Access Ctrl: Devicemanagement (Lower 4bits)	*CTL	
022	Access Ctrl: uadministration (Lower 4bits)	*CTL	

210	Setting: LogType: Job1	*CTL	NIA
211	Setting: LogType: Job2	*CTL	
212	Setting: LogType: Access	*CTL	
213	Setting: Primary Srv	*CTL	
214	Setting: Secondary Srv	*CTL	
215	Setting: StartTime	*CTL	
216	Setting: IntervalTime	*CTL	
217	Setting: Timing	*CTL	

5849	**[Installation Date]**		
001	Display	*CTL	[- / **-** / -]
	The "Counter Clear Day" has been changed to "Installation Date" or "Inst. Date".		
002	Switch to Print	*CTL	[0 or 1 / **1** / 1 /step] 0: OFF (No Print) 1: ON (Print)
	Determines whether the installation date is printed on the printout for the total counter.		
003	Setup Count	*CTL	[0 or 99999999 / **0** / 1 /step]
	Displays the total counter at the setting day (SP5849-001).		

5856	**[Remote ROM Update]**		
	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.		
002	Local Port	*CTL	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5857	**[Save Debug Log]**

001	On/Off (1:ON 0:OFF)	*CTL	[0 or 1 / **0** / 1 /step] 0: OFF 1: ON
	Switches the debug log feature on and off. The debug log cannot be captured until this feature is switched on.		
002	Target (2: HDD 3: SD)	*CTL	[1 to 3 / **2** / 1 /step] 1:IC Card 2: HDD 3: SD Card
	Selects the storage device to save debug logs information when the conditions set with SP5-858 are satisfied.		
005	Save to HDD	*CTL	[-999999 to 9999999 / **0** / 1 /step]
	Saves the debug log of the input SC number in memory to the HDD. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.		
006	Save to SD Card	*CTL	[-999999 to 9999999 / **0** / 1/step]
	Saves the debug log of the input SC number in memory to the SD card.		
009	Copy HDD to SD Card (Latest 4 MB)	*CTL	[- / **-** / -] [Execute]
	Takes the most recent 4 MB of the log written to the hard disk and copies them to the SD Card. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.		

010	Copy HDD to SD Card (Latest 4 MB Any Key)	*CTL	[- / - / -] [Execute]
	Takes the log of the specified key from the log on the hard disk and copies it to the SD Card. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4 MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card. This SP does not execute if there is no log on the HDD with no key specified.		
011	Erase HDD Debug Data	*CTL	[- / - / -] [Execute]
	Erases all debug logs on the HDD		
012	Erase SD Card Debug Data	*CTL	[- / - / -] [Execute]
	Erases all debug logs on the SD Card. If the card contains only debugging files generated by an event specified by SP5858, the files are erased when SP5857 010 or 011 is executed. To enable this SP, the machine must be cycled off and on.		
013	Free Space on SD Card	*CTL	[- / - / -] [Execute]
	Displays the amount of space available on the SD card.		
014	Copy SD to SD (Latest 4 MB)	*CTL	[- / - / -] [Execute]
	Copies the last 4MB of the log (written directly to the card from shared memory) onto an SD card.		
015	Copy SD to SD (Latest 4 MB Any Key)	*CTL	[- / - / -] [Execute]
	This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number.		
016	Make HDD Debug	*CTL	[- / - / -] [Execute]
	This SP creates a 32 MB file to store a log on the HDD.		

017	Make SD Debug	*CTL	[- / - / -] [Execute]
	This SP creates a 4 MB file to store a log on an SD card.		

5858	**[Debug Save When]**		
	These SPs select the content of the debugging information to be saved to the destination selected by SP5857-002. SP5858-3 stores one SC specified by number. Refer to Section 4 for a list of SC error codes.		
001	Engine SC Error (0: OFF, 1: ON)	*CTL	[0 or 1 / **0** / 1/ step]
	Turns on/off the debug save for SC codes generated by copier engine errors.		
002	Controller SC Error (0: OFF, 1: ON)	*CTL	[0 or 1 / **0** / 1/ step]
	Turns on/off the debug save for SC codes generated by GW controller errors.		
003	Any SC Error	*CTL	[0 to 65535 / **0** / 1 /step]
004	Jam (0: OFF, 1: ON)	*CTL	[0 or 1 / **0** / 1/ step]
	Turns on/off the debug save for jam errors.		

5859	**[Debug Save Key No.]**
	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller board.

001	Key 1	*CTL	[–9999999 to 9999999 / **0** / 1 /step]
002	Key 2	*CTL	
003	Key 3	*CTL	
004	Key 4	*CTL	
005	Key 5	*CTL	
006	Key 6	*CTL	
007	Key 7	*CTL	
008	Key 8	*CTL	
009	Key 9	*CTL	
010	Key 10	*CTL	

5860	**[SMTP/POP3/IMAP4]**		
021	MDN Response RFC2298 Compliance	*CTL	[0 to 1 / **1** / 1 /step] 0: No 1: Yes
	Determines whether RFC2.5298 compliance is switched on for MDN reply mail.		
025	SMTP Auth. Direct Setting	*CTL	[0 to 255 / **0** / - /step]
	Selects the authentication method for SMPT. **Bit switch:** • Bit 0: LOGIN • Bit 1: PLAIN • Bit 2: CRAM MD5 • Bit 3: DIGEST MD5 • Bit 4 to 7: Not used **Note** • This SP is activated only when SMTP authorization is enabled by UP mode.		

026	S/MIME: MIME Header Setting	*CTL	[0 to 2 / **0** / 1 /step] 0: Microsoft Outlook Express standard 1: Internet Draft standard 2: RFC standard
	Selects the MIME header type of an E-mail sent by S/MIME.		

5866	**[E-Mail Report]**		
001	Report Validity	CTL	[0 to 1 / **0** / 1/step] 0: Enable, 1: Disable
	Enables/disables each function.		
005	Add Date Field	*CTL	[0 to 1 / **0** / 1/step] 0: Not add, 1: Add

5869	**[RAM Disk Setting]**		
001	Mail Function	*CTL	[0 or 1 / **0** / 1 /step]
	Writes to flash ROM the common proof for validating the device for @Remote specifications.		

5870	**[Common Key Info Writing]**		
001	Writing	CTL	-
	Writes to flash ROM the common proof for validating the device for @Remote specifications.		
003	Initialize	CTL	-
	Initializes the data area of the common proof for validating.		

5873	**[SD Card Appli Move]**		
001	Move Exec	CTL	-
	This SP copies the application programs from the original SD card in SD card slot 2 to an SD card in SD card slot 1.		

002	Undo Exec	CTL	-
	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).		

5878	[Option Setup]		
002	Data Overwrite Security	CTL	[- / **-** / -] [Execute]
	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.		

5881	[Fixed Phrase Block Erasing]		
001	Fixed Phase Block Erasing	CTL	[- / **-** / -] [Execute]
	Deletes the fixed phrase.		

5883	[Line Speed Selection]		
	Selects the line speed for middle thick paper.		
001	Middle Thick	*ENG	[0 or 1 / **0** / 1 /step] 0: MID CARD: Half Speed (115 mm/sec) 1: MID CARD: Normal Speed (C2.5c: 154, C2.5d: 205 mm/sec)

5887	[SD Get Counter]
	This SP determines whether the ROM can be updated.

	-	CTL	[- / - / -] [Execute]
001	This SP sends a text file to an SD card inserted in SD card Slot 2 (lower slot). The operation stores. The file is stored in a folder created in the root directory of the SD card called SD_COUNTER. The file is saved as a text file (*.txt) prefixed with the number of the machine. 1. Insert the SD card in SD card Slot 2 (lower slot). 2. Select SP5887 then touch [EXECUTE]. Touch [Execute] in the message when you are prompted.		

5888	[Personal Information Protect]		
001	Personal Information Protect	*CTL	[0 or 1 / **0** / 1 /step] 0: No authentication, No protection for logs 1: No authentication, Protected logs (only an administrator can see the logs)
	Selects the protection level for logs.		

5893	[SDK Application Counter]		
	Displays the counter name of each SDK application.		
001	SDK-1	CTL	-
002	SDK-2	CTL	
003	SDK-3	CTL	
004	SDK-4	CTL	
005	SDK-5	CTL	
006	SDK-6	CTL	

5894	[External Counter Setting]		
	Test Name1_1		
001	Switch Charge Mode	*ENG	[0 to 2 / **0** / 1/step]

5907	[Plug & Play Maker/Model Name]		
001	-	*CTL	-
	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.		

5919	[HDD Encryption]		
001	Display Operation State	*CTL	[0 or 1 / **0** / 1 /step] 0: Not Activated 1: Activated
	Shows the status of the encryption function for the HDD.		

5930	[MeterClick Ch.]		
001	MeterClick Ch.	*ENG	[0 or 1 / **0** / 1 /step] 0:OFF 1:ON
010	PCU	*ENG	[0 or 1 / **1** / 1 /step] 0:OFF 1:ON
014	Mid Trans Unit	*ENG	[0 or 1 / **1** / 1 /step] 0:OFF 1:ON
016	Fusing Unit	*ENG	[0 or 1 / **0** / 1 /step] 0:OFF 1:ON

5985	[Device Setting]
	Enables/disables the on-board device.

001	On Board NIC	CTL	[0 to 2 / **0** / 1/step] 0: Disable, 1: Enable, 2: Function limitation
	When the "Function limitation" is set, "On board NIC" is limited only for the NRS or LDAP/NT authentication. **Note** • Other network applications than NRS or LDAP/NT authentication are not available when this SP is set to "2".Even though you can change the initial settings of those network applications, the settings do not work.		
002	On Board USB	CTL	[0 or 1 / **0** / 1/step] 0: Disable, 1: Enable

5990	**[SP print mode]**		
	Prints out the SMC sheets.		
001	All (Data List)	CTL	
002	SP (Mode Data List)	CTL	
003	User Program	CTL	
004	Logging Data	CTL	
005	Diagnostic Report	CTL	
006	Non-Default	CTL	
007	NIB Summary	CTL	-
008	Capture Log	CTL	
021	Copier User Program	CTL	
022	Scanner SP	CTL	
023	Scanner User Program	CTL	
024	SDK/J Summary	CTL	
025	SDK/J Application Info	CTL	

5992	**[SP Text mode]**		
	Exports the SMC sheet data to the SD Card.		
001	All (Data List)	CTL	Press "Execute" key to start exporting the SMC data in the SP mode display.
002	SP (Mode Data List)	CTL	
003	User Program	CTL	
004	Logging Data	CTL	
005	Diagnostic Report	CTL	
006	Non-Default	CTL	
007	NIB Summary	CTL	
008	Capture Log	CTL	
021	Copier User Program	CTL	
022	Scanner SP	CTL	
023	Scanner User Program	CTL	
024	SDK/J Summary	CTL	
025	SDK/J Application Info	CTL	
026	Printer SP mode	CTL	

5998	**[Fusing Cont mode]** Fusing Control Mode		
	Turns the silent fusing warm-up mode on or off.		
001	fast/silent	*ENG	[0 or 1 / **1** / 1 /step] 0: Silent (less noise) 1: Fast (less time)

Engine SP Tables-6

SP6-XXX (Peripherals)

6128	[Punch Position: Sub Scan]		
	Adjusts the punching position in the sub scan direction.		
001	Domestic 2Hole (Europe 2Hole)	*ENG	[-7.5 to 7.5 / **0** / 0.5 mm/step]
002	North America 3Hole		
003	Europe 4Hole		
004	North Europe 4Hole		
005	North America 2Hole		

6129	[Punch Position: Main Scan]		
	Adjusts the punching position in the main scan direction.		
001	Domestic 2Hole (Europe 2Hole)	*ENG	[-2.0 to 2.0 / **0** / 0.4 mm/step]
002	North America 3Hole		
003	Europe 4Hole		
004	North Europe 4Hole		
005	North America 2Hole		

6130	[Skew Correction: Buckle Adj.]
	Adjusts the paper buckle for each paper size.

001	A3T	*ENG	[-5.0 to 5.0 / **0** / 0.2 mm/step]
002	B4T		
003	A4T		
004	A4Y		
005	B5T		
006	B5Y		
007	DLT-T		
008	LG-T		
009	LT-T		
010	LT-Y		
011	12*18		
012	Other		

6131	**[Skew Correction Control]**
	Selects the skew correction control for each paper size. These are only activated for B804/B805.

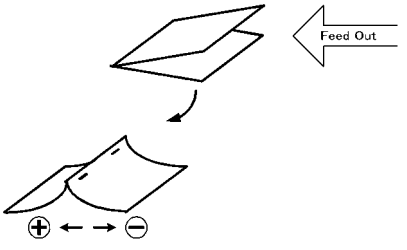
001	A3T	*ENG	[0 or 1 / **0** / 1/step] 0: No (No skew correction) 1: Roller Stop Skew Correction
002	B4T		
003	A4T		
004	A4Y		
005	B5T		
006	B5Y		
007	DLT-T		
008	LG-T		
009	LT-T		
010	LT-Y		
011	12*18		
012	Other		

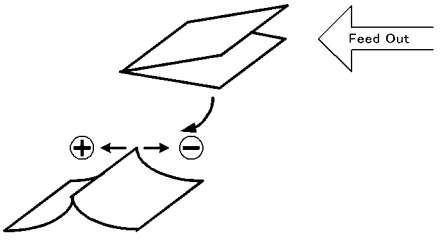
6132	**[Jogger Fence Fine Adj]**
	This SP adjusts the distance between the jogger fences and the sides of the stack on the finisher stapling tray in the (Booklet) Finisher B804/B805. The adjustment is done perpendicular to the direction of paper feed.

001	A3T	*ENG	[-1.5 to 1.5 / **0** / 0.5 mm/step] + Value: Increases distance between jogger fences and the sides of the stack. - Value: Decreases the distance between the jogger fences and the sides of the stack.
002	B4T		
003	A4T		
004	A4Y		
005	B5T		
006	B5Y		
007	DLT-T		
008	LG-T		
009	LT-T		
010	LT-Y		
011	12*18		
012	Other		

6133	**[Staple Position Adjustment]**		
	Adjusts the staple position for each finisher (B408/B804/B805). + Value: Moves the staple position to the rear side. - Value: Moves the staple position to the front side.		
001	Finisher1	*ENG	[-3.5 to 3.5 / **0** / 0.5/step]

6134	**[Saddle Stitch Position Adjust]**
	Use this SP to adjust the stapling position of the booklet stapler when paper is stapled and folded in the Booklet Finisher B804.

001	A3T	*ENG	[-3.0 to 3.0 / **0** / 0.2 mm/step] + Value: Shifts staple position toward the crease. - Value: Shifts staple position away from the crease. 
002	B4T		
003	A4T		
004	B5T		
005	DLT-T		
006	LG-T		
007	LT-T		
008	12*18		
009	Other		

6135	**[Folder Position Adj.]**		
	This SP corrects the folding position when paper is stapled and folded in the Booklet Finisher B804.		
001	A3T	*ENG	[-3.0 to 3.0 / **0** / 0.2 mm/step] + Value: Shifts staple position toward the crease. - Value: Shifts staple position away from the crease. 
002	B4T		
003	A4T		
004	B5T		
005	DLT-T		
006	LG-T		
007	LT-T		
008	12*18		
009	Other		

6136	**[Folding Number]**		
001	-	*ENG	[1 to 30 / **2** / 1 time/step]
	Sets the number of times that folding is done in the Booklet Finisher B804.		

6137	**[Fin. Free Run]**		
	Sets the finisher free run on/off.		
001	Free Run1	ENG	[0 or 1 / **0** / 1 /step]
002	Free Run2	ENG	[0 or 1 / **0** / 1 /step]
003	Free Run3	ENG	[0 or 1 / **0** / 1 /step]
004	Free Run4	ENG	[0 or 1 / **0** / 1 /step]

6138	**[FIN (TIG) INPUT Check]**
	Displays the signals received from sensors and switches of the finisher. See "Input Check" (☛p.408).

6140	**[FIN (EUP) INPUT Check]** Finisher (D636/D637) Input Check
	Displays the signals received from sensors and switches of the (booklet) finisher. See "Input Check" (☛p.408).

6142	**[FIN (JAK) INPUT Check]** Mail Box (M413) Input Check
	Displays the signals received from sensors and switches of the Mail Box. See "Input Check" (☛p.408).

6143	**[FIN (TIG) OUTPUT Check]**
	Displays the signals received from sensors and switches of the (booklet) finisher. See "Output Check" (☛p.408).

6145	**[FIN (EUP) OUTPUT Check]** Finisher (D636/D637) Output Check
	Displays the signals received from sensors and switches of the (booklet) finisher. See "Output Check" (☛p.408).

6147	**[FIN (JAK) OUTPUT Check]** Mail Box (M413) Input Check
	Displays the signals received from sensors and switches of the Mail Box. See "Output Check" (☛p.408).

6148	[Jogger Fine Adj.]		
001	A3T	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
002	B4T	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
003	A4T	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
004	A4Y	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
005	B5Y	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
006	A5Y	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
007	DLT-T	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
008	LG-T	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
009	LT-T	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
010	LT-Y	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
011	HLT-Y	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]
012	Other	*ENG	[-1.5 to 1.5 / **0.0** / 0.5mm/step]

6149	[Max. Pre-Stack Sheet]		
	Number of Pre-Stack Sheets		
001	-	*ENG	[0 to 3 / **3** / 1 sheet/step]
	This SP sets the number of sheets sent to the pre-stack tray. **Note** • You may need to adjust this setting or switch it off when feeding thick or slick paper.		

6150	[INPUT Check]
	Displays the signals received from sensors and switches of the bridge unit (D386) / side tray (D542) See "Input Check" (p.408).

6151	[OUTPUT Check]
	Displays the signals received from sensors and switches of the bridge unit (D386)/ side tray (D542) See "Output Check" (p.408).

6152	[INPUT Check]		
	Displays the signals received from sensors and switches of the shift tray (D388) See "Input Check" (☛p.408).		

6153	[OUTPUT Check]		
	ShiftTray Motor	ENG	[0 or 1 / **0** / 1/step] On/Off
	Displays the signals received from sensors and switches of the shift tray (D388) See "Output Check" (☛p.408).		

6154	[INPUT Check]		
	Displays the signals received from sensors and switches of the 1 bin tray (D536) See "Input Check" (☛p.408).		

6155	[OUTPUT Check]		
001	1 bin: Junction Solenoid	ENG	[0 or 1 / **0** / 1/step] On/Off
	Displays the signals received from sensors and switches of the 1 bin tray (D536) See "Output Check" (☛p.408).		

6157	[OUTPUT Check]		
001	4 bin: Junction Solenoid	ENG	[0 or 1 / **0** / 1/step] On/Off
	Displays the signals received from sensors and switches of the 4 bin tray (D536) See "Output Check" (☛p.408).		

6160	[INPUT Check]
	Displays the signals received from sensors and switches of the two-tray paper feed unit (D537), LCT 2000 (D538) and LCT 1200 (D539) See "Input Check" (☛p.408).

6161	**[OUTPUT Check]**
	Displays the signals received from sensors and switches of the two-tray paper feed unit (D537), LCT 2000 (D538) and LCT 1200 (D539) See "Output Check" (☛p.408).

6830	**Extra Staples**		
	More than the standard number of sheets can be stapled. This SP sets the additional number of sheets (This Setting + Standard Number = maximum number of sheets). • If the number of the maximum for staples is increased, and the mechanical warranty of the unit can be guaranteed, then the setting can take effect without changing the controller software. • However, assurance that mechanical performance can be guaranteed is required before changing the setting to increase the staple load for more than the maximum in the feed/exit specifications.		
001	Staple positions other than booklet stapling	*CTL	[0 to 50 / **0** / 1/step]
002	2 Booklet stapling	*CTL	[0 to 50 / **0** / 1/step]

Engine SP Tables-7

SP7-XXX (Data Log)

7401	[Total SC]		
	Displays the number of SC codes detected.		
001	SC Counter	*CTL	[0 to 65535 / - / 1/step]
002	Total SC Counter	*CTL	[0 to 65535 / - / 1/step]

7403	[SC History]		
	Logs the SC codes detected. The 10 most recently detected SC Codes are not displayed on the screen, but can be seen on the SMC (logging) outputs.		
001	Latest	*CTL	-
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7404	[SC990 / SC991 History]		
	Logs and displays the SC990 / SC991 detected. The 10 most recently detected SC. Note • If the same SC codes are detected continuously and total counter is not increasing, it only logs once in case of deleting other SC code logs.		
001	Latest	*CTL	[- / - / -]
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7502	[Total Paper Jam]		
	Displays the total number of jams detected.		
001	Jam Counter	* CTL	[0 to 65535 / - / 1/step]
002	Total Jam Counter	* CTL	[0 to 65535 / - / 1/step]

7503	[Total Original Jam]		
	Displays the total number of original jams.		
001	Original Jam counter	*CTL	[0 to 9999 / - / 1 original/step]

7504	**[Paper Jam Loc]** ON: On check, OFF: Off Check		
	Displays the number of jams according to the location where jams were detected. **NOTE:** The LCT is counted as the 3rd feed station.		
001	At Power On	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
003	Tray 1: On	*CTL	
004	Tray 2: On	*CTL	
005	Tray 3: On	*CTL	
006	Tray 4: On	*CTL	
007	LCT : On	*CTL	
008	Registration Sn: On (Bypath)	*CTL	
009	Registration Sn: On (Duplex)	*CTL	
011	Vertical Trans. 1: On	*CTL	
012	Vertical Trans. 2: On	*CTL	
013	Vertical Trans. 3: On	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
014	Vertical Trans. 4: On	*CTL	
017	Registration Sn: On (Tray)	*CTL	
018	Fusing Entrance: On	*CTL	
019	Fusing Exit: On	*CTL	
020	Paper Exit: On	*CTL	
021	Bridge Tray Exit: On	*CTL	
022	Bridge Relay: On	*CTL	
024	Junction Gate Sensor : On	*CTL	

025	Duplex Exit: On	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
026	Duplex Entrance: On (In)	*CTL	
027	Duplex Entrance: On (Out)	*CTL	
051	Vertical Trans. 1: Off	*CTL	
052	Vertical Trans. 2: Off	*CTL	
053	Vertical Trans. 3: Off	*CTL	
054	Vertical Trans. 4: Off	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
057	Registration Sensor: Off	*CTL	
058	LCT Feed Sensor : Off	*CTL	
060	Paper Exit Off	*CTL	
061	Bridge Exit: Off	*CTL	
062	Bridge Relay: Off	*CTL	
064	Junction Gate Sensor : Off	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
065	Duplex Exit: Off	*CTL	
066	Duplex Entrance: Off (In)	*CTL	
067	Duplex entrance : Off (Out)	*CTL	
100	Finisher Entrance: KIN	*CTL	
101	Finisher Shift Tray Exit: KIN	*CTL	
102	Finisher Staple: KIN	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
103	Finisher Exit: KIN	*CTL	
105	Finisher Tray Lift Motor: KIN	*CTL	
106	Finisher Jogger Motor: KIN	*CTL	
107	Finisher Shift Motor: KIN	*CTL	
108	Finisher Staple Motor: KIN	*CTL	
109	Finisher Exit Motor: KIN	*CTL	

191	Finisher Entrance: EUP	*CTL	For details, see “Jam Detection” in the "Main Chapters: 6. Troubleshooting".
192	Finisher Proof Exit: EUP	*CTL	
193	Finisher Shift Tray Exit: EUP	*CTL	
194	Finisher Stapler Exit: EUP	*CTL	
195	Finisher Exit: EUP	*CTL	
198	Finisher Folder: EUP	*CTL	
199	Finisher Tray Motor: EUP	*CTL	
200	Finisher Jogger Motor: EUP	*CTL	
201	Finisher Shift Motor: EUP	*CTL	
202	Finisher Staple Moving Motor: EUP	*CTL	
203	Finisher Staple Motor: EUP	*CTL	
204	Finisher Folder Motor: EUP	*CTL	
206	Finisher Punch Motor: EUP	*CTL	

7506	[Jam Count by Paper Size]		
	Displays the number of jams according to the paper size.		
005	A4 LEF	*CTL	[0 to 9999 / - / 1 sheet/step]
006	A5 LEF	*CTL	
014	B5 LEF	*CTL	
038	LT LEF	*CTL	
044	HLT LEF	*CTL	

132	A3 SEF	*CTL	[0 to 9999 / - / 1 sheet/step]
133	A4 SEF	*CTL	
134	A5 SEF	*CTL	
141	B4 SEF	*CTL	
142	B5 SEF	*CTL	
160	DLT SEF	*CTL	
164	LG SEF	*CTL	
166	LT SEF	*CTL	
172	HLT SEF	*CTL	
255	Others	*CTL	[0 to 9999 / - / 1 sheet/step]

7507	[Plotter Jam History]		
	Displays the 10 most recently detected paper jams.		
001	Latest	*CTL	-
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7801	[ROM No]
	Displays all versions and ROM numbers in the machine.

002	Engine	ENG	[- / - / -]
007	Finisher	ENG	
009	PTU	ENG	
011	MailBox	ENG	
019	PTU2	ENG	
110	LCT	ENG	
7801	**[Firmware Version]**		
	Displays all versions and ROM numbers in the machine.		
102	Engine	ENG	[- / - / -]
107	Finisher	ENG	
111	MailBox	ENG	
255	ROM No./ Firmware Version	CTL	Lists ROM No. and Firmware versions on the display. [- / - / -]

7803	**[PM Counter Display]** (Page, Unit, [Color])		
001 to 020	Displays the number of sheets printed for each current maintenance unit. PM counters click up based on the number of A4 (LT) LEF size sheets printed. Therefore, the A3 (DLT) Double Count is activated. The Double Count cannot be deactivated. When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter - Previous (SP7-906-1 to 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** • The LCT is counted as the 3rd feed station.		
001	PM Counter Display	*CTL	[0 to 9999999 / - / 1 /step]

002	Page: PCU: Bk	ENG	[0 to 9999999 / - / 1 page/step]
003	Page: PCU: M	ENG	
004	Page: PCU: C	ENG	
005	Page: PCU: Y	ENG	
006	Page: Development Unit: Bk	ENG	
007	Page: Development Unit: M	ENG	
008	Page: Development Unit: C	ENG	
009	Page: Development Unit: Y	ENG	
010	Page: Developer: Bk	ENG	[0 to 9999999 / - / 1 page/step]
011	Page: Developer: M	ENG	
012	Page: Developer: C	ENG	
013	Page: Developer: Y	ENG	
014	Page: Image Transfer	ENG	
015	Page: Cleaning Unit	ENG	
016	Page: Fusing Unit	ENG	
017	Page: Paper Transfer Unit	ENG	
018	Page: Toner Collection Bottle	ENG	
019	Page: Fusing Belt Unit	ENG	
020	Page: Pressure Roller	ENG	
021 to 024	Displays the number of pages of the pump unit for each current maintenance unit. When a unit is replaced, and SP7804-xxx is executed, the current PM counter value is moved to the PM Counter - Previous (SP7-906-020 to 112) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-020 to 112.		

021	Page: Toner Supply Unit: Bk	ENG	[0 to 9999999 / - / 1 page/step]
022	Page: Toner Supply Unit: M	ENG	
023	Page: Toner Supply Unit: C	ENG	
024	Page: Toner Supply Unit: Y	ENG	
031 to 048	Displays the number of revolutions of motors or clutches for each current maintenance unit. When a unit is replaced, and SP7804-xxx is executed, the current PM counter value is moved to the PM Counter - Previous (SP7-906-11 to 20) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-11 to 20.		
031	Rotation: PCU: Bk	ENG	[0 to 999999999 / - / 1 mm/step]
032	Rotation: PCU: M	ENG	
033	Rotation: PCU: C	ENG	
034	Rotation: PCU: Y	ENG	
035	Rotation: Development Unit: Bk	ENG	
036	Rotation: Development Unit: M	ENG	
037	Rotation: Development Unit: C	ENG	[0 to 999999999 / - / 1 mm/step]
038	Rotation: Development Unit: Y	ENG	
039	Rotation: Developer: Bk	ENG	
040	Rotation: Developer: M	ENG	
041	Rotation: Developer: C	ENG	
042	Rotation: Developer: Y	ENG	

043	Rotation: Image Transfer	ENG	[0 to 999999999 / - / 1 mm/step]
044	Rotation: Cleaning Unit	ENG	
045	Rotation: Fusing Unit	ENG	
046	Rotation: Paper Transfer Unit	ENG	
047	Measurement: Toner Collection bottle	ENG	
048	Rotation: Fusing Belt Unit	ENG	
049	Rotation: Pressure Roller	ENG	
050 to 053	Displays the running time of the pump unit for each current maintenance unit. When a unit is replaced, and SP7804-xxx is executed, the current PM counter value is moved to the PM Counter - Previous (SP7-906-020 to 112) and is reset to "0". The total number of revolutions made with the last unit replaced can be checked with SP7-906-020 to 112.		
050	Run Time: Toner Supply Unit: Bk	ENG	[0 to 999999999 / - / 1 msec/step]
051	Run Time: Toner Supply Unit: M	ENG	
052	Run Time: Toner Supply Unit: C	ENG	
053	Run Time: Toner Supply Unit: Y	ENG	
061 to 079	Displays the value given by the following formula: (Current revolution / Target revolution) × 100. This shows how much of the unit's expected lifetime has been used up. The Rotation (%) counter is based on rotations, not prints. If the number of rotations reaches the limit, the machine enters the end condition for that unit. If the print count lifetime is reached first, the machine also enters the end condition, even though the R (%) counter is still less than 100%.		

061	Rotation (%): PCU: Bk	ENG	[0 to 255 / - / 1 %/step] (☛ 079)
062	Rotation (%): PCU: M	ENG	
063	Rotation (%): PCU:C	ENG	
064	Rotation (%): PCU:Y	ENG	
065	Rotation (%): Development Unit: Bk	ENG	
066	Rotation (%): Development Unit: M	ENG	
067	Rotation (%): Development Unit: C	ENG	
068	Rotation (%): Development Unit: Y	ENG	
069	Rotation (%): Developer: Bk	ENG	
070	Rotation (%): Developer: M	ENG	
071	Rotation (%): Developer: C	ENG	
072	Rotation (%): Developer: Y	ENG	
073	Rotation (%): Image Transfer Belt	ENG	[0 to 255 / - / 1 %/step]
074	Rotation (%): Cleaning Unit	ENG	
075	Rotation (%): Fusing Unit	ENG	
076	Rotation (%): Paper Transfer Unit	ENG	
077	Measurement (%): Toner Collection bottle	ENG	
078	Rotation (%): Fusing Belt Unit	ENG	
079	Rotation (%): Pressure Roller	ENG	

<table>
<tr><td>080 to 083</td><td colspan="3">Displays the value given by the following formula:
(Current running time / Target running time) × 100. This shows how much of the unit's expected lifetime has been used up.
The Run Time (%) counter is based on the running time, not printouts nor revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Run Time (%) counter is still less than 100%.</td></tr>
<tr><td>080</td><td>Run Time(%):Toner Supply Unit: Bk</td><td>ENG</td><td rowspan="4">[0 to 255 / - / 1 %/step]</td></tr>
<tr><td>081</td><td>Run Time(%):Toner Supply Unit: M</td><td>ENG</td></tr>
<tr><td>082</td><td>Run Time(%):Toner Supply Unit: C</td><td>ENG</td></tr>
<tr><td>083</td><td>Run Time(%):Toner Supply Unit: Y</td><td>ENG</td></tr>
<tr><td>091 to 108</td><td colspan="3">Displays the value given by the following formula:
(Current printouts / Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up.
The Page (%) counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page (%) counter is still less than 100%.</td></tr>
</table>

091	Page (%): PCU: Bk	ENG	[0 to 255 / - / 1 %/step]
092	Page (%): PCU: M	ENG	
093	Page (%): PCU: C	ENG	
094	Page (%): PCU: Y	ENG	
095	Page (%): Development Unit: Bk	ENG	
096	Page (%): Development Unit:M	ENG	
097	Page (%): Development Unit:C	ENG	
098	Page (%): Development Unit:Y	ENG	
099	Page (%): Developer: Bk	ENG	[0 to 255 / - / 1 %/step] (☛ 091)
100	Page (%): Developer: M	ENG	
101	Page (%): Developer: C	ENG	
102	Page (%): Developer: Y	ENG	
103	Page (%): Image Transfer	ENG	
104	Page (%): Cleaning Unit	ENG	
105	Page (%): Fusing Unit	ENG	
106	Page (%): Paper Transfer Unit	ENG	
107	Page (%): Fusing Belt Unit	ENG	
108	Page (%): Pressure Roller	ENG	
109 to 112	Displays the value given by the following formula: (Current printouts / Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page (%) counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page (%) counter is still less than 100%.		

109	Page (%):Toner Supply Unit: Bk	ENG	[0 to 255 / - / 1 %/step]
110	Page (%):Toner Supply Unit: M	ENG	
111	Page (%):Toner Supply Unit: C	ENG	
112	Page (%):Toner Supply Unit: Y	ENG	
114 to 118	-		
114	Yield(%):PCU:K	*ENG	[-999 to 999 / **100** / 1 %/step]
115	Yield(%):PCU:Col	*ENG	
116	Yield(%):PTR Unit	*ENG	
117	Yield(%):ITB	*ENG	
118	Yield(%):Fusing	*ENG	
255	ROM Version	CTL	-

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 counter value in SP7-906 (PM Counter - Previous) and reset the value of the current PM counter (SP7-803) to “0”.		
001	PM Counter Reset	CTL	[- / **-** / -] [Execute]

002	PCU: Bk	ENG	[- / - / -] [Execute]
003	PCU: M	ENG	
004	PCU: C	ENG	
005	PCU: Y	ENG	
006	PCU: All	ENG	
007	Development Unit: Bk	ENG	
008	Development Unit: M	ENG	
009	Development Unit: C	ENG	
010	Development Unit: Y	ENG	
011	Development Unit: All	ENG	
012	Developer: Bk	ENG	[- / - / -] [Execute]
013	Developer: M	ENG	
014	Developer: C	ENG	
015	Developer: Y	ENG	
016	Developer: All	ENG	
017	Image Transfer Belt	ENG	
018	Cleaning Unit	ENG	
019	Fusing Unit	ENG	
020	Paper Transfer Unit	ENG	
021	Toner Collection Bottle	ENG	
022	Fusing Belt Unit	ENG	
023	Pressure Roller	ENG	

024	Toner Supply Unit: Bk	ENG	[- / - / -] [Execute]
025	Toner Supply Unit: M	ENG	
026	Toner Supply Unit: C	ENG	
027	Toner Supply Unit: Y	ENG	
028	Toner Supply Unit: All	ENG	
029	Toner Supply Unit:CMY	ENG	
100	All	ENG	

7807	**[SC/Jam Counter Reset]**		
	Clears the counters related to SC codes and paper jams. **Note** • This SP doesn't delete either jam histories or SC code histories.		
001	SC/Jam Clear	CTL	[- / - / -] [Execute]

7832	**[Self-Diagnose Result Display]**		
	Displays the result of the diagnostics.		
001	Diag. Result	*CTL	[- / - / -]

7836	**[Total Memory Size]**		
	Displays the memory capacity of the controller system.		
001	Total Memory Size	*CTL	[- / - / - MB]

7853	**[Replacement Counter]**
	Displays the PM parts replacement number.

001	PCU: Bk	ENG	[0 to 255 / - / 1 /step]
002	PCU: M	ENG	
003	PCU: C	ENG	
004	PCU: Y	ENG	
005	Development Unit: Bk	ENG	[0 to 255 / - / 1 /step]
006	Development Unit: M	ENG	
007	Development Unit: C	ENG	
008	Development Unit: Y	ENG	
009	Developer: Bk	ENG	[0 to 255 / - / 1 /step]
010	Developer: M	ENG	
011	Developer: C	ENG	
012	Developer: Y	ENG	
013	Image Transfer	ENG	[0 to 255 / - / 1 /step]
014	Cleaning Unit	ENG	
015	Fusing Unit	ENG	
016	Paper Transfer Unit	ENG	
017	Tonner Collection Bottle	ENG	
018	Fusing Belt Unit	ENG	
019	Pressure Roller	ENG	
020	Toner Supply Unit: Bk	ENG	[0 to 255 / - / 1 /step]
021	Toner Supply Unit: M	ENG	
022	Toner Supply Unit: C	ENG	
023	Toner Supply Unit: Y	ENG	

7855	**[Coverage Range]**		
	Sets the color coverage threshold. Coverage rate = Coverage per page / A4 full coverage (dots) x 100 There are three coverage counters: Color 1, Color 2, and Color 3 • [A] 5% (default) is adjustable with SP7855-001. • [B] 20% (default) is adjustable with SP7855-002.  **Note** • The setting value [B] must be set larger than [A]. The total numbers of printouts (BW printing plus color printing) for each coverage range are displayed with the following SPs. • Color1 counter: SP8601-021 • Color2 counter: SP8601-022 • Color3 counter: SP8601-023		
001	Coverage Range	*CTL	[1 to 200 / **5** / 1 /step]
002	Coverage Range 1	*CTL	[1 to 200 / **20** /1 /step]

7901	**[Assert Info.]**		
	-		
001	File Name	*CTL	[- / **-** / -]
002	Number of Lines	*CTL	[- / **-** / -]
003	Location	*CTL	[- / **-** / -]

7904	**[Near End Setting]**
	Displays the ACC execution times for each mode.

001	PCU:K	*ENG	[0 to 2 / 1 /1 /step]
002	PCU:Col	*ENG	
004	ITB	*ENG	
006	Fusing Unit	*ENG	
007	PTR Unit	*ENG	

7906	[Prev. Unit PM Counter] (Page or Rotations, Unit, [Color]), Dev.: Development Unit		
001 to 019	Displays the number of sheets printed with the previous maintenance units.		
001	Page: PCU: Bk	ENG	[0 to 9999999 / - / 1 page/step]
002	Page: PCU: M	ENG	
003	Page: PCU: C	ENG	
004	Page: PCU: Y	ENG	
005	Page: Development Unit: Bk	ENG	
006	Page: Development Unit: M	ENG	
007	Page: Development Unit: C	ENG	
008	Page: Development Unit: Y	ENG	
009	Page: Developer: Bk	ENG	
010	Page: Developer: M	ENG	
011	Page: Developer: C	ENG	
012	Page: Developer: Y	ENG	

013	Page: Image Transfer	ENG	[0 to 9999999 / - / 1 page/step]
014	Page: Cleaning Unit	ENG	
015	Page: Fusing Unit	ENG	
016	Page: Paper Transfer Unit	ENG	
017	Page: Toner Collection Bottle	ENG	
018	Page: Fusing Belt Unit	ENG	
019	Page: Pressure Roller	ENG	
020 to 023	Displays the number of sheets printed with the previous maintenance units.		
020	Page: Toner Supply Unit: Bk	ENG	[0 to 9999999 / - / 1 page/step]
021	Page: Toner Supply Unit: M	ENG	
022	Page: Toner Supply Unit: C	ENG	
023	Page: Toner Supply Unit: Y	ENG	
031 to 046	Displays the number of revolutions for motors or clutches in the previous maintenance units. (☛ 031 - 046)		

031	Rotation: PCU: Bk	ENG	[0 to 999999999 / - / 1 mm/step] (☛ 019)
032	Rotation: PCU: M	ENG	
033	Rotation: PCU: C	ENG	
034	Rotation: PCU: Y	ENG	
035	Rotation: Development Unit: Bk	ENG	
036	Rotation: Development Unit: M	ENG	
037	Rotation: Development Unit: C	ENG	
038	Rotation: Development Unit: Y	ENG	
039	Rotation: Developer: Bk	ENG	
040	Rotation: Developer: M	ENG	
041	Rotation: Developer: C	ENG	
042	Rotation: Developer: Y	ENG	
043	Rotation: Image Transfer	ENG	[0 to 999999999 / - / 1 mm/step] (☛ 019)
044	Rotation: Cleaning Unit	ENG	
045	Rotation: Fusing Unit	ENG	
046	Rotation: Paper Transfer Unit	ENG	
047	Measurement: Tonner Collection bottle	ENG	
048	Rotation: Fusing Belt Unit	ENG	
049	Rotation: Pressure Roller	ENG	
050 to 053	Displays the running time of the previous pump unit		

050	Run Time: Toner Supply Unit: Bk	ENG	[0 to 999999999 / - / 1 msec/step]
051	Run Time: Toner Supply Unit: M	ENG	
052	Run Time: Toner Supply Unit: C	ENG	
053	Run Time: Toner Supply Unit: Y	ENG	
061 to 079	Displays the value given by the following formula: (Current revolution / Target revolution) × 100. This shows how much of the unit's expected lifetime has been used up. The Rotation % counter is based on rotations, not prints. If the number of rotations reaches the limit, the machine enters the end condition for that unit. If the print count lifetime is reached first, the machine also enters the end condition, even though the Rotation % counter is still less than 100%.		
061	Rotation %: PCU: BK	ENG	[0 to 255 / - / 1 %/step]
062	Rotation %: PCU:M	ENG	
063	Rotation %: PCU:C	ENG	
064	Rotation %: PCU:Y	ENG	
065	Rotation %: Development Unit: Bk	ENG	
066	Rotation %: Development Unit: M	ENG	
067	Rotation %: Development Unit: C	ENG	
068	Rotation %: Development Unit: Y	ENG	

069	Rotation %: Developer: Bk	ENG	[0 to 255 / - / 1 %/step]
070	Rotation %: Developer: M	ENG	
071	Rotation %: Developer: C	ENG	
072	Rotation %: Developer: Y	ENG	
073	Rotation %: Image Transfer Belt	ENG	
074	Rotation %: Cleaning Unit	ENG	
075	Rotation %: Fusing Unit	ENG	
076	Rotation %: Paper Transfer Unit	ENG	
077	Measurement %: Tonner Collection bottle	ENG	
078	Rotation (%): Fusing Belt Unit	ENG	
079	Rotation (%): Pressure Roller	ENG	
080 to 083	Displays the value given by the following formula: (Current running time / Target running time) × 100. This shows how much of the unit's expected lifetime has been used up. The Run Time (%) counter is based on the total running time, not printouts nor revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Run Time (%) counter is still less than 100%.		
080	Run Time (%):Toner Supply Unit : Bk	ENG	[0 to 255 / - / 1 %/step]
081	Run Time (%):Toner Supply Unit : M	ENG	
082	Run Time (%):Toner Supply Unit : C	ENG	
083	Run Time (%):Toner Supply Unit : Y	ENG	

091 to 112	Displays the value given by the following formula: (Current printouts / Target printouts) × 100. This shows how much of the unit's expected lifetime has been used up. The Page% counter is based on printouts, not revolutions. If the number of printouts reaches the limit, the machine enters the end condition for that unit. If the revolution count lifetime is reached first, the machine also enters the end condition, even though the Page % counter is still less than 100%.		
091	Page %: PCU: Bk	ENG	[0 to 255 / - / 1 %/step]
092	Page %: PCU: M	ENG	
093	Page %: PCU: C	ENG	
094	Page %: PCU: Y	ENG	
095	Page %: Development Unit: Bk	ENG	
096	Page %: Development Unit: M	ENG	
097	Page %: Development Unit: C	ENG	
098	Page %: Development Unit: Y	ENG	
099	Page %: Developer: Bk	ENG	
100	Page %: Developer: M	ENG	
101	Page %: Developer: C	ENG	
102	Page %: Developer: Y	ENG	

103	Page %: Image Transfer	ENG	[0 to 255 / - / 1 %/step]
104	Page %: Cleaning Unit	ENG	
105	Page %: Fusing Unit	ENG	
106	Page %: Paper Transfer Unit	ENG	
107	Page (%): Fusing Belt Unit	ENG	
108	Page (%): Pressure Roller	ENG	
109	Page (%): Toner Supply Unit: Bk	ENG	
110	Page (%):Toner Supply Unit: M	ENG	
111	Page (%):Toner Supply Unit: C	ENG	
112	Page (%):Toner Supply Unit: Y	ENG	

7931	**[Toner Bottle Bk]**		
	Displays the toner bottle information for Bk.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	

010	Date	*ENG	[0 or 1 / - / 1 /step]
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	[0 to 100 / - / 1 %/step]
013	EDP Code	*ENG	[0 or 1 / - / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 or 99999999 / - / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / - / 1 /step]
021	End Date	*ENG	

7932	**[Toner Bottle M]**		
	Displays the toner bottle information for M.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	[0 or 1 / - / 1 /step]
011	Serial No.	*ENG	

012	Toner Remaining	*ENG	[0 to 100 / - / 1 %/step]
013	EDP Code	*ENG	[0 or 1 / - / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 to 99999999 / - / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / - / 1 /step]
021	End Date	*ENG	

7933	[Toner Bottle C]		
	Displays the toner bottle information for C.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	[0 or 1 / - / 1 /step]
011	Serial No.		
012	Toner Remaining	*ENG	[0 to 100 / - / 1 %/step]

013	EDP Code	*ENG	[0 or 1 / - / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 to 99999999 / - / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / - / 1 /step]
021	End Date		

7934	**[Toner Bottle Y]**		
	Displays the toner bottle information for Y.		
001	Machine Serial ID	*ENG	[0 to 255 / - / 1 /step]
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Product Information	*ENG	
009	Recycle Counter	*ENG	
010	Date	*ENG	[0 or 1 / **0** / 1 /step]
011	Serial No.	*ENG	
012	Toner Remaining	*ENG	[0 or 100 / **0** / 1 %/step]

013	EDP Code	*ENG	[0 or 1 / **0** / 1 /step]
014	End History	*ENG	
015	Refill Information	*ENG	
016	Attachment: Total Counter	*ENG	[0 or 99999999 / **0** / 1 /step]
017	Attachment: Color Counter	*ENG	
018	End: Total Counter	*ENG	
019	End: Color Counter	*ENG	
020	Attachment Date	*ENG	[0 or 1 / **0** / 1 /step]
021	End Date	*ENG	

7935	**[Toner Bottle Log 1: Bk]**		
001 to 004	Displays the toner bottle information log 1 for Bk.		
001	Serial No.	ENG	[0 or 1 / **-** / 1 /step]
002	Attachment Date	ENG	[0 or 1 / **-** / 1 /step]
003	Attachment: Total Counter	ENG	[0 to 99999999 / **-** / 1 /step]
004	Refill Information	*ENG	[0 or 1 / **-** / 1 /step]
011 to 014	Displays the toner bottle information log 2 for Bk.		
011	Serial No.	ENG	[0 or 1 / **-** / 1 /step]
012	Attachment Date	ENG	[0 or 1 / **-** / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / **-** / 1 /step]
014	Refill Information	*ENG	[0 or 1 / **-** / 1 /step]
021 to 024	Displays the toner bottle information log 3 for Bk.		
021	Serial No.	ENG	[0 or 1 / **-** / 1 /step]
022	Attachment Date	ENG	[0 or 1 / **-** / 1 /step]

023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for Bk.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for Bk.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7936	**[Toner Bottle Log 1: M]**		
001 to 004	Displays the toner bottle information log 1 for M.		
001	Serial No.	ENG	[0 or 1 / - / 1 /step]
002	Attachment Date	ENG	[0 or 1 / - / 1 /step]
003	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
004	Refill Information	*ENG	[0 or 1 / - / 1 /step]
011 to 014	Displays the toner bottle information log 2 for M.		
011	Serial No.	ENG	[0 or 1 / - / 1 /step]
012	Attachment Date	ENG	[0 or 1 / - / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
014	Refill Information	*ENG	[0 or 1 / - / 1 /step]

021 to 024	Displays the toner bottle information log 3 for M.		
021	Serial No.	ENG	[0 or 1 / - / 1 /step]
022	Attachment Date	ENG	[0 or 1 / - / 1 /step]
023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for M.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for M.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7937	**[Toner Bottle Log 1: C]**		
001 to 004	Displays the toner bottle information log 1 for C.		
001	Serial No.	ENG	[0 or 1 / - / 1 /step]
002	Attachment Date	ENG	[0 or 1 / - / 1 /step]
003	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
004	Refill Information	*ENG	[0 or 1 / - / 1 /step]
011 to 014	Displays the toner bottle information log 2 for C.		

011	Serial No.	ENG	[0 or 1 / - / 1 /step]
012	Attachment Date	ENG	[0 or 1 / - / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
014	Refill Information	*ENG	[0 or 1 / - / 1 /step]
021 to 024	Displays the toner bottle information log 3 for C.		
021	Serial No.	ENG	[0 or 1 / - / 1 /step]
022	Attachment Date	ENG	[0 or 1 / - / 1 /step]
023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for C.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for C.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7938	**[Toner Bottle Log 1: Y]**		
001 to 004	Displays the toner bottle information log 1 for Y.		
001	Serial No.	ENG	[0 or 1 / - / 1 /step]
002	Attachment Date	ENG	[0 or 1 / - / 1 /step]

003	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
004	Refill Information	*ENG	[0 or 1 / - / 1 /step]
011 to 014	Displays the toner bottle information log 2 for Y.		
011	Serial No.	ENG	[0 or 1 / - / 1 /step]
012	Attachment Date	ENG	[0 or 1 / - / 1 /step]
013	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
014	Refill Information	*ENG	[0 or 1 / - / 1 /step]
021 to 024	Displays the toner bottle information log 3 for Y.		
021	Serial No.	ENG	[0 or 1 / - / 1 /step]
022	Attachment Date	ENG	[0 or 1 / - / 1 /step]
023	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
024	Refill Information	*ENG	[0 or 1 / - / 1 /step]
031 to 034	Displays the toner bottle information log 4 for Y.		
031	Serial No.	ENG	[0 or 1 / - / 1 /step]
032	Attachment Date	ENG	[0 or 1 / - / 1 /step]
033	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
034	Refill Information	*ENG	[0 or 1 / - / 1 /step]
041 to 044	Displays the toner bottle information log 5 for Y.		
041	Serial No.	ENG	[0 or 1 / - / 1 /step]
042	Attachment Date	ENG	[0 or 1 / - / 1 /step]
043	Attachment: Total Counter	ENG	[0 to 99999999 / - / 1 /step]
044	Refill Information	*ENG	[0 or 1 / - / 1 /step]

7950	[Unit Replacement Date]		
	Displays the replacement date of each PM unit.		
001	Image Transfer Belt	*ENG	[0 to 999999 / - / 1 /step]
002	Cleaning Unit	*ENG	
003	Paper Transfer Unit	*ENG	
004	Fusing Unit	*ENG	
005	Toner Collection Bottle	*ENG	[0 or 1 / - 1 /step]
006	AIT:Bk	*ENG	[0 to 999999 / - / 1 /step]
007	AIT:M	*ENG	
008	AIT:C	*ENG	
009	AIT:Y	*ENG	
010	Fusing Belt Unit	*ENG	[0 to 999999 / - / 1 /step]
011	Pressure Roller	*ENG	
012	Toner Supply Unit: Bk	*ENG	
013	Toner Supply Unit: M	*ENG	
014	Toner Supply Unit: C	*ENG	
015	Toner Supply Unit: Y	*ENG	

7951	[Remaining Day Counter]		
	Displays the remaining unit life of each PM unit.		
001	Page: PCU: Bk	ENG	[0 to 255 / **255** / 1 day/step]
002	Page: PCU: M	ENG	
003	Page: PCU: C	ENG	
004	Page: PCU: Y	ENG	

005	Page: Development Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
006	Page: Development Unit: M	ENG	
007	Page: Development Unit: C	ENG	
008	Page: Development Unit: Y	ENG	
009	Page: Developer: Bk	ENG	[0 to 255 / **255** / 1 day/step]
010	Page: Developer: M	ENG	
011	Page: Developer: C	ENG	
012	Page: Developer: Y	ENG	
013	Page: Image Transfer	ENG	[0 to 255 / **255** / 1 day/step]
014	Page: Cleaning Unit	ENG	
015	Page: Fusing Unit	ENG	
016	Page: Paper Transfer Unit	ENG	
017	Page: Fusing Belt Unit	ENG	
018	Page: Pressure Roller	ENG	
019	Page: Toner Supply Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
020	Page: Toner Supply Unit: M	ENG	
021	Page: Toner Supply Unit: C	ENG	
022	Page: Toner Supply Unit: Y	ENG	
023	Page: Toner Supply Unit: CMY	ENG	
031	Rotation: PCU: Bk	ENG	[0 to 255 / **255** / 1 day/step]
032	Rotation: PCU: M	ENG	
033	Rotation: PCU: C	ENG	
034	Rotation: PCU: Y	ENG	

035	Rotation: Development Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
036	Rotation: Development Unit: M	ENG	
037	Rotation: Development Unit: C	ENG	
038	Rotation: Development Unit: Y	ENG	
039	Rotation: Developer: Bk	ENG	[0 to 255 / **255** / 1 day/step]
040	Rotation: Developer: M	ENG	
041	Rotation: Developer: C	ENG	
042	Rotation: Developer: Y	ENG	
043	Rotation: Image Transfer	ENG	[0 to 255 / **255** / 1 day/step]
044	Rotation: Cleaning Unit	ENG	
045	Rotation: Fusing Unit	ENG	
046	Rotation: Paper Transfer Unit	ENG	
047	Measurement: Toner Collection bottle	ENG	
048	Rotation: Fusing Belt Unit	ENG	
049	Rotation: Pressure Roller	ENG	

050	Run Time: Toner Supply Unit: Bk	ENG	[0 to 255 / **255** / 1 day/step]
051	Run Time: Toner Supply Unit: M	ENG	
052	Run Time: Toner Supply Unit: C	ENG	
053	Run Time: Toner Supply Unit: Y	ENG	
054	Run Time: Toner Supply Unit: CMY	ENG	

101	Minimum: PCU: Bk	ENG	Displays one of the three, Remaining Day Counter: Rotation or Runtime, or Remaining Day Counter: Page, which is the minimum value. [0 to 255 / **255** / 1 day/step] For toner collection bottle, this SP is not displayed because its Remaining Day Counters is calculated with its weights only.
102	Minimum: PCU: M	ENG	
103	Minimum: PCU: C	ENG	
104	Minimum: PCU: Y	ENG	
105	Minimum: Development Unit: Bk	ENG	
		ENG	
106	Minimum: Development Unit: M	ENG	
107	Minimum: Development Unit: C	ENG	
108	Minimum: Development Unit: Y	ENG	
109	Minimum: Developer: Bk	ENG	
110	Minimum: Developer: M	ENG	
111	Minimum: Developer: C	ENG	
112	Minimum: Developer: Y	ENG	
113	Minimum: Image Transfer	ENG	
114	Minimum: Cleaning Unit	ENG	
115	Minimum: Fusing Unit	ENG	
116	Minimum: Paper Transfer Unit	ENG	
117	Minimum: Fusing Belt Unit	ENG	
118	Minimum: Pressure Roller	ENG	

119	Minimum: Toner Supply Unit: Bk	ENG	Displays either Remaining Day Counter: time or Page, which is less value. [0 to 255 / **255** / 1 day/step]
120	Minimum: Toner Supply Unit: M	ENG	
121	Minimum: Toner Supply Unit: C	ENG	
122	Minimum: Toner Supply Unit: Y	ENG	
123	Minimum: Toner Supply Unit: CMY	ENG	

7952	**[PM Yield Setting]**		
	Adjusts the unit yield of each PM unit.		
001	Rotation: Image Transfer Belt	ENG	[0 to 999999999 / **303401000** / 1 mm/step]
002	Rotation: Cleaning Unit	ENG	[0 to 999999999 / **151701000** / 1 mm/step]
003	Rotation: Fusing Unit	ENG	[0 to 999999999 / **P3c: 153198000, P3d: 170257000** / 1 mm/step]
004	Rotation: Paper Transfer Unit	ENG	[0 to 999999999 / **151701000** / 1 mm/step]
005	Run Time: Toner Supply Unit: Bk	ENG	[0 to 999999999 / **64103000** / 1000 msec/step]
006	Run Time: Toner Supply Unit: M	ENG	[0 to 999999999 / **52083000** / 1000 msec/step]
007	Run Time: Toner Supply Unit: C	ENG	[0 to 999999999 / **52083000** / 1000 msec/step]
008	Run Time: Toner Supply Unit: Y	ENG	[0 to 999999999 / **52083000** / 1000 msec/step]
011	Page: Image Transfer Belt	ENG	[0 to 999999 / **600000** / 1 sheet/step]
012	Page: Cleaning Unit	ENG	[0 to 999999 / **300000** / 1 sheet/step]

013	Page: Fusing Unit	ENG	[0 to 999999 / **300000** / 1 sheet/step]
014	Page: Paper Transfer Unit	ENG	[0 to 999999 / **300000** / 1 sheet/step]
015	Toner Supply Unit: Bk	ENG	[0 to 9999999 / **2000000** / 1 sheet/step]
016	Toner Supply Unit: M	ENG	[0 to 9999999 / **1500000** / 1 sheet/step]
017	Toner Supply Unit: C	ENG	[0 to 9999999 / **1500000** / 1 sheet/step]
018	Toner Supply Unit: Y	ENG	[0 to 9999999 / **1500000** / 1 sheet/step]
021	Day Threshold: PCU: Bk	ENG	Adjusts the threshold day for the near end fro each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
022	Day Threshold: PCU: M	ENG	
023	Day Threshold: PCU: C	ENG	
024	Day Threshold: PCU: Y	ENG	
025	Day Threshold: Development Unit: Bk	ENG	
026	Day Threshold: Development Unit: M	ENG	
027	Day Threshold: Development Unit: C	ENG	
028	Day Threshold: Development Unit: Y	ENG	
029	Day Threshold: Developer: Bk	ENG	
030	Day Threshold: Developer: M	ENG	
031	Day Threshold: Developer: C	ENG	
032	Day Threshold: Developer: Y	ENG	

033	Day Threshold: Image Transfer Belt	ENG	Adjusts the threshold day for the near end for each PM unit. [1 to 30 / **15** / 1 day/step] These threshold days are used for @Remote alarms.
034	Day Threshold: Cleaning Unit	ENG	
035	Day Threshold: Fusing Unit	ENG	
036	Day Threshold: Paper Transfer Unit	ENG	
037	Day Threshold: Toner Collection Bottle	ENG	
038	Rotation: PCU Bk	ENG	[0 to 999999999 / **0** / 1 mm/step]
039	Rotation: PCU M	ENG	
040	Rotation: PCU C	ENG	
041	Rotation: PCU Y	ENG	
042	Rotation: Development Unit: Bk	ENG	[0 to 999999999 / **0** / 1 mm/step]
043	Rotation: Development Unit: M	ENG	
044	Rotation: Development Unit: C	ENG	
045	Rotation: Development Unit: Y	ENG	
046	Rotation: Developer: Bk	ENG	[0 to 999999999 / **0** / 1 mm/step]
047	Rotation: Developer: M	ENG	
048	Rotation: Developer: C	ENG	
049	Rotation: Developer: Y	ENG	
050	Page: PCU: Bk	ENG	[0 to 999999 / **0** / 1 sheet/step]
051	Page: PCU: M	ENG	
052	Page: PCU: C	ENG	
053	Page: PCU: Y	ENG	

054	Page: Development Unit: Bk	ENG	[0 to 999999 / **0** / 1 sheet/step]
055	Page: Development Unit: M	ENG	
056	Page: Development Unit: C	ENG	
057	Page: Development Unit: Y	ENG	
058	Page: Developer: Bk	ENG	[0 to 999999 / **0** / 1 sheet/step]
059	Page: Developer: M	ENG	
060	Page: Developer: C	ENG	
061	Page: Developer: Y	ENG	
062	Day Threshold:Toner Supply Unit: Bk	ENG	[1 to 30 / **15** / 1 day/step]
063	Day Threshold:Toner Supply Unit: M	ENG	[1 to 30 / **15** / 1 day/step]
064	Day Threshold:Toner Supply Unit: C	ENG	[1 to 30 / **15** / 1 day/step]
065	Day Threshold:Toner Supply Unit: Y	ENG	[1 to 30 / **15** / 1 day/step]

7953	**[Operation Env. Log: PCU: Bk]**
	Displays the PCDU rotation distance in each specified operation environment. T: Temperature (°C), H: Relative Humidity (%)

001	T<=0	ENG	[0 to 99999999 / - / 1 mm/step]
002	0<T<=5:0<=H<30	ENG	
003	0<T<=5:30<=H<70	ENG	
004	0<T<=5:70<=H<=100	ENG	
005	5<T<15:0<=H<30	ENG	
006	5<T<15:30<=H<55	ENG	
007	5<T<15:55<=H<80	ENG	
008	5<T<15:80<=H<=100	ENG	
009	15<=T<25:0<=H<30	ENG	
010	15<=T<25:30<=H<55	ENG	
011	15<=T<25:55<=H<80	ENG	[0 to 99999999 / - / 1 mm/step]
012	15<=T<25:80<=H<=100	ENG	
013	25<=T<30:0<=H<30	ENG	
014	25<=T<30:30<=H<55	ENG	
015	25<=T<30:55<=H<80	ENG	
016	25<=T<30:80<=H<=100	ENG	
017	30<=T<35:0<=H<30	ENG	
018	30<=T<35:30<=H<55	ENG	
019	30<=T<35:55<=H<80	ENG	
020	30<=T<35:80<=H<=100	ENG	
021	35 <= T	ENG	

7954	[Operation Env. Log Clear]		
	Clears the operation environment log.		
001	Operation Env. Log Clear	ENG	[- / - / -] [Execute]

7955	[Fusing Stop]		
001	Near End: Page	ENG	[1 to 999999 / **318000** / 1 sheet/step]
	Displays the threshold sheet for the heating roller near end.		
002	End: Page	ENG	[1 to 999999 / **330000** / 1 sheet/step]
	Displays the threshold sheet for the heating roller end.		
003	Near End: Rotation	ENG	[0 to 999999999 / **P3c: 162390000, P3d: 180473000** / 1 mm/step]
	Displays the threshold distance for the heating roller near end.		
004	End: Rotation	ENG	[0 to 999999999 / **P3c: 168518000, P3d: 187283000** / 1 mm/step]
	Displays the threshold distance for the heating roller end.		

Engine 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.).
P:	Print application.	
O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.

The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

Key for Abbreviations

Abbreviation	What it means
/	"By", e.g. "T:Jobs/Apl" = Total Jobs "by" Application
>	More (2> "2 or more", 4> "4 or more"
AddBook	Address Book
Apl	Application
B/W	Black & White
Bk	Black
C	Cyan
ColCr	Color Create
ColMode	Color Mode
Comb	Combine
Comp	Compression
Deliv	Delivery
DesApl	Designated Application. The application (Copy, Fax, Scan, Print) used to store the job on the document server, for example.
Dev Counter	Development Count, no. of pages developed.
Dup, Duplex	Duplex, printing on both sides
Emul	Emulation
FC	Full Color
FIN	Post-print processing, i.e. finishing (punching, stapling, etc.)
Full Bleed	No Margins
GenCopy	Generation Copy Mode
GPC	Get Print Counter. For jobs 10 pages or less, this counter does not count up. For jobs larger than 10 pages, this counter counts up by the number that is in excess of 10 (e.g., for an 11-page job, the counter counts up 11-10 =1)
IFax	Internet Fax

Abbreviation	What it means
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.
K	Black (YMCK)
LS	Local Storage. Refers to the document server.
LSize	Large (paper) Size
Mag	Magnification
MC	One color (monochrome)
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.
Org	Original for scanning
OrgJam	Original Jam
Palm 2	Print Job Manager/Desk Top Editor: A pair of utilities that allows print jobs to be distributed evenly among the printers on the network, and allows files to moved around, combined, and converted to different formats.
PC	Personal Computer
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.
PJob	Print Jobs
Ppr	Paper
PrtJam	Printer (plotter) Jam
PrtPGS	Print Pages
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.
Rez	Resolution
SC	Service Code (Error SC code displayed)
Scn	Scan

Abbreviation	What it means
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

Note

- All of the Group 8 SPs are able to reset by "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. [0 to 99999999 / **0** / 1] **Note**: The L: counter is the total number of times the other applications are used to send a job to the document server, plus the number of times a file already on the document server is used.
8004	P: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.
- When the customer prints a report (user code list, for example), the O: counter increments.

8061	T:FIN Jobs	*CTL	[0 to 99999999 / **0** / 1]
	These SPs total the finishing methods. The finishing method is specified by the application.		
8064	P:FIN Jobs	*CTL	[0 to 99999999 / **0** / 1]
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.		
8067	O:FIN Jobs	*CTL	[0 to 99999999 / **0** / 1]
	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.		
806x 1	Sort	Number of jobs started in Sort mode. When a stored copy job is set for Sort and then stored on the document server, the L: counter increments. (See SP8-066-1)	
806x 2	Stack	Number of jobs started out of Sort mode.	
806x 3	Staple	Number of jobs started in Staple mode.	
806x 4	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.	
8 06x 5	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).	
806x 6	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8-064-6.)	
806x 7	Other	(Reserved)	
806x 8	Inside-Flod	Not used	
806x 9	Three-In-Fold	Not used	
806x 10	Three-OUT-Fold	Not used	
806x 11	Four-Fold	Not used	
806x 12	KANNON-Fold	Not used	
806x 13	Perfect-Bind	Not used	
806x 14	Ring-Bind	Not used	

8071	T:Jobs/PGS	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.		
8074	P:Jobs/PGS	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count and calculate the number of print jobs by size based on the number of pages in the job.		
8077	O:Jobs/PGS	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.		
807x 1	1 Page	8 07x 8	21 to 50 Pages
807x 2	2 Pages	8 07x 9	51 to 100 Pages
807x 3	3 Pages	8 07x 10	101 to 300 Pages
807x 4	4 Pages	8 07x 11	301 to 500 Pages
807x 5	5 Pages	8 07x 12	501 to 700 Pages
807x 6	6 to 10 Pages	8 07x 13	701 to 1000 Pages
807x 7	11 to 20 Pages	8 07x 14	1001 to Pages

- 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.
- When printing the first page of a job from within the document server screen, the page is counted.

8381	T:Total PrtPGS	*CTL	These SPs count the number of pages printed by the customer. The counter for the application used for storing the pages increments. [0 to 99999999 / **0** / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.
8384	P:Total PrtPGS	*CTL	
8387	O:Total PrtPGS	*CTL	

- When the A3/DLT double count function is switched on with SP5104, 1 A3/DLT page is counted as 2.
- When several documents are merged for a print job, the number of pages stored are counted for the application that stored them.
- These counters are used primarily to calculate charges on use of the machine, so the following pages are not counted as printed pages:
  - Blank pages in a duplex printing job.
  - Blank pages inserted as document covers, chapter title sheets, and slip sheets.
  - Reports printed to confirm counts.
  - All reports done in the service mode (service summaries, engine maintenance reports, etc.)
  - Test prints for machine image adjustment.
  - Error notification reports.
  - Partially printed pages as the result of a copier jam.

8391	LSize PrtPGS	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count pages printed on paper sizes A3/DLT and larger. **Note**: In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.		

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 99999999 / **0** / 1]

8421	T:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.		
8424	P:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.		
8427	O:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by Other applications		

842x 1	Simplex> Duplex	
842x 4	Simplex Combine	
842x 5	Duplex Combine	
842x 6	2in1	2 pages on 1 side (2-Up)
842x 7	4 in1	4 pages on 1 side (4-Up)
842x 8	6 in1	6 pages on 1 side (6-Up)
842x 9	8 in1	8 pages on 1 side (8-Up)
842x 10	9 in1	9 pages on 1 side (9-Up)
842x 11	16 in1	16 pages on 1 side (16-Up)
842x 12	Booklet	
842x 13	Magazine	
842x 14	2-in-1 + Booklet	
842x 15	4-in-1 + Booklet	
842x 16	6-in-1 + Booklet	
842x 17	8-in-1 + Booklet	
842x 18	9-in-1 + Booklet	
842x 19	2-in-1 + Magazine	
842x 20	4-in-1 + Magazine	
842x 21	6-in-1 + Magazine	
842x 22	8-in-1 + Magazine	
842x 23	9-in-1 + Magazine	
842x 24	16-in-1 + Magazine	

- These counts (SP8 421 to SP8 427) are especially useful for customers who need to improve their compliance with ISO standards for the reduction of paper consumption.
- Pages that are only partially printed with the n-Up functions are counted as 1 page.
- Here is a summary of how the counters work for Booklet and Magazine modes:

Booklet		Magazine	
Original Pages	Count	Original Pages	Count
1	1	1	1
2	2	2	2
3	2	3	2
4	2	4	2
5	3	5	4
6	4	6	4
7	4	7	4
8	4	8	4

8431	T:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count the total number of pages output with the three features below, regardless of which application was used.		
8434	P:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count the total number of pages output with the three features below with the print application.		
8437	O:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count the total number of pages output with the three features below with Other applications.		
843x 1	Cover/Slip Sheet	Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.	
843x 2	Series/Book	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.	
843x 3	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 99999999 / **0** / 1]
	These SPs count by print paper size the number of pages printed by all applications.		

8444	P:PrtPGS/Ppr Size	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by print paper size the number of pages printed by the printer application.		
8447	O:PrtPGS/Ppr Size	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by print paper size the number of pages printed by Other applications.		
844x 1	A3		
844x 2	A4		
844x 3	A5		
844x 4	B4		
844x 5	B5		
844x 6	DLT		
844x 7	LG		
844x 8	LT		
844x 9	HLT		
844x 10	Full Bleed		
844x 254	Other (Standard)		
844x 255	Other (Custom)		

- These counters do not distinguish between LEF and SEF.

8451	PrtPGS/Ppr Tray		
	These SPs count the number of sheets fed from each paper feed station.		
001	Bypass Tray	*CTL	Bypass Tray [0 to 99999999 / **0** / 1]
002	Tray 1	*CTL	Copier [0 to 99999999 / **0** / 1]
003	Tray 2	*CTL	

004	Tray 3	*CTL	Paper Tray Unit (Option) [0 to 99999999 / **0** / 1]
005	Tray 4	*CTL	
006	Tray 5	*CTL	LCT (Option) [0 to 99999999 / **0** / 1]
007	Tray 6	*CTL	Currently not used.
008	Tray 7	*CTL	Currently not used.
009	Tray 8	*CTL	Currently not used.
010	Tray 9	*CTL	Currently not used.
011	Tray 10	*CTL	Currently not used.
012	Tray 11	*CTL	Currently not used.
013	Tray 12	*CTL	Currently not used.
014	Tray 13	*CTL	Currently not used.
015	Tray 14	*CTL	Currently not used.
016	Tray 15	*CTL	Currently not used.

8461	T:PrtPGS/Ppr Type	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by paper type the number pages printed by all applications. • These counters are not the same as the PM counter. The PM counter is based on feed timing to accurately measure the service life of the feed rollers. However, these counts are based on output timing. • Blank sheets (covers, chapter covers, slip sheets) are also counted. • During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1.		
8464	P:PrtPGS/Ppr Type	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by paper type the number pages printed by the printer application.		
846x 1	Normal		
846x 2	Recycled		
846x 3	Special		

846x 4	Thick
846x 5	Normal (Back)
846x 6	Thick (Back)
846x 7	OHP
846x 8	Other

8471	PrtPGS/Mag		
	These SPs count by magnification rate the number of pages printed.		
001	< 49%	*CTL	[0 to 99999999 / **0** / 1]
002	50% to 99%	*CTL	
003	100%	*CTL	
004	101% to 200%	*CTL	
005	201% <	*CTL	

- 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 99999999 / **0** / 1]
8484	P:PrtPGS/TonSave	*CTL	
	These SPs count the number of pages printed with the Toner Save feature switched on. **Note**: These SPs return the same results as this SP is limited to the Print application.		

8501	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages printed in the Color Mode by the print application.
8504	P:PrtPGS/Col Mode	*CTL	
8507	O:PrtPGS/Col Mode	*CTL	
8 50x 1	B/W		
8 50x 2	Mono Color		
8 50x 3	Full Color		
8 50x 4	Single Color		
8 50x 5	Two Color		

8511	T:PrtPGS/Emul	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by printer emulation mode the total number of pages printed.		
8514	P:PrtPGS/Emul	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by printer emulation mode the total number of pages printed.		
8 51x 1	RPCS		
8 51x 2	RPDL		
8 51x 3	PS3		
8 51x 4	R98		
8 51x 5	R16		
8 51x 6	GL/GL2		
8 51x 7	R55		
8 51x 8	RTIFF		
8 51x 9	PDF		
8 51x 10	PCL5e/5c		
8 51x 11	PCL XL		
8 51x 12	IPDL-C		
8 51x 13	BM-Links	Japan Only	

8 51x 14	Other	
8 51x 15	IPDS	

- SP8 511 and SP8 514 return the same results as they are both limited to the Print application.
- Print jobs output to the document server are not counted.

8521	T:PrtPGS/FIN	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by all applications.		
8524	P:PrtPGS/FIN	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count by finishing mode the total number of pages printed by the Print application.		
8 52x 1	Sort		
8 52x 2	Stack		
8 52x 3	Staple		
8 52x 4	Booklet		
8 52x 5	Z-Fold		
8 52x 6	Punch		
8 52x 7	Other		
8 52x 8	Inside Fold	Half-Fold (FM2) (Multi Fold Unit)	
8 52x 9	Three-IN-Fold	Letter Fold-in (FM4) (Multi Fold Unit)	
8 52x 10	Three-OUT-Fold	Letter Fold-out (FM3) (Multi Fold Unit)	
8 52x 11	Four Fold	Double Parallel Fold (FM5) (Multi Fold Unit)	
8 52x 12	KANNON-Fold	Gate Fold (FM6) (Multi Fold Unit)	
8 52x 13	Perfect-Bind	Perfect Binder	
8 52x 14	Ring-Bind	Ring Binder	

Note

- If stapling is selected for finishing and the stack is too large for stapling, the unstapled pages are still counted.
- The counts for staple finishing are based on output to the staple tray, so jam recoveries are counted.

8531	Staples	*CTL	This SP counts the amount of staples used by the machine. [0 to 9999999 / **0** / 1]

8551	T:FIN Books		
001	Perfect-Bind	*CTL	Not used
002	Ring-Bind	*CTL	

8554	T:FIN Books		
001	Perfect-Bind	*CTL	Not used
002	Ring-Bind	*CTL	

8561	T:A Sheet Of Paper		
001	Total: Over A3/DLT	*CTL	[0 to 99999999 / **0** / 1]
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	
004	Duplex: Under A3/DLT	*CTL	

8564	P:A Sheet Of Paper		
001	Total: Over A3/DLT	*CTL	[0 to 99999999 / **0** / 1]
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	
004	Duplex: Under A3/DLT	*CTL	

8567	O:A Sheet Of Paper

001	Total: Over A3/DLT	*CTL	[0 to 99999999 / **0** / 1]
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	
004	Duplex: Under A3/DLT	*CTL	

8581	T:Counter		
	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	*CTL	[0 to 99999999 / **0** / 1]
002	Total: Full Color	*CTL	
003	B&W/Single Color	*CTL	
004	Development: CMY	*CTL	
005	Development: K	*CTL	
008	Print: Color	*CTL	
009	Print: B/W	*CTL	
010	Total: Color	*CTL	
011	Total: B/W	*CTL	[0 to 99999999 / **0** / 1]
012	Full Color: A3	*CTL	
013	Full Color: B4 JIS or Smaller	*CTL	
014	Full Color Print	*CTL	
015	Mono Color Print	*CTL	
017	Twin Color Mode Print	*CTL	
018	Full Color Print (Twin)	*CTL	
019	Mono Color Print (Twin)	*CTL	
020	Full Color Total (CV)	*CTL	

021	Mono Color Total (CV)	*CTL	[0 to 99999999 / **0** / 1]
022	Full Color Print (CV)	*CTL	
023	Eco Color Print (FC)	*CTL	
024	Eco Color Print (Bk)	*CTL	
025	Total: Color (Eco Bk)	*CTL	
026	Total: B/W (Eco Bk)	*CTL	
027	Total: Color (Eco FC)	*CTL	
028	Development: CMY (A3)	*CTL	
029	Development: K (A3)	*CTL	
030	Total: Color (A3)	*CTL	
031	Total: B/W (A3)	*CTL	

8584	P:Counter		
	These SPs count the total output of the print application broken down by color output.		
001	B/W	*CTL	[0 to 99999999 / **0** / 1]
002	Mono Color	*CTL	
003	Full Color	*CTL	
004	Single Color	*CTL	
005	Two Color	*CTL	

8591	O:Counter		
	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	*CTL	[0 to 99999999 / **0** / 1]
002	Duplex	*CTL	

8601	T: Coverage Counter		
	These SPs count the total coverage for each color and the total printout pages for each printing mode.		
001	B/W	*CTL	[0 to 2147483647 / **0** / 1% /step]
002	Color	*CTL	
011	B/W Printing Pages	*CTL	[0 to 9999999 / **0** / 1]
012	Color Printing Pages	*CTL	[0 to 9999999 / **0** / 1]
021	Coverage Counter 1	*CTL	[0 to 9999999 / **0** / 1]
022	Coverage Counter 2	*CTL	
023	Coverage Counter 3	*CTL	
031	Coverage Counter 1 (YMC)	*CTL	[0 to 9999999 / **0** / 1]
032	Coverage Counter 2 (YMC)	*CTL	
033	Coverage Counter 3 (YMC)	*CTL	

8604	P:Coverage Counter		
	-		
001	B/W	*CTL	[0 to 2147483647 / **0** / 1% /step]
002	Single Color	*CTL	
003	Two Color	*CTL	
004	Full Color	*CTL	

8617	SDK Apli Counter
	These SPs count the total printout pages for each SDK application.

001	SDK-1	*CTL	[0 to 99999999 / **0** / 1]
002	SDK-2	*CTL	
003	SDK-3	*CTL	
004	SDK-4	*CTL	
005	SDK-5	*CTL	
006	SDK-6	*CTL	

8621	Func Use Counter		
	-		
001	Function-001	*CTL	[0 to 99999999 / **0** / 1]
002	Function-002	*CTL	
003	Function-003	*CTL	
004	Function-004	*CTL	
005	Function-005	*CTL	
006	Function-006	*CTL	
007	Function-007	*CTL	
008	Function-008	*CTL	
009	Function-009	*CTL	
010	Function-010	*CTL	

011	Function-011	*CTL	[0 to 99999999 / **0** / 1]
012	Function-012	*CTL	
013	Function-013	*CTL	
014	Function-014	*CTL	
015	Function-015	*CTL	
016	Function-016	*CTL	
017	Function-017	*CTL	
018	Function-018	*CTL	
019	Function-019	*CTL	
020	Function-020	*CTL	
021	Function-021	*CTL	[0 to 99999999 / **0** / 1]
022	Function-022	*CTL	
023	Function-023	*CTL	
024	Function-024	*CTL	
025	Function-025	*CTL	
026	Function-026	*CTL	
027	Function-027	*CTL	
028	Function-028	*CTL	
029	Function-029	*CTL	
030	Function-030	*CTL	

031	Function-031	*CTL	[0 to 99999999 / **0** / 1]
032	Function-032	*CTL	
033	Function-033	*CTL	
034	Function-034	*CTL	
035	Function-035	*CTL	
036	Function-036	*CTL	
037	Function-037	*CTL	
038	Function-038	*CTL	
039	Function-039	*CTL	
040	Function-040	*CTL	
041	Function-041	*CTL	[0 to 99999999 / **0** / 1]
042	Function-042	*CTL	
043	Function-043	*CTL	
044	Function-044	*CTL	
045	Function-045	*CTL	
046	Function-046	*CTL	
047	Function-047	*CTL	
048	Function-048	*CTL	
049	Function-049	*CTL	
050	Function-050	*CTL	

051	Function-051	*CTL	[0 to 99999999 / **0** / 1]
052	Function-052	*CTL	
053	Function-053	*CTL	
054	Function-054	*CTL	
055	Function-055	*CTL	
056	Function-056	*CTL	
057	Function-057	*CTL	
058	Function-058	*CTL	
059	Function-059	*CTL	
060	Function-060	*CTL	
061	Function-061	*CTL	[0 to 99999999 / **0** / 1]
062	Function-062	*CTL	
063	Function-063	*CTL	
064	Function-064	*CTL	

8771	Dev Counter		
	These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.		
001	Total		
002	K	*CTL	[0 to 99999999 / **0** / 1]
003	Y	*CTL	
004	M	*CTL	
005	C	*CTL	

8781	Toner_Bottle_Info.	*ENG	[0 to 9999999 / **0** / 1]
	These SPs display the number of already replaced toner bottles. **NOTE:** Currently, the data in SP7-833-011 through 014 and the data in SP8-781-001 through 004 are the same.		

001	Toner: BK	The number of black-toner bottles
002	Toner: Y	The number of yellow-toner bottles
003	Toner: M	The number of magenta-toner bottles
004	Toner: C	The number of cyan-toner bottles

8801	Toner Remain		
	These SPs display the percent of toner remaining for each color. This SP allows the user to check the toner supply at any time. **Note:** This precise method of measuring remaining toner supply (1% steps) is better than other machines in the market that can only measure in increments of 10 (10% steps).		
001	K	*CTL	[0 to 100 / **0** / 1% /step]
002	Y	*CTL	
003	M	*CTL	
004	C	*CTL	

8811	Eco Counter		
	-		
001	Eco Total	*CTL	[0 to 99999999 / **0** / 1]
002	Color	*CTL	
003	Full Color	*CTL	
004	Duplex	*CTL	
005	Combine	*CTL	
006	Color (%)	*CTL	[0 to 100 / **0** / 1% /step]
007	Full Color (%)	*CTL	
008	Duplex (%)	*CTL	
009	Combine (%)	*CTL	
010	Paper Cut (%)	*CTL	

101	Eco Totalr:Last	*CTL	[0 to 99999999 / **0** / 1]
102	Color:Last	*CTL	
103	Full Color:Last	*CTL	
104	Duplex:Last	*CTL	
105	Combine:Last	*CTL	
106	Color(%):Last	*CTL	[0 to 100 / **0** / 1% /step]
107	Full Color (%):Last	*CTL	
108	Duplex (%):Last	*CTL	
109	Combine (%):Last	*CTL	
110	Paper Cut (%):Last	*CTL	

8851	Cvr Cnt: 0-10%		
	These SPs display the number of scanned sheets on which the coverage of each color is from 0% to 10%.		
011	0 to 2%: BK	*ENG	[0 to 99999999 / **0** / 1]
012	0 to 2%: Y	*ENG	
013	0 to 2%: M	*ENG	
014	0 to 2%: C	*ENG	
021	3 to 4%: BK	*ENG	[0 to 99999999 / **0** / 1]
022	3 to 4%: Y	*ENG	
023	3 to 4%: M	*ENG	
024	3 to 4%: C	*ENG	
031	5 to 7%: BK	*ENG	[0 to 99999999 / **0** / 1]
032	5 to 7%: Y	*ENG	
033	5 to 7%: M	*ENG	
034	5 to 7%: C	*ENG	

041	8 to 10%: BK	*ENG	[0 to 99999999 / **0** / 1]
042	8 to 10%: Y	*ENG	
043	8 to 10%: M	*ENG	
044	8 to 10%: C	*ENG	

8861	CVr Cnt: 11-20%		
	These SPs display the number of scanned sheets on which the coverage of each color is from 11% to 20%.		
001	BK	*ENG	[0 to 99999999 / **0** / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8871	CVr Cnt: 21-30%		
	These SPs display the number of scanned sheets on which the coverage of each color is from 21% to 30%.		
001	BK	*ENG	[0 to 99999999 / **0** / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8881	CVr Cnt: 31%-		
	These SPs display the number of scanned sheets on which the coverage of each color is 31% or higher.		
001	BK	*ENG	[0 to 99999999 / **0** / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8891	Page/Toner Bottle		
	These SPs display the amount of the remaining current toner for each color.		
001	BK	*ENG	[0 to 99999999 / **0** / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8901	Page/Toner_prev1		
	These SPs display the amount of the remaining previous toner for each color.		
001	BK	*ENG	[0 to 99999999 / **0** / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8911	Page/Toner_prev2		
	These SPs display the amount of the remaining 2nd previous toner for each color.		
001	BK	*ENG	[0 to 99999999 / **0** / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8921	Cvr Cnt/Total		
	Displays the total coverage and total printout number for each color.		
001	Coverage (%) Bk	*CTL	[0 to 2147483647 / **0** / 1% /step]
002	Coverage (%) Y	*CTL	
003	Coverage (%) M	*CTL	
004	Coverage (%) C	*CTL	

011	Coverage /P: Bk	*CTL	[0 to 99999999 / **0** / 1]
012	Coverage /P: Y	*CTL	
013	Coverage /P: M	*CTL	
014	Coverage /P: C	*CTL	
031	Coverage(%):Eco BK	*CTL	[0 to 2147483647 / **0** / 1% /step]
032	Coverage(%):Eco Y	*CTL	
033	Coverage(%):Eco M	*CTL	
034	Coverage(%):Eco C	*CTL	
041	Coverage/P:Eco BK	*CTL	[0 to 99999999 / **0** / 1]
042	Coverage/P:Eco Y	*CTL	
043	Coverage/P:Eco M	*CTL	
044	Coverage/P:Eco C	*CTL	

8941	Machine Status	*CTL	[0 to 99999999 / **0** / 1]
	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.		
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

8961	Electricity Status		
	-		
001	Ctrl Standby Time	*CTL	[0 to 99999999 / **0** / 1]
002	STR Time	*CTL	
003	Main Power Off Time	*CTL	
004	Reading and Printing Time	*CTL	
005	Printing Time	*CTL	[0 to 99999999 / **0** / 1]
006	Reading Time	*CTL	
007	Eng Waiting Time	*CTL	
008	Low Power State Time	*CTL	
009	Silent State Time	*CTL	

8999	Admin. Counter List
	-

001	Total		[0 to 99999999 / **0** / 1]
006	Printer: Full Color		
007	Printer: BW		
008	Printer: Single Color		
009	Printer: Two Color		
012	A3/DLT		
013	Duplex		
026	Printer: Full Color(%)		[0 to 2147483647 / **0** / 1]
027	Printer: BW(%)		
028	Printer: Single Color(%)		
029	Printer: Two Color(%)		

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

Copier

5803	Description	Reading	
		0	1
001	2nd Tray Size Detection	See table 2 following this table.	
002	1st Tray Set Detection		
003	1st Tray Paper Height Sensor1	See table 1 following this table.	
004	1st Tray Paper Height Sensor2	See table 1 following this table.	
005	2nd Tray Paper Height Sensor1	See table 1 following this table.	
006	2nd Tray Paper Height Sensor2	See table 1 following this table.	
007	1st Tray Paper End Detection		
008	2nd Tray Paper End Detection		
009	1st Tray Upper Limit Sensor		
010	2nd Tray Upper Limit Sensor		
011	Bypass Paper Width Detection	See table 3 following this table.	
012	Bypass Paper End Detection		
013	Bypass Paper Length Detection	See table 3 following this table.	
014	1st Paper Feed Sensor		
015	2nd Paper Feed Sensor		

016	Exit Sensor		
017	Tray Full Exit Sensor		
018	Fusing Exit Sensor		
019	Fusing Entrance Sensor		
020	1st Feed Sensor		
021	2nd Feed Sensor		
022	Duplex Exit Sensor		
023	Registration Sensor		
024	Duplex Entrance Sensor		
025	Junction Sensor		
026	2nd Tray Set Detection		
030	Tonner End Sensor: Bk		
031	Tonner End Sensor: M		
032	Tonner End Sensor: C		
033	Tonner End Sensor: Y		
034	Drum Phase Sensor: Bk		
035	Drum Phase Sensor: M		
036	Drum Phase Sensor: C		
037	Drum Phase Sensor: Y		
038	Interlock Release Detection 1		
039	Interlock Release Detection 2		
040	Right Door		
041	Duplex Cover		
042	Toner Collection Bottle Set		
043	Toner Collection Full Sensor		
044	Toner Cooling Fan: Lock		

045	2nd Duct Fan2: Lock		
046	ITB New Unit Detection		
049	Duplex Fan:Lock		
050	Airflow Fan: Front: Lock		
051	Airflow Fan: Rear: Lock		
052	Fusing Exit Fan: Lock		
053	2nd Duct Fan1: Lock		
054	3rd Duct Fan: Lock		
055	Paper Exit Fan:Lock		
056	QSU Heater Cooling Fan: Lock		
057	AC Control board Cooling Fan: Lock		
058	Airflow Fan: Middle 1: Lock		
059	Airflow Fan:Middle 2:Lock		
060	ITB Contact Motor Position		
061	Paper Transfer Contact Motor Position		
062	Tonner Relay Motor: Lock		
063	ITB Drive Motor:Lock		
064	K Drum/Devlopment Drive Motor: Lock		
065	M Drum/Devlopment Drive Motor: Lock		
066	C Drum/Devlopment Drive Motor: Lock		
067	Y Drum/Devlopment Drive Motor: Lock		
068	Fusing Exit Motor:Lock		
080	PP:TTS:SC Detection		
081	PP:CB:SC Detection		
082	PP:D:SC Detection		
083	Fusing Destination Detection: 100V		

084	Fusing Destination Detection: 200V		
087	Fusing New Unit Detection		
090	Zero-cross Signal		
091	Shutter Position Sensor		
092	Fusing Pressue Release Sensor		
094	GAVD Open/Close Detection		
100	Keycard: Set		
101	Mechanical Counter : Set		
110	IOB Version		

Table 1: Paper Height Sensor

0: Deactivated, 1: Activated (actuator inside sensor)

Remaining paper	Paper height sensor 1	Paper height sensor 2
Full	0	0
Nearly full	1	0
Near end	1	1
Almost empty	0	1

Table 2: Paper Size Switch (Tray 2)

Switch 1 is used for tray set detection.

0: Pushed, 1: Not pushed

Models		Switch Location		
North America	Europe/Asia	4 (bit0)	3 (bit1)	2 (bit2)
11" x 17" SEF*1 (A3 SEF)	A3 SEF*1 (11" x 17" SEF)	0	0	1

8.5" x 14" SEF*2 (B4 SEF)	B4 SEF*2 (8.5" x 14" SEF)	0	0	0
A4 SEF	A4 SEF	1	1	0
8.5" x 11" SEF	8.5" x 11" SEF	1	1	1
B5 SEF	B5 SEF	0	1	1
11" x 81/2" LEF*3 (A4 LEF)	A4 LEF*3 (11" x 81/2" LEF)	1	0	0
10.5" x 7.25" LEF*4 (B5 LEF)	B5 LEF*4 (10.5" x 7.25" LEF)	0	1	0
A5 LEF	A5 LEF	1	0	1

*1: The machine detects either 11" x 17" SEF or A3 SEF, depending on the setting of SP 5-181-003.

*2: The machine detects either 8.5" x 14" SEF or B4 SEF, depending on the setting of SP 5-181-004.

*3: The machine detects either 11" x 81/2" LEF or A4 LEF, depending on the setting of SP 5-181-002.

*4: The machine detects either B5 LEF or 10.5" x 7.25" LEF, depending on the setting of SP 5-181-005.

Table 3: Paper Size (By-pass Table)

0: ON, 1: OFF

By-pass Paper Size Sensor				Length Sensor	NA	EU/ASIA
bit3	Bit2	Bit1	Bit0			
1	1	1	1	1	HLT SEF	A6 SEF
0	1	1	1	1	HLT SEF	A6 SEF
0	0	1	1	1	HLT SEF	A5 SEF
1	0	1	1	1	HLT SEF	A5 SEF
1	0	0	1	0	LT/LG SEF*1	A4 SEF
1	0	0	1	1	LT/LG SEF*1	A5 LEF
1	1	0	1	0	LT/LG SEF*1	A4 SEF

By-pass Paper Size Sensor				Length Sensor	NA	EU/ASIA
bit3	Bit2	Bit1	Bit0			
1	1	0	1	1	LT/LG SEF*1	A5 LEF
1	1	0	0	0	DLT SEF	A3 SEF
1	1	0	0	1	LT LEF	A4 LEF
1	1	1	0	0	DLT SEF	A3 SEF
1	1	1	0	1	LT LEF	A4 LEF

*1: The paper size (LT or LG) can be selected with SP1-007-001.

[FIN (TIG) INPUT Check]

6138	Description	Reading	
		0	1
001	Interference Escape Sensor		
002	Staple Moving HP Sensor		
003	Stuck Relay1 Release HP Sensor		
004	Exit Junction Gate HP Sensor		
005	Jogger HP Sensor		
006	Staple Tray Paper Sensor		
007	Rear Edge Fence HP Sensor		
008	Saddle Stitch Exit Sensor		
009	Stuck Relay2 Roller HP Sensor		
010	Folder Tray Full Sensor 1		
011	Folder Tray Full Sensor 2		
012	Folder Plate HP Sensor		
013	Saddle Stitch Arrival Sensor		

014	Folder Cam HP Sensor		
015	Staple Exit Sensor		
016	Shift Tray Paper Sensor		
017	Shift Tray Full		
018	Shift Roller HP Sensor		
020	Entrance Sensor		
021	Shift Exit Sensor		
022	Proof Exit Sensor		
023	Exit Guide Plate HP Sensor		
024	Proof Full Sensor		
025	Upper Cover Sensor		
026	Door SW		
027	Clincher Timing Sensor		
028	Clincher HP Sensor		
029	Driver Timing Sensor		
030	Staple Near End		
031	Self Priming		
032	Driver HP Sensor		
033	Punch Registration Detection HP Sensor		
034	Punch Moving HP Sensor		
035	Punch HP Sensor		
036	Punch Pluse Count Sensor		
037	Punch Chad Full Sensor		
038	Punch Registration Detection Sensor		

[FIN (KIN) INPUT Check] Finisher (B804/B805)

6139	Description	Reading	
		0	1
001	Entrance Sensor		
002	Shift Exit Sensor		
003	Staple Entrance Sensor		
004	Staple Moving HP Sensor		
005	Jogger HP Sensor		
006	Stack Feed-out Belt HP Sensor		
007	Staple Tray Paper Sensor		
008	Staple Rotation Sensor		
009	Staple Sensor		
010	Staple READY Detection		
011	Exit Guide Plate HP		
012	Shift HP Sensor		
013	Paper Sensor		
014	Tray Lower Sensor		
015	Proof Full Sensor		

[FIN (EUP) INPUT Check] Finisher (B804/B805)

6140	Description	Reading	
		0	1
001	Entrance Sensor		
002	Proof Exit Sensor		
003	Proof Full Detection Sensor		

004	Trailing Edge Detection: Shift		
005	Staple Exit Sensor		
006	Shift HP Sensor		
007	Shift Exit Sensor		
008	Exit Guide Plate HP Sensor		
009	Paper Detection Sensor: Staple		
010	Paper Detection Sensor: Shift		
011	Paper Full Sensor: 2000-Sheet		
012	Oscillating Back Roller		
013	Jogger HP Sensor		
014	Junction Gate HP Sensor		
015	Staple Tray Paper Sensor		
016	Staple Moving HP Sensor		
017	Skew HP Sensor		
018	Limit SW		
019	Door SW		
020	Stapler 1 Rotation		
021	Staple Detection		
022	Staple Leading Edge Detection		
023	Punch Moving HP Sensor		
024	Punch Registration HP Sensor		
025	Punch Registration Detection Sensor		
026	Punch Chad Full Sensor		
027	Punch HP		
028	Punch Selection DiPSW 1	See *1	
029	Punch Selection DiPSW	See *1	

030	Junction Gate Open/Close HP Sensor		
031	Leading Edge Detection Sensor		
032	Drive Roller HP Sensor		
033	Arrival Sensor		
034	Rear Edge Fence HP Sensor		
035	Folder Cam HP Sensor		
036	Folder Plate HP Sensor		
037	Folder Pass Sensor		
038	Saddle Full Sensor: Front		
039	Saddle Full Sensor: Rear		
040	Saddle Stitch Stapler 1 Rotation: Front		
041	Saddle Stitch Detection: Front		
042	Saddle Stitch Leading Edge Detection: Front		
043	Saddle Stitch Stapler 1 Rotation: Rear		
044	Saddle Stitch Detection: Rear		
045	Saddle Stitch Leading Edge Detection: Rear		
046	Full Sensor: 3000-Sheet	Not Full	Full
047	Exit Jogger HP Sensor: Front		
048	Exit Jogger HP Sensor: Rear		
049	Exit Jogger HP Sensor: Upper		

*1: Combination of DIP SW 1 and SW 2

DIP SW 1	DIP SW 2	Punch Type
0	0	Japan
1	0	Europe

0	1	North America
1	1	North Europe

*2: Please refer to "Lower Tray (D637 Only)" in the Service Manual for the "2000/3000 (Booklet) Finisher".

[FIN (ELB) INPUT Check] Finisher (B804/B805)

6141	Description	Reading	
		0	1
001	Entrance Sensor		
002	Hitroll HP Sensor		
003	Front Jogger HP Sensor		
004	Rear Jogger HP Sensor		
005	Staple Tray Paper Sensor		
006	Staple Moving HP Sensor		
007	Stuck Feed-out Belt Sensor		
008	Shift Tray Paper Sensor		
009	Upper Cover Sensor		
010	Staple Rotation Sensor		
011	Staple Near End		
012	Self Priming		
013	Shift Tray Limit Sensor		

[FIN (JAK) INPUT Check] 4bin Mail Box (M413)

6142	Description	Reading	
		0	1
001	Relay Sensor 1		

002	Relay Sensor 2		
003	Full Sensor 4		
004	Paper Sensor 4		
005	Full Sensor 3		
006	Paper Sensor 3		
007	Full Sensor 2		
008	Paper Sensor 2		
009	Full Sensor 1		
010	Paper Sensor 1		
011	Door Sensor		

Bridge Unit (D386) / Side Tray (D542)

6150	Description	Reading	
		0	1
001	Bridge/Left: Exit Sensor		
002	Bridge/Left: Feed Sensor		
003	Bridge/Left/Shift: Set Detection		
004	Bridge/Left: Exit Cover Detection		
005	Bridge/Left: Feed Cover Detection		
006	Left:Left Exit Sensor		

Shift Tray (D388)

6152	Description	Reading	
		0	1
002	ShiftTray: Position Sensor	Tray position: Front	Tray position: Rear

1 Bin Tray (D536)

6154	Description	Reading	
		0	1
001	1 bin: Set Detection		
002	1 bin: Paper Sensor		

Two-Tray Paper Feed Unit (D537)/ LCT 2000 (D538)/ LCT 1200 (D539)

6160	Description	Reading	
		0	1
001	Bank: Tray3: Feed Sensor		
002	Bank: Tray4: Feed Sensor		
003	Bank: Tray5: Feed Sensor		
004	Bank: Tray3: Vertical Feed Sensor		
005	Bank: Tray4: Vertical Feed Sensor		
006	Bank: Tray5: Vertical Feed Sensor		
007	Bank: Feed Cover Detection		
011	Bank: LCT: Paper Replenishment		
012	Bank: LCT: Slide		

Output Check Table

Copier

5804	Display	Description
003	Drum/Dev Motor:K: HighSpeed	-
004	Drum/Dev Motor:K: MiddleSpeed	-

005	Drum/Dev Motor: K: LowSpeed	-
010	Drum/Dev Motor:M:HighSpeed	-
011	Drum/Dev Motor:M: MiddleSpeed	-
012	Drum/Dev Motor: M: LowSpeed	-
017	Drum/Dev Motor:C: HighSpeed	-
018	Drum/Dev Motor:C: MiddleSpeed	-
019	Drum/Dev Motor: C: LowSpeed	-
024	Drum/Dev Motor:Y: HighSpeed	-
025	Drum/Dev Motr:Y: MiddleSpeed	-
026	Drum/Dev Motor: Y: LowSpeed	-
037	Toner Relay Motor	-
040	Image Transfer Motor: HighSpeed	-
041	Image Transfer Motor: MiddleSpeed	-
042	Image Transfer Motor: LowSpeed	-
050	Feed Motor: HighSpeed	-
051	Feed Motor: IncreaseSpeed	-
052	Feed Motor: MiddleSpeed	-
053	Feed Motor: MiddleIncreaseSpeed	-
054	Feed Motor: LowSpeed	-
055	Feed Motor: LowIncreaseSpeed	-
060	Regist Motor: HighSpeed	-
061	Regist Motor: MiddleSpeed	-
062	Regist Motor: LowSpeed	-
067	Duplex Feed Motor: CW: HighSpeed	-
068	Duplex Feed Motor: CW: MiddleSpeed	-

069	Duplex Feed Motor: CW: LowSpeed	-
074	Duplex Feed Motor: CCW: HighSpeed	-
075	Duplex Feed Motor: CCW: MiddleSpeed	-
076	Duplex Feed Motor: CCW: LowSpeed	-
081	Duplex Reverse Motor: CW: HighSpeed	-
082	Duplex Reverse Motor: CW: MiddleSpeed	-
083	Duplex Reverse Motor: CW: LowSpeed	-
088	Duplex Reverse Motor: CCW: HighSpeed	-
089	Duplex Reverse Motor: CCW: MiddleSpeed	-
090	Duplex Reverse Motor: CCW:LowSpeed	-
095	ITB Contact Motor	-
096	Paper Transfer Contact Motor	-
097	1st Tray Lift Motor: Up	-
098	1st Tray Lift Motor: Down	-
099	2ndTray Lift Motor: Up	-
100	2nd Tray Lift Motor: Down	-
102	Fusing Pressue Release Motor	-
104	Polygon Moter: LL	-
105	Polygon Moter: LM	-
106	Polygon Moter: LH	-
107	Polygon Moter: HH	-

110	Air Flow Fan:Flont	-
111	Air Flow Fan:Rear	-
112	Fusing Fan:H	-
113	Fusing Fan:L	-
114	PSU Cooling Fan	-
115	2nd Duct Fan1	-
117	3rd Duct Fan	-
119	Paper Exit Fan	-
121	QSU Heater Cooling Fan	-
122	AC Control board Cooling Fan	-
126	Development Clutch: Bk	-
127	Development Clutch: M	-
128	Development Clutch: C	-
129	Development Clutch: Y	-
130	Toner Bottle Clutch: Bk	-
131	Toner Bottle Clutch: M	-
132	Toner Bottle Clutch: C	-
133	Toner Bottle Clutch: Y	-
134	Toner Supply Pump: Bk	-
135	Toner Supply Pump: M	-
136	Toner Supply Pump: C	-
137	Toner Supply Pump: Y	-
138	1st Paper Feed Clutch	-
139	2nd Paper Feed Clutch	-
140	Bypass Feed Clutch	-
141	Bypass Pickup Solenoid	-

143	TM Sensor Shutter Solonoid	-
144	Exit Junction Solenoid	-
145	1st Feed Pickup Solenoid	-
146	2nd Feed Pickup Solenoid	-
150	Duplex Fan: HighSpeed	-
151	Duplex Fan: Lowspeed	-
152	Check Air Flow Fan:Middle 1	-
153	2nd Duct Fan2	-
154	Air Flow Fan:Middle 2	-
155	Toner Cooling Fan	-
161	PCL:Bk	-
162	PCL:M	-
163	PCL:C	-
164	PCL:Y	-
165	HST Sensor Power Supply	-
166	HST Sensor:Bk	-
167	HST Sensor:M	-
168	HST Sensor:C	-
169	HST Sensor:Y	-
170	Toner End Sensor: K	-
171	Toner End Sensor: M	-
172	Toner End Sensor: C	-
173	Toner End Sensor: Y	-
174	TM Sensor:F	-
175	TM Sensor:C	-
176	TM Sensor:R	-

177	P Sensor:M	-
178	P Sensor:C	-
179	P Sensor:Y	-
181	ChargeAC: Y: HighSpeed	-
182	ChargeAC: Y: MiddleSpeed	-
183	ChargeAC: Y: LowSpeed	-
186	PP: Development: K	-
187	PP: Development: M	-
188	PP: Development: C	-
189	PP: Development: Y	-
190	PP:Separation	-
216	LD1: K	-
217	LD2: K	-
218	LD1: Ma	-
219	LD2: Ma	-
220	LD1: Cy	-
221	LD2: Cy	-
222	LD1: Ye	-
223	LD2: Ye	-
224	PP: ITB: K	-
225	PP: ITB: M	-
226	PP: ITB: C	-
227	PP: ITB: Y	-
228	PP: PTR: +	-
229	PP: PTR: -	-
231	PP: ChargeDC: K	-

232	PP: ChargeDC: M	-
233	PP: ChargeDC: C	-
234	PP: ChargeDC: Y	-
237	PP: ChargeDC: K: HighSpeed	-
238	PP: ChargeDC: K: MiddleSpeed	-
239	PP: ChargeDC: K: LowSpeed	-
244	PP: ChargeDC: M: HighSpeed	-
245	PP: ChargeDC: M: MiddleSpeed	-
246	PP: ChargeDC: M: LowSpeed	-
251	PP: ChargeDC: M: HighSpeed	-
252	PP: ChargeDC: M: MiddleSpeed	-
253	PP: ChargeDC: M: LowSpeed	-

[FIN (TIG) OUTPUT Check]

6143	Display	Description
001	Shift Motor	-
002	Entrance Motor	-
003	Staple Relay Motor	-
004	Knock Solenoid	-
005	Junction Gate SOL 1	-
006	Junction Gate SOL 2	-
007	Folder Roller Rotation Motor	-
008	Staple Motor	-
010	Exit Guide Plate Motor	-
011	Shift Relay Motor	-

012	Tray Motor	-
013	Stack Feed-out Motor	-
014	Stuck Relay1 Motor	-
015	Stuck Relay1 Release Motor	-
016	Rear Edge Fence Drive Motor	-
017	Folder Plate Motor	-
018	Drive Roller Oscillating Motor	-
019	Staple Moving Motor	-
020	Jogger Motor	-
021	Punch Registration Moving Motor	-
022	Punch Motor	-
023	Punch Moving Motor	-

[FIN (KIN) OUTPUT Check]

6143	Display	Description
001	Relay Up Motor	-
002	Relay Down Motor	-
003	Exit Motor	-
004	Proof Junction Gate SOL	-
005	Tray Up Motor	-
006	Jogger Motor	-
007	Staple Moving Motor	-
008	Staple Motor	-
009	Staple Junction Gate SOL	-
010	Posioning Roller Solenoid	-

011	Stack Feed-out Motor	-
012	Shift Motor	-
013	Exit Guide Plate Motor	-

[FIN (EUP) OUTPUT Check] (Booklet) Finisher (D804/D805)

6145	Display	Description
001	Entrance Motor	Finisher Entrance Motor
002	Upper Feed Motor	Upper Transport Motor
003	Lower Feed Motor	Lower Transport Motor
004	Exit Motor	Upper/Proof Tray Exit Motor
005	Knock Roller Motor	Clamp Roller Retraction Motor
006	Shift Motor	Shift Roller Motor
007	Exit Guide Plate Open/Close Motor	Exit Guide Plate Motor
008	Tray Lift Motor	Upper Tray Lift Motor
009	Oscillating Back Roller Motor	Stacking Sponge Roller Motor
010	Jogger Motor	Jogger Fence Motor
011	Stack Feed-out Motor	Feed Out Belt Motor
012	Staple Moving Motor	Corner Stapler Movement Motor
013	Staple Skew Motor	Corner Stapler Rotation Motor
014	Staple Motor	Corner Stapler EH530
015	Upper Junction Gate Solenoid	Proof Junction Gate Solenoid
016	Lower Junction Gate Solienoid	Stapling Tray Junction Gate Solenoid
017	Knock Solenoid	Stapling Edge Pressure Plate Solenoid
018	Trailing Edge Hold Solenoid	Positioning Roller Solenoid
019	Saddle Stitch Hold Solonoid	Booklet Pressure Roller Solenoid

020	Stack Junction Gate Open/Close Motor	Stack Junction Gate Motor
021	Trailing Edge Fence Moving Motor	Fold Unit Bottom Fence Lift Motor
022	Saddle Stitch Staple Motor: Front	Booklet Stapler EH185R: Front
023	Saddle Stitch Staple Motor: Rear	Booklet Stapler EH185R: Rear
024	Folder Plate Motor	Fold Plate Motor
025	Folder Roller Motor	Fold Roller Motor
026	Drive Roller Oscillating Motor	Positioning Roller Motor
027	Punch Motor	Punch Drive Motor
028	Punch Moving Motor	Punch Movement Motor
029	Punch Registration Detection Motor	Paper Position Sensor Slide Motor
030	Exit Jogger Motor: Front	
031	Exit Jogger Motor: Rear	
032	Exit Jogger Release Motor	

[FIN (ELB) OUTPUT Check]

6146	Display	Description
001	Carry Motor	-
002	Hitroll Motor	-
003	Front Jogger Motor	-
004	Rear Jogger Motor	-
005	Staple Moving Motor	-
006	Stack Feed-out Motor	-
007	Tray Motor	-
008	Staple Motor	-
009	Stopper Solenoid	-

013	Exit Guide Plate Motor	-

FIN(JAK)OUTPUT Check

6147	Display	Description
001	Feed Motor	-
002	Solenoid 1	-
003	Solenoid 2	-
004	Solenoid 3	-

Bridge Unit (D386)/ Side Tray (D542)

6151	Display	Description
001	Bridge/Left: Feed Motor: Current Switch	-
002	Bridge/Left: Feed Motor: Reset	-
003	Bridge/Left: Feed Motor: Enable	-
006	Bridge/Left: Feed Motor: HighSpeed	-
007	Bridge/Left: Feed Motor: MiddleSpeed	-
008	Bridge/Left: Feed Motor: LowSpeed	-
011	Bridge/Left: Junction Solenoid	-

Shift Tray (D388)

6153	Display	Description
001	ShiftTray: Motor	-

1 Bin Tray (D536)

6155	Display	Description
001	1 bin: Junction Solenoid	-

-

6157	Display	Description
001	4 bin: Junction Solenoid	-

Two-Tray Paper Feed Unit (D537)/ LCT 2000 (D538)/ LCT 1200 (D539)

6161	Display	Description
005	Bank1: Feed Motor: HighSpeed/Fan	-
006	Bank1: Feed Motor: IncreaseSpeed/Fan	-
007	Bank1: Feed Motor: MiddleSpeed/Fan	-
008	Bank1 Feed Motor: MiddleIncreaseSpeed/Fan	-
009	Bank1: Feed Motor: LowSpeed/Fan	-
010	Bank1: Feed Motor: LowIncreaseSpeed/Fan	-
015	Bank2: Feed Motor: HighSpeed/Fan	-
016	Bank2: Feed Motor: IncreaseSpeed/Fan	-
017	Bank2: Feed Motor: MiddleSpeed/Fan	-
018	Bank2 Feed Motor: MiddleIncreaseSpeed/Fan	-
019	Bank2: Feed Motor: LowSpeed/Fan	-

020	Bank2: Feed Motor: LowIncreaseSpeed/Fan	-
030	Bank: Tray3: PU Solenoid	-
031	Bank: Tray4: PU Solenoid	-
032	Bank: Tray5: PU Solenoid	-
035	Bank: Tray3: Feed Clutch	-
036	Bank: Tray4: Feed Clutch	-
037	Bank: Tray5: Feed Clutch	-

Test Pattern Printing

Printing Test pattern: SP2-109

Some of these test patterns are used for print image adjustments but most are used primarily for design testing.

Note

- Do not operate the machine until the test pattern is printed out completely. Otherwise, an SC occurs.

1. Enter the SP mode and select **SP2-109-003**.
2. Enter the number for the test pattern that you want to print.
3. When you want to select the single color of Magenta, Yellow, or Cyan for printing a test pattern, select the color with SP2-109-005 (2: Magenta, 3: Yellow, 4: Cyan).
4. When you want to change the density of printing a test pattern, select the density with SP2-109-006 to -009 for each color.

   Note

   - If you select "0" with SP2-109-006 to -009, the color to be adjusted to "0" does not come up on a test pattern.
5. Exit the SP mode.
6. Touch the following tabs in order, to print a test pattern
   User Tools >Printer Features >List/Test Print >Color Sample.
7. After checking the test pattern, re-enter the SP mode, and reset SP2-109-003 to "0: None".
8. Exit the SP mode.

No.	Pattern	No.	Pattern
0	None	11	Independent Pattern (1-dot)
1	Vertial Line (1dot)	12	Independent Pattern (2-dot)
2	Vertial Line (2dot)	13	Independent Pattern (4-dot)
3	Horizontal Line (1dot)	14	Triming Area
4	Horizontal Line (2dot)	16	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

MEMO

MEMO