Model OR-C2
Machine Code:
D182/D183/D184

Field Service Manual

30 August, 2013

Important Safety Notices

Safety

Prevention of Physical Injury

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

Health Safety Conditions

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

Observance of Electrical Safety Standards

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

Safety and Ecological Notes for Disposal

1. Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.

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

⚠CAUTION

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

Handling Toner

- Work carefully when removing paper jams or replacing toner bottles or cartridges to avoid spilling toner on clothing or the hands.
- If toner is inhaled, immediately gargle with large amounts of cold water and move to a well ventilated location. If there are signs of irritation or other problems, seek medical attention.
- If toner gets on the skin, wash immediately with soap and cold running water.
- If toner gets into the eyes, flush the eyes with cold running water or eye wash. If there are signs of irritation or other problems, seek medical attention.
- If toner is swallowed, drink a large amount of cold water to dilute the ingested toner. If there are signs of any problem, seek medical attention.
- If toner spills on clothing, wash the affected area immediately with soap and cold water. Never use hot water! Hot water can cause toner to set and permanently stain fabric.
- Always store toner and developer supplies such as toner and developer packages, cartridges, and bottles (including used toner and empty bottles and cartridges) out of the reach of children.
- Always store fresh toner supplies or empty bottles or cartridges in a cool, dry location that is not exposed to direct sunlight.

Laser Safety

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

⚠WARNING

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

WARNING FOR LASER UNIT
WARNING: Turn off the main switch before attempting any of the procedures in the Laser Unit section. Laser beams can seriously damage your eyes. CAUTION MARKING:    laser_decal

Safety Precautions for This Machine

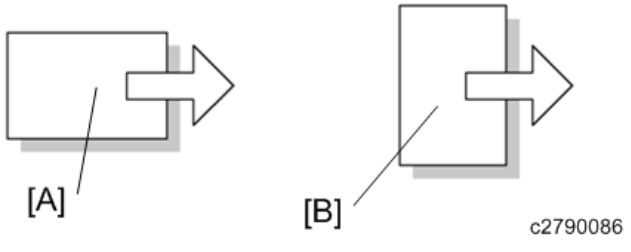
Before moving the mainframe:

- Disconnect all peripheral units (finisher, LCT, etc.) from the mainframe.
- Pull the slide handles out of the mainframe and use them to lift the mainframe.

Conventions and Trademarks

Conventions

Symbol	What it means
	Screw
	Connector
	E-ring
	C-ring
	Harness clamp
SEF	Short Edge Feed
LEF	Long Edge Feed
FFC	Flat Film Connector



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

The notations "SEF" and "LEF" describe the direction of paper feed. The arrows indicate the direction of paper feed.

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.

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TABLE OF CONTENTS

Important Safety Notices..... 1
Safety..... 1
Laser Safety..... 2
Safety Precautions for This Machine..... 3
Conventions and Trademarks..... 4
Conventions..... 4
Warnings, Cautions, Notes..... 4
Trademarks..... 5

1. Product Information

Product Overview..... 17
Mechanical Components..... 17
Paper Path..... 18
Drive Layout..... 19
Machine Codes and Peripherals Configuration..... 21
System Configuration and Options..... 21
Specifications..... 26

2. Installation

Installation Requirements..... 27
Environment..... 27
Machine Level..... 27
Minimum Space Requirements..... 27
Machine Dimensions..... 29
Power Requirements..... 29
Main Machine Installation..... 31
Installation Flow Chart..... 31
Accessory Check..... 31
Installation Procedure..... 32
Check Image Quality / Settings..... 41
Moving the Machine..... 42
Transporting the Machine..... 43
Paper Feed Unit PB3120 (D579)..... 44
Accessory Check..... 44
Installation Procedure..... 44

Caster Table Type D (D593)....49
Component Check....49
Installation Procedure....49
Paper Feed Unit PB3180 (D746)....51
Accessory Check....51
Installation Procedure....51
LCIT PB3190 (D747)....58
Accessory Check....58
Installation Procedure....58
Platen Cover PN2000 (D700)....64
Accessory Check....64
Installation Procedure....64
ARDF DF3090 (D779)....67
Accessory Check....67
Installation Procedure....67
1 Bin Tray BN3090 (D582)....72
Component Check....72
Installation Procedure....72
Internal Shift Tray SH3050 (D583)....77
Component Check....77
Installation Procedure....77
Bridge Unit BU3050 (D584)....80
Component List....80
Installation Procedure....80
Booklet Finisher SR3150 (D686) / Finisher SR3140 (D687)....82
Accessory Check....82
Installation Procedure....84
Punch Unit PU3050 (D717)....93
Accessory Check....93
Installation Procedure....94
Internal Finisher Type 3352 (D586)....105
Component Check....105
Installation Procedure....106

Punch Kit PU3020 (D587)..... 111
Component Check..... 111
Installation Procedure..... 112
Heaters..... 122
Anti-Condensation Heater (Scanner Unit)..... 122
Tray Heater (Copier)..... 124
Tray Heater (Optional Paper Feed Unit)..... 126
Tray Heater (Optional LCT)..... 134
Smart Card Reader Built-in Unit Type M7 (D773)..... 139
Accessory Check..... 139
Installation Procedure..... 139
Card Reader Bracket Type 3352 (D593)..... 143
Component Check..... 143
Installation Procedure..... 143
Key Counter Bracket Type H (A674)..... 147
Installation Procedure..... 147
Optional Counter Interface Unit Type A (B870)..... 149
Installation Procedure..... 149
Internal Options..... 152
List of Slots..... 152
Printer and Printer/Scanner Options..... 153
Overview..... 153
Kit Contents..... 154
Printer, Printer/Scanner Unit Installation (For Basic Models)..... 155
Scanner Enhance Option (For Basic Models)..... 158
Adding Icons to the [Home] Screen..... 159
IEEE 1284 Interface Board Type A (B679)..... 161
Accessories..... 161
Installation..... 161
IEEE 802.11a/g/n Interface Unit Type M2 (D164)..... 163
Accessories..... 163
Installation..... 163
User Tool Settings for IEEE 802.11a/g..... 166

Bluetooth Interface Unit Type D (D566)..... 169
Accessories..... 169
Installation..... 169
File Format Converter Type E (D377)..... 171
Accessory Check..... 171
Installation..... 171
Copy Data Security Unit Type G (D640)..... 173
Component Check..... 173
Installation..... 173
Hard Disk Drive Option Type M7 (D758)..... 176
Accessory Check..... 176
Installation..... 176
SD Card Option..... 179
SD Card Slots..... 179
List of Slots Used..... 179
SD Card Appli Move..... 180
Overview..... 180
Move Exec..... 181
Undo Exec..... 182
Browser Unit Type M7 (D758)..... 183
Accessory Check..... 183
Installation procedure..... 183
Settings..... 187
SD card for NetWare printing Type M7 (D758)..... 189
Accessory Check..... 189
Installation procedure..... 189
PostScript3 Unit Type M7 (D757)..... 191
Accessory Check..... 191
Installation procedure..... 191
IPDS Unit Type M7 (D757)..... 193
Accessories..... 193
Installation..... 193
OCR Unit Type M2 (D166)..... 196

Accessory Check.....196
Installation Procedure.....196
Recovery Procedure.....198
Memory Unit Type M1 1.5GB (D701).....200
Accessories.....200
Installation procedure.....200
Check All Connections.....202
Security Setting.....203
Security Function Installation.....203
Data Overwrite Security.....204
HDD Encryption.....206
@Remote Settings.....212
Operation Guidance for Users.....216

3. Preventive Maintenance

Preventive Maintenance Tables.....217
Image Quality Standards.....218
Paper Transfer Quality Standards.....220

4. Replacement and Adjustment

Notes on the Main Power Switch.....221
Push Switch.....221
Special Tools and Lubricants.....224
Special Tools.....224
Lubricants.....224
Exterior Covers.....225
Front Door.....225
Upper Rear Cover.....225
Lower Rear Cover.....227
Controller Cover.....227
Left Cover.....228
Right Front Cover.....230
Right Cover.....231
Right Rear Cover.....232
Scanner Front Cover.....233

Scanner Left Cover....235
Scanner Right Cover....236
Scanner Upper Cover....237
Paper Exit Cover....238
Output Tray....239
Operation Panel....241
Operation Panel....241
LCD Panel....242
Scanner Unit....245
Exposure Glass....245
Exposure Lamp (LED)....247
Scanner Motor....248
Lens Block....250
Original Size Sensor....251
SIO....252
Scanner HP Sensor....253
DF Position Sensor....254
Adjusting the Scanner Wire....255
Laser Unit....265
Caution Decal Locations....265
Laser Unit....265
Polygon Mirror Motor....267
LD Unit....268
Laser Synchronization Detector....268
Photoconductor Unit (PCU)....270
PCU Removal....270
Pick-off Pawls....271
OPC Drum....271
Charge Roller, Cleaning Roller....273
Cleaning Blade....274
Developer....275
After Replacement of PCU Components....280
Transfer Unit....281

Transfer Roller Unit.....281
Image Density Sensor.....282
Fusing Unit.....284
Fusing Unit.....284
Thermistors.....284
Hot Roller Strippers.....285
Thermostats.....286
Hot Roller and Fusing Lamps.....287
Pressure Roller/Cleaning Roller.....290
Paper Exit.....291
Paper Exit Sensor/Paper Overflow Sensor.....291
Paper Feed.....294
Paper Feed Unit.....294
Separation Roller, Feed Roller, Pick-up Roller.....296
Paper Tray Lift Motors.....297
Registration Clutch.....298
Transport Clutch.....298
Paper Feed Clutch.....299
Paper Size Sensors.....300
Registration Sensor.....301
Vertical Transport, Paper Overflow, Paper End and Paper Feed Sensor.....303
Dust Collection Box.....304
Duplex Unit/By-pass Tray Unit.....306
Duplex Unit.....306
Duplex Entrance Sensor.....307
Duplex Exit Sensor.....309
Duplex Motor/By-pass Motor.....310
By-pass Tray Unit.....312
By-pass Paper Length Sensor.....314
By-Pass Paper Size Sensor.....315
By-pass Paper End Sensor.....317
By-pass Pick-up Roller.....318
By-pass Tray HP Sensor.....318

PCBs and Other Items....320
Controller Board....320
NVRAM on the Controller Board....324
BCU Board....325
EEPROM on the BCU....326
IPU....327
Main Motor....329
PSU....330
Power Pack....331
HDD....331
Adjustment after Replacement....334
Printing....334
Scanning....338
Scanner Wire....339
ADF Image Adjustment....340
Touch Screen Calibration....341

5. Service Table

Service Program Mode....345
SP Tables....345
Enabling and Disabling Service Program Mode....345
Types of SP Modes....345
Remarks....349
Test Pattern Print....351
Test Pattern (SP2-109-001)....351
Firmware Update....353
Type of Firmware....353
Before You Begin....354
Updating Firmware....355
Handling Firmware Update Errors....358
Updating JavaVM....361
Creating an SD Card for Updating....361
Selecting the Panel Display Language....365
Switchable Languages....365

NVRAM Data Upload/Download 366
Uploading Content of NVRAM to an SD card 366
Downloading an SD Card to NVRAM 367
UP/SP Data Import/Export 368
Overview 368
UP Data Import/Export 368
SP Data Import/Export 372
Possible solutions for import/export problems 374
Address Book Export/Import 377
Export 377
Import 377
Specification 378
Capturing the Debug Logs 379
Overview 379
Retrieving the Debug Logs 381

6. Troubleshooting

Service Call 383
Summary 383
SC100 (Engine: Scanning) 384
SC200 (Engine: Exposure) 391
SC300 (Engine: Image Processing1 (Charge, Development)) 395
SC400 (Engine: Image Processing2 (Around the Drum)) 398
SC500 (Engine: Paper Feed and Fusing) 400
SC600 (Engine: Communication and Others) 414
SC600 (Controller) 417
SC700 (Engine: Peripherals) 428
SC800 (Controller) 454
SC900 (Engine: Others) 472
SC900 (Controller) 474
Jam Detection 478
Paper Jam Display 478
Jam Codes and Display Codes 479
Sensor Locations 485

Paper Size Codes....486
Other Problems....487
Marks (Vertical Streaks) on Prints and Copies due to Scanning Problems....487
Jammed Paper at the Bridge Unit....491
Stacking Problem at the 1000-sheet Finisher....491
Early Paper Full Detection at the 1000-sheet Finisher....494
Blown Fuse Conditions....496

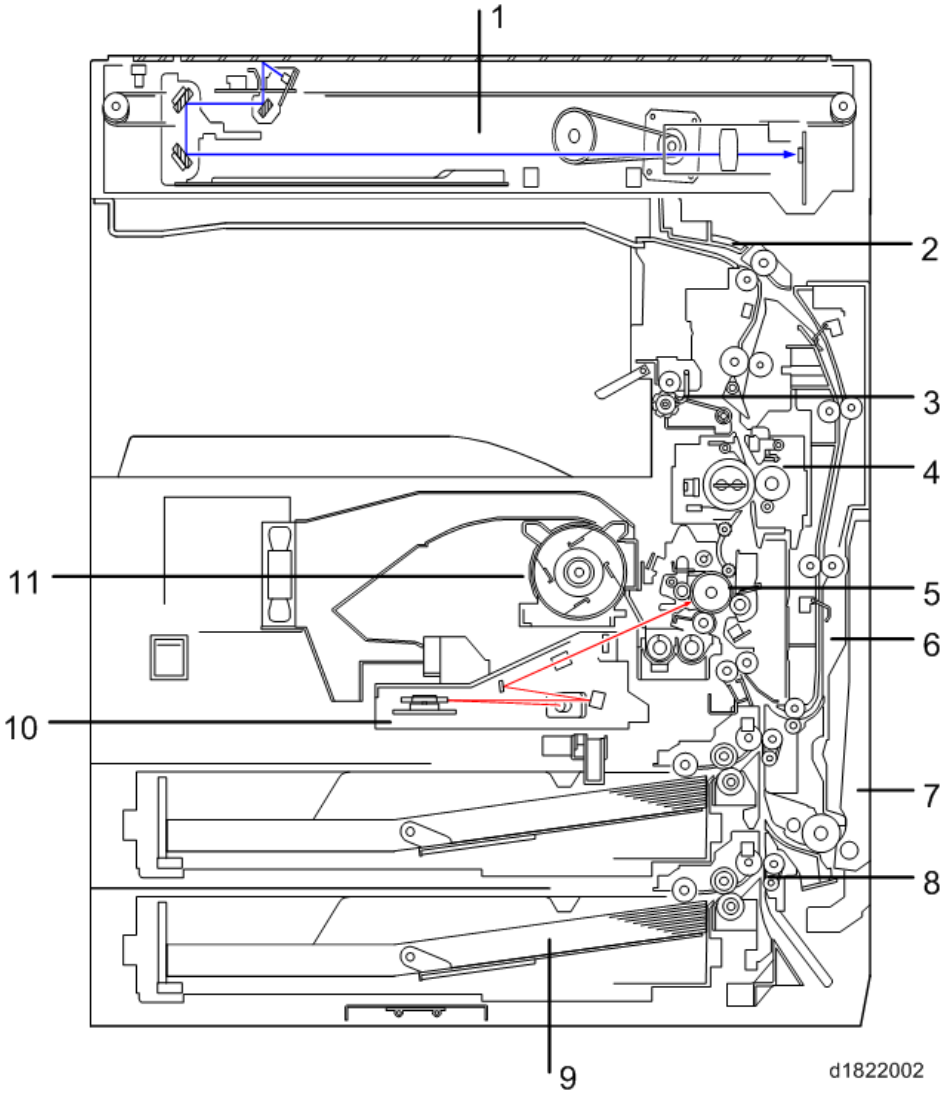
7. Energy Saving

Energy Saving....497
Energy Save....497
Energy Saver Timer....499
Paper Save....500
Effectiveness of Duplex/Combine Function....500

1. Product Information

Product Overview

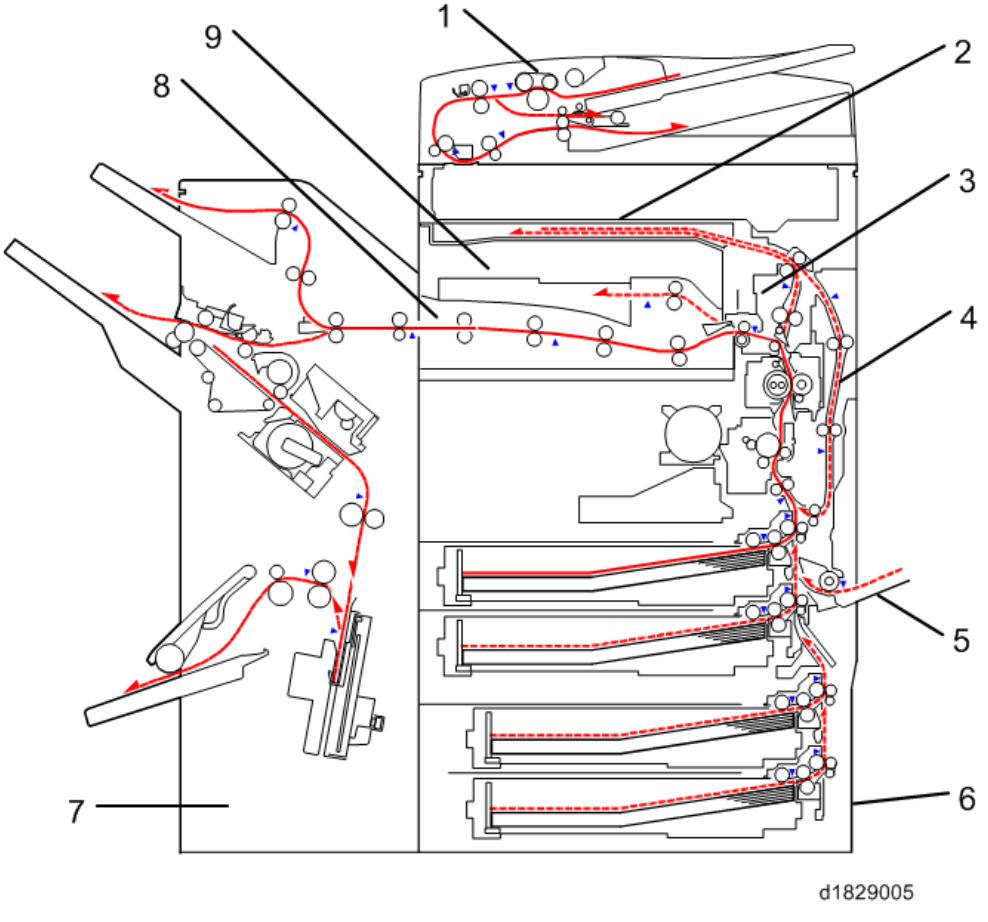
Mechanical Components



1. Scanner unit
2. Inverter transport
3. Paper exit unit

4. Fusing unit
5. OPC drum
6. Duplex unit
7. By-pass tray unit
8. Vertical transport
9. Paper feed unit
10. Laser unit
11. Toner supply unit

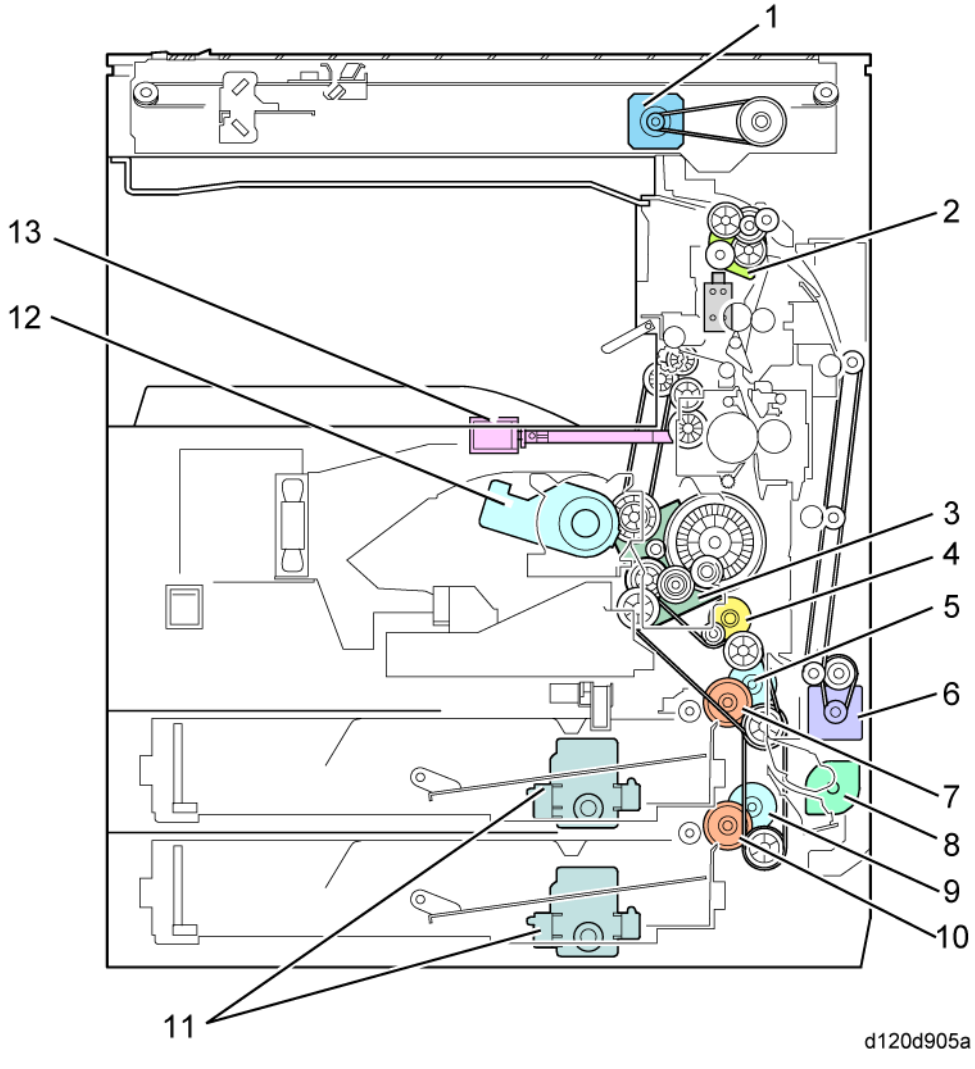
Paper Path



1. ADF
2. Optional 1-bin Tray

3. Interchange Unit
4. Duplex Unit
5. By-pass Feed Tray
6. Optional Paper Feed Unit
7. Optional Finisher
8. Optional Bridge Unit
9. Optional shift tray

Drive Layout

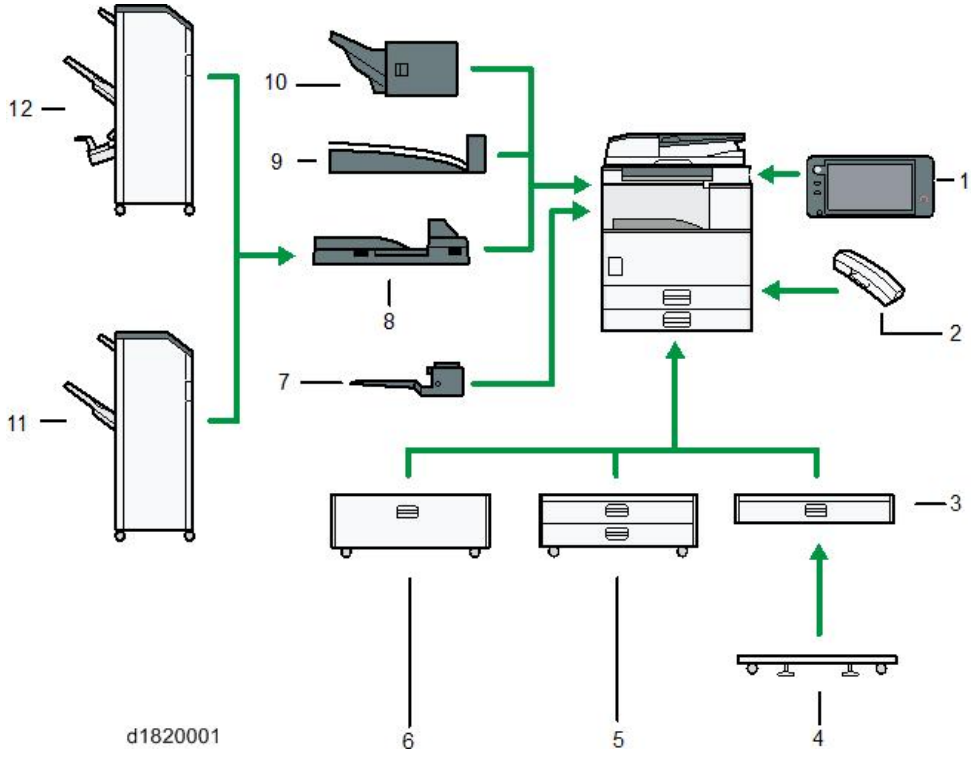


1. Scanner Motor
2. Inverter Motor
3. Main Motor
4. Registration Clutch
5. Upper Transport Clutch
6. Duplex Motor
7. Upper Paper Feed Clutch
8. By-pass Motor
9. Lower Transport Clutch
10. Lower Paper Feed Clutch
11. Paper Tray Lift Motor
12. Toner Supply Motor
13. Fusing drive release solenoid

Machine Codes and Peripherals Configuration

System Configuration and Options

D182/D183/D184 (NA)

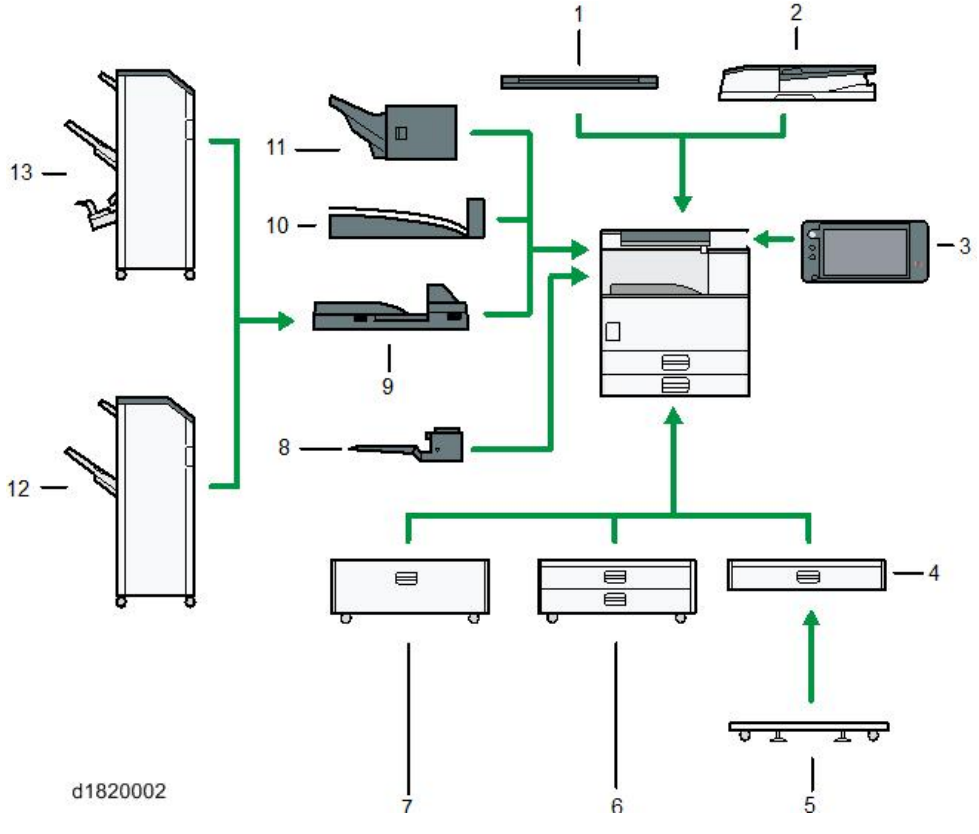


No.	Item	Machine Code
1	Smart Operation Panel Type M3	D148
2	Handset Type 3352	D593
3	Paper Feed Unit PB3120	D579
4	Caster Table Type D	D593
5	Paper Feed Unit PB3180	D746
6	LCIT PB3190	D747
7	1 Bin Tray BN3090	D582

No.	Item	Machine Code
8	Bridge Unit BU3050	D584
9	Internal Shift Tray SH3050	D583
10	Internal Finisher Type 3352	D586
11	Finisher SR3140	D687
12	Booklet Finisher SR3150	D686
	Punch Kit PU3020 NA	D587-17
	Punch Unit PU3050 NA	D717-17
	Finisher Adapter Type M7	D687
	ADF Handle Type C	D593
	OCR Unit Type M2	D166
	PostScript3 Unit Type M7	D757
	IPDS Unit Type M7	D757
	IEEE 802.11a/g/n Interface Unit Type M2	D164
	IEEE 1284 Interface Board Type A	B679
	Bluetooth Interface Unit Type D	D566
	File Format Converter Type E	D377
	SD card for NetWare printing Type M7	D758
	Browser Unit Type M7	D758
	Copy Data Security Unit Type G	D640
	Hard Disk Drive Option Type M7	D758
	Memory Unit Type M1 1.5GB	D701
	Optional Counter Interface Unit Type A	B870
	Key Counter Bracket Type H	A674
	Card Reader Bracket Type 3352	D593
	Smart Card Reader Built-in Unit Type M7	D773

No.	Item	Machine Code
	Unicode Font Package for SAP(R) 1 License	B869
	Unicode Font Package for SAP(R) 10 License	B869
	Unicode Font Package for SAP(R) 100 License	B869
	Fax marker type 30	H903

D182/D183/D184 (EU/AP/CHN/TWN)



No.	Item	Machine Code
1	Platen Cover PN2000	D700
2	ARDF DF3090	D779
3	Smart Operation Panel Type M3	D148 (AP, CHN, TWN only)

No.	Item	Machine Code
4	Paper Feed Unit PB3120	D579
5	Caster Table Type D	D593
6	Paper Feed Unit PB3180	D746
7	LCIT PB3190	D747
8	1 Bin Tray BN3090	D582
9	Bridge Unit BU3050	D584
10	Internal Shift Tray SH3050	D583
11	Internal Finisher Type 3352	D586
12	Finisher SR3140	D687
13	Booklet Finisher SR3150	D686
	Punch Kit PU3020 EU	D587-27
	Punch Kit PU3020 SC	D587-67
	Punch Unit PU3050 EU	D717-27
	Punch Unit PU3050 SC	D717-28
	Finisher Adapter Type M7	D687
	ADF Handle Type C	D593
	Printer/Scanner Unit Type M7	D757
	Printer Unit Type M7	D757
	Scanner Enhance Option Type M7	D757
	OCR Unit Type M2	D166
	PostScript3 Unit Type M7	D757
	IPDS Unit Type M7	D757
	IEEE 802.11a/g/n Interface Unit Type M2	D164 (EU, AP Only)
	IEEE 1284 Interface Board Type A	B679
	Bluetooth Interface Unit Type D	D566 (EU, AP Only)

No.	Item	Machine Code
	File Format Converter Type E	D377
	SD card for NetWare printing Type M7	D758
	Browser Unit Type M7	D758
	Copy Data Security Unit Type G	D640
	Hard Disk Drive Option Type M7	D758
	Memory Unit Type M1 1.5GB	D701
	Optional Counter Interface Unit Type A	B870
	Key Counter Bracket Type H	A674
	Card Reader Bracket Type 3352	D593
	Smart Card Reader Built-in Unit Type M7	D773
	Unicode Font Package for SAP(R) 1 License	B869
	Unicode Font Package for SAP(R) 10 License	B869
	Unicode Font Package for SAP(R) 100 License	B869
	Fax marker type 30	H903
	SD Card for Fonts Type D	D641 (EU only)

Specifications

See "Appendices" for the following information:

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

2. Installation

Installation Requirements

Environment

1. Temperature Range: 10 °C to 32 °C (50 °F to 89.6 °F)
2. Humidity Range: 15% to 80% RH
3. Ambient Illumination: Less than 1,500 lux (do not expose to direct sunlight.)
4. Ventilation: Room air should turn over at least 30 m^3/hr/person
5. Ambient Dust: Less than 0.10 mg/m^3
6. Avoid an area which is exposed to sudden temperature changes. This includes:
    - Areas directly exposed to cool air from an air conditioner.
    - Areas directly exposed to heat from a heater.
7. Do not place the machine in an area where it will be exposed to corrosive gases.
8. Do not install the machine at any location over 2,000 m (6,500 ft.) above sea level. (NA can be installed only up to 2,500m (8,202 ft.))
9. Place the copier on a strong and level base. (Inclination on any side should be no more than 5 mm.)
10. Do not place the machine where it may be subjected to strong vibrations.

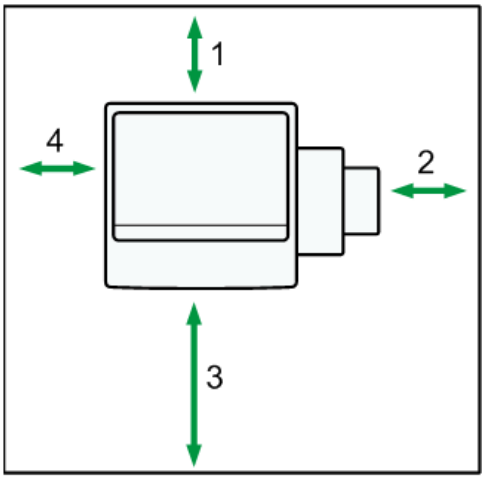
Machine Level

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

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

Minimum Space Requirements

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



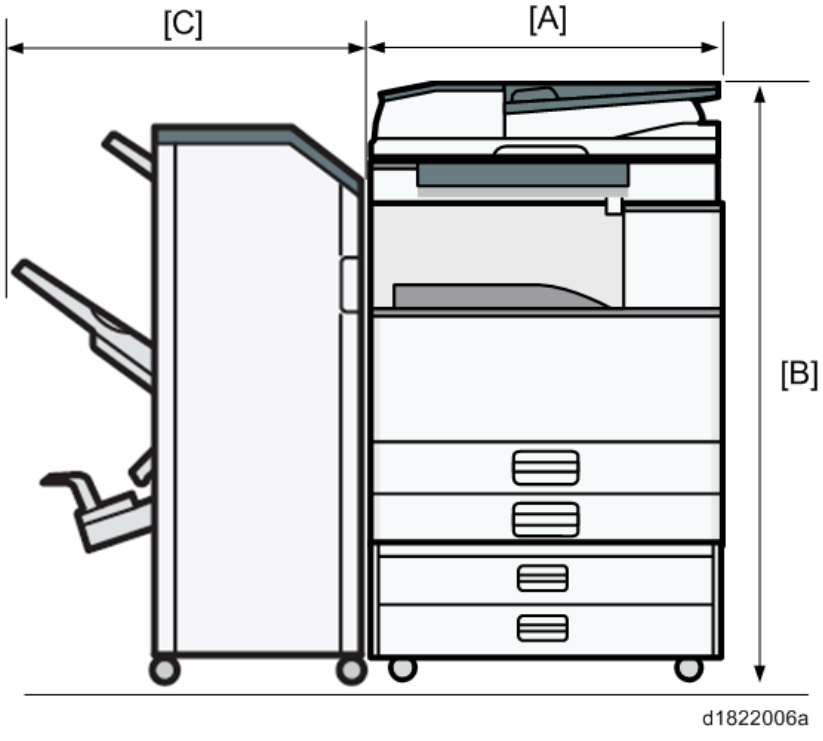
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1. Rear: Over 100 mm (4")
2. Right: Over 900 mm (36")
3. Front: Over 400 mm (15.8")
4. Left: Over 100 mm (4")

Note

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

Machine Dimensions



[A]: 587 mm (23.1")

[B]: 1095 mm (43.1")

[C]: 646 mm (25.4")

Power Requirements

⚠CAUTION

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

Input voltage level

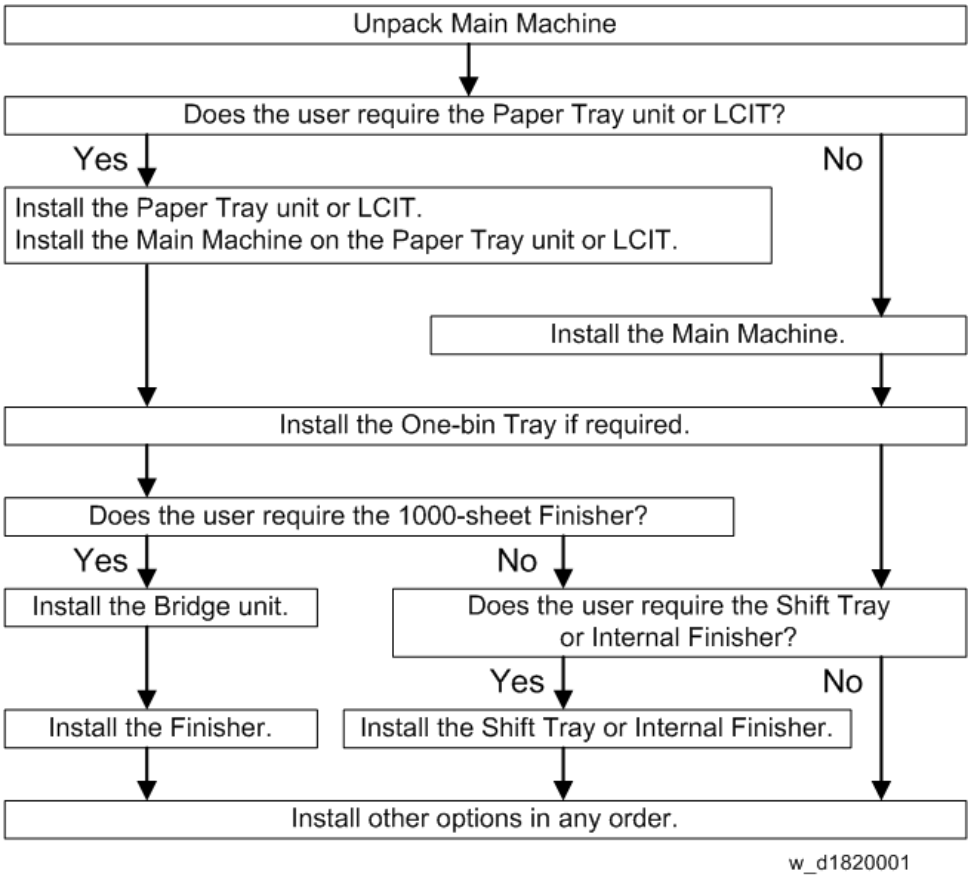
- 120 V to 127 V, 60 Hz: More than 12 A: NA
- 220 V to 240 V, 50 Hz/60 Hz: More than 7 A: EU/AP
- 110V, 60 Hz: More than 13 A

Voltage tolerance

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

Main Machine Installation

Installation Flow Chart



Accessory Check

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

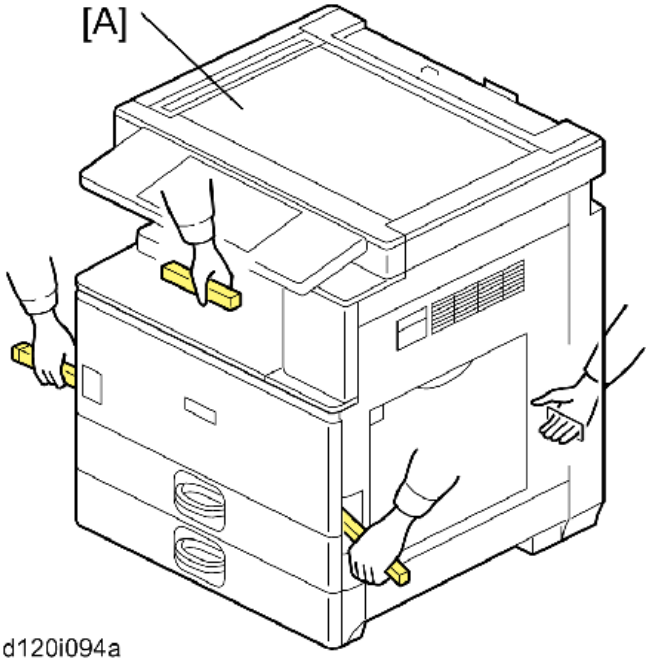
No.	Description	Q'ty
1	TAPPING SCREW: 3 x 8	1
2	LABEL:RATING NAME PLATE	1
3	ACCESSORY:DECAL	1

No.	Description	Q'ty
4	DECAL:ORIGINAL TABLE	1
5	DECAL:ORIGINAL:MANY LANGUAGES	1
6	ACCESSORY SET:MANUAL:D183-17	1
7	LICENSE AGREEMENT SHEET	1
8	SEAL:CAUTION:18LANGUAGES	1

Installation Procedure

Unloading

When unloading the main machine [A] from a pallet, use grips and the handle.



d120i094a

Note

- Lift the main machine slowly, using 4 people.

Tapes and Retainers



d1822007

⚠CAUTION

- Unplug the machine power cord before you start the following procedure.

If the optional paper feed unit or the optional LCT is going to be installed now, put the copier on the paper feed unit or the LCT first, then install these options, then install the copier.

Note

- Keep the shipping retainers after installing the machine. They will be reused if the machine is moved to another location in the future.

1. Remove the tapes and the scanner unit stay [A] on the exterior of the copier.



d1822008

2. Attach the grip cover [A] to the main machine.



d1822010

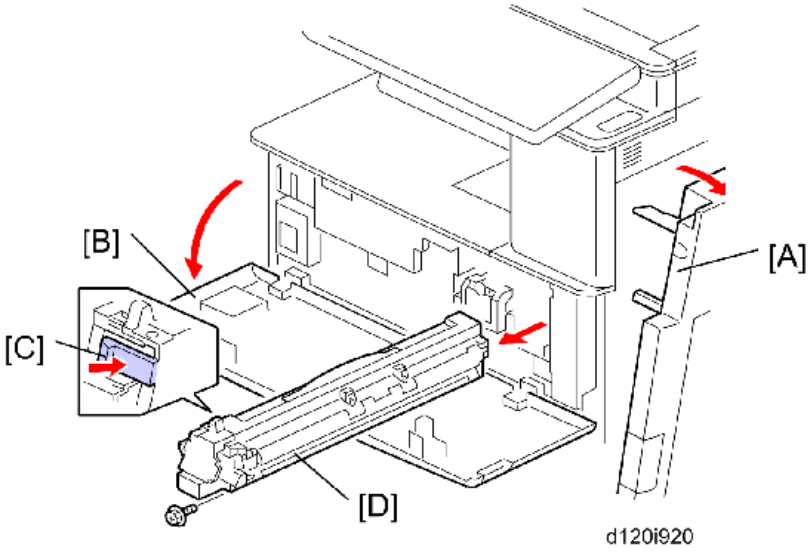
3. Open the front cover, and then keep the scanner unit stay [A] inside the front door.



d1822009

Developer

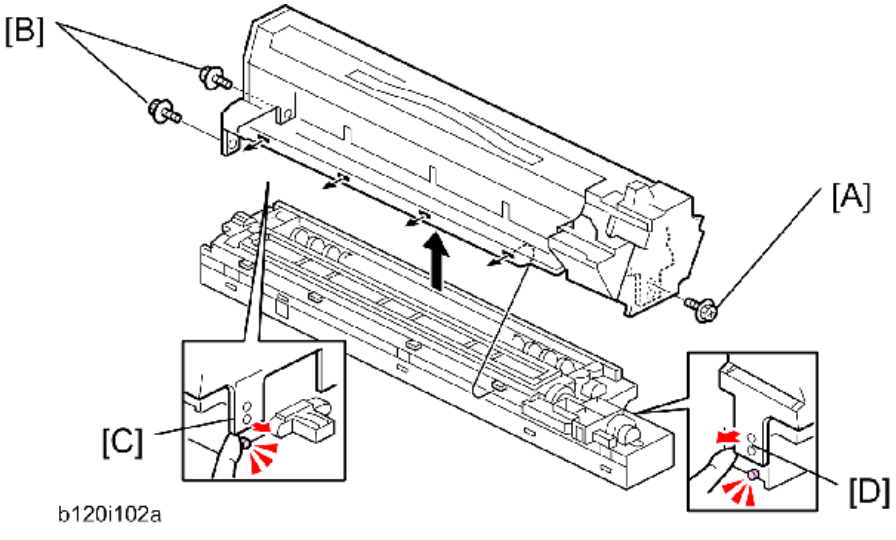
1. Spread the vinyl sheet provided with the developer kit on a flat surface.
2. Open the right cover [A].
3. Open the front cover [B].
4. Push the latch [C] and remove the PCU [D] (x1).



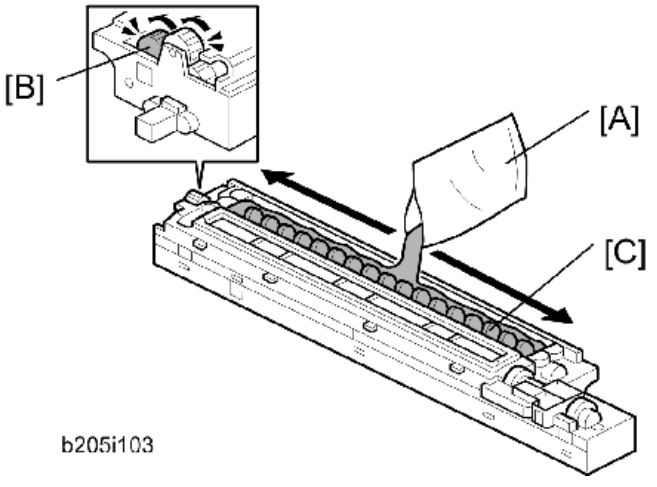
5. Remove the front screw [A] (x1)
6. Remove the rear screws [B] (x2)
7. Release the rear tab [C] then front tab [D], then separate the top and bottom.

Important

- **Be sure to release the rear tab first and the front tab second.**



8. Open the developer pack [A].
9. While turning the black gear [B], slowly move the pack left and right and pour half of the developer over the auger [C].



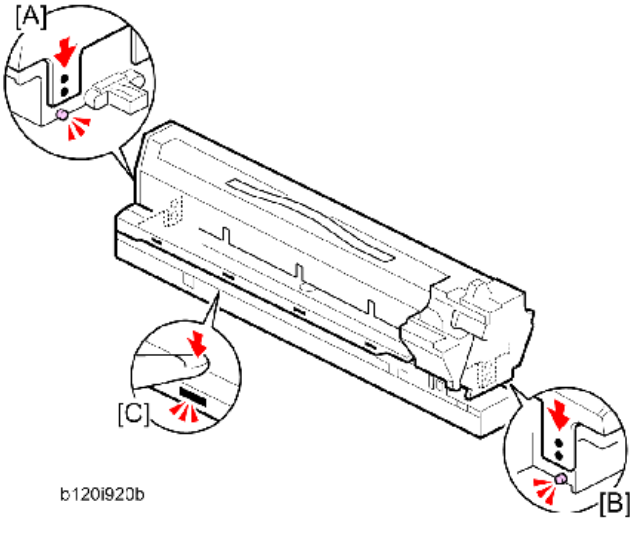
10. Continue to turn the black gear until the developer is level.
11. While continuing to turn the black gear, slowly move the pack left and right and pour the remaining half of the developer over the auger until the developer is level.

Important

- **Be careful. Do not spill developer on the gears and sponges. If you accidentally spill developer on the gears or sponges, remove it with a magnet or the tip of a magnetized screwdriver.**

Re-assembly

1. Make sure that all of the holes and tabs are engaged at [A], [B], and [C]. Then push down to lock the tabs on the front and rear end of the PCU.



2. Make sure that the holes for the screws on the front and rear end of the PCU are aligned correctly. If the holes are not aligned correctly, make sure that the tabs at the front, rear, and left side of the PCU are engaged correctly.

Important

- **Reattach the rear screws (x2) first, then reattach the front screw (x1).**
- **Do not push down on the top of the PCU when you attach the rear and front screws**

3. Reinstall the PCU in the main machine (x1).

Toner Bottle

1. Raise the toner bottle holder lever [A], push lever [B] down, and pull the toner bottle holder [C] out.
2. Shake the toner bottle [D].

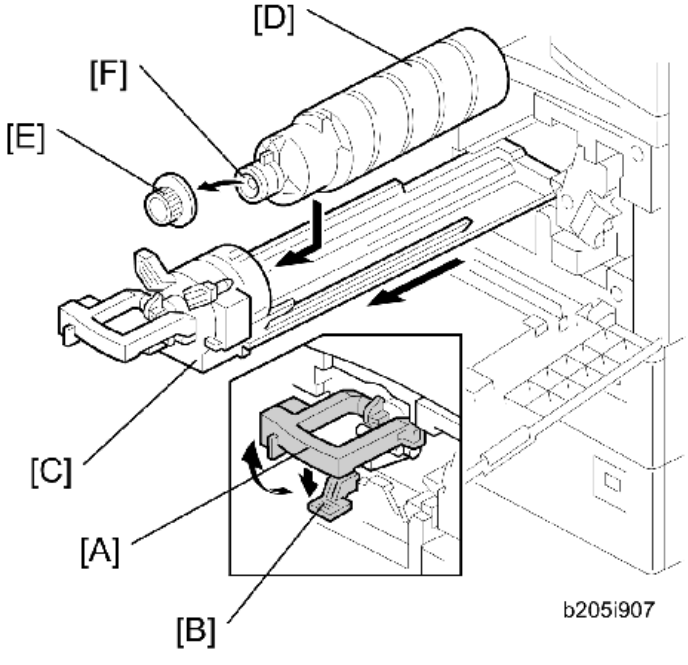
Note

- Do not remove the toner bottle cap [E] until after shaking.

3. Unscrew the bottle cap [E] and insert the bottle into the holder.

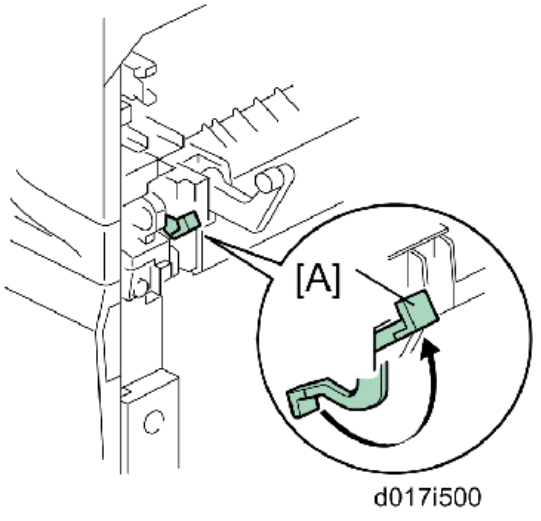
Note

- Do not touch the inner bottle cap [F].



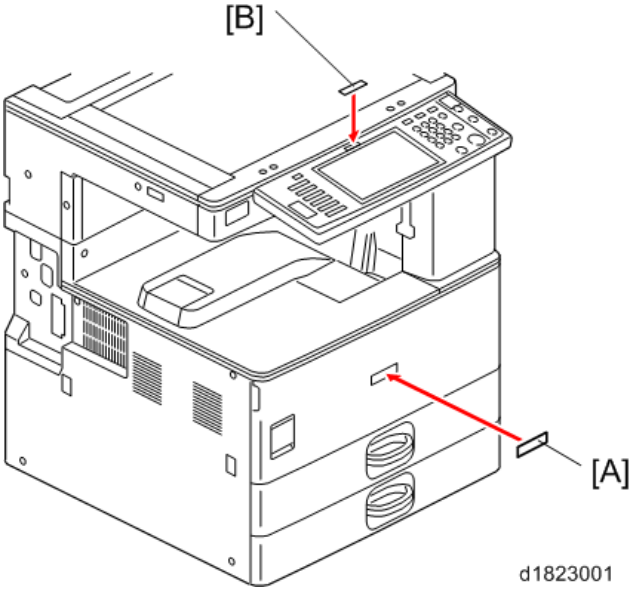
4. Reposition the holder and press down the holder lever to secure the bottle.
5. Open the right cover.

6. Rotate the green fusing pressure lever [A] to the up position.

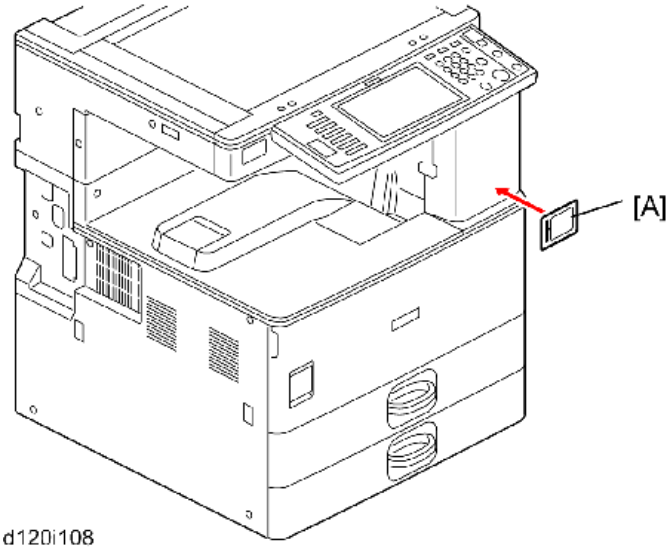


Emblem, Decals

1. Attach the emblem [A] to the center of the front cover
2. Attach the small emblem [B] to the top center on the operation panel.

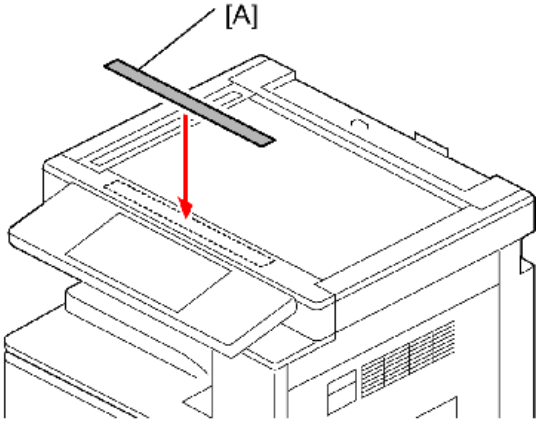


3. Attach the precautions for printing decal [A] to the front right cover.



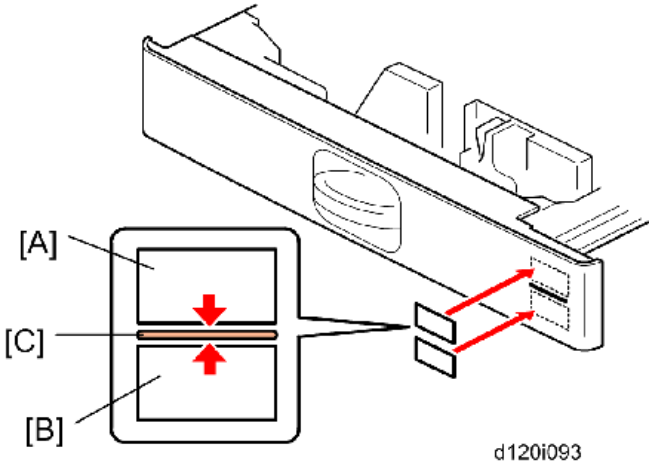
d120i108

4. Attach the copy prohibition display decal [A] to the front of the exposure glass.



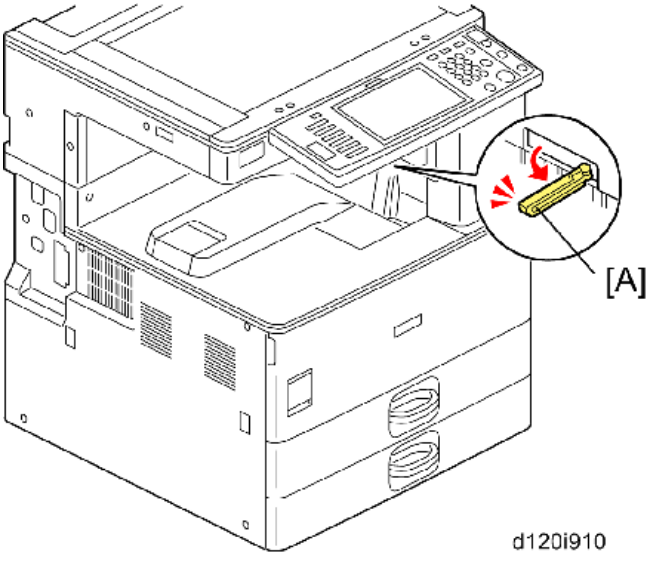
d120i109

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



Completion

1. If the optional bridge unit will not be installed, swing the sensor feeler [A] out.



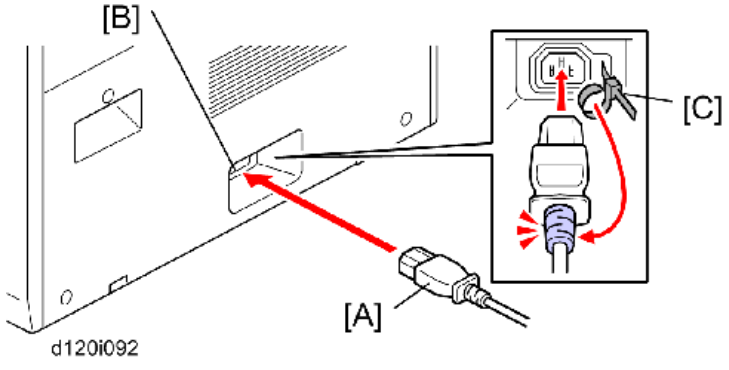
2. Install the optional ARDF or the optional platen cover. (page 67 "ARDF DF3090 (D779)", page 64 "Platen Cover PN2000 (D700)").
3. Pull out trays, and then adjust the side fences and end fence to match the paper size.

Note

- To move the side fences, first pull out the tray fully, then push down the green lock at the rear of the tray.

4. Connect the power cord [A] to the inlet [B] of the main machine.

5. Secure the power cord with the clamp [C] installed in the main machine so that the power cord is never disconnected.



Check Image Quality / Settings

Image quality test

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

1. After checking that clamps, etc., have been removed, connect the power plug to the wall socket.
2. Turn the main power supply switch ON.
3. Check that the operation panel shows the following display.

   "Please supply the tray with paper."
4. The paper size is basically detected automatically.
   1. Pull out the paper feed tray slowly until it stops.
   2. While pressing the release lever, adjust the side fence to the paper size to be set.
   3. Set the end fence.

Checking the copy image with the test chart

Check the copy image with the test chart.

SP Settings

1. Go into the SP mode and do SP2-801-001 (Developer Initialization).
2. Do SP5-181 and SP1-007-001 to set automatic paper size selection for the upper tray, lower tray, and by-pass tray.

Upper Tray (Size Adjust Tray 1)

5-181-001	A4 LEF/LT LEF	[0 to 1 / **0** / 1] 0: ISO (A3, A4, A5, etc.) 1: USA (DLT, LT, EXE, etc.)
5-181-002	A3/DLT	
5-181-003	B4/LG	
5-181-004	B5LEF/ExeLEF	
5-181-005	A5SEF/HLTSEF	

Lower Tray (Size Adjust Tray 2)

5-181-006	A4 LEF/LT LEF	[0 to 1 / **0** / 1] 0: ISO (A3, A4, A5, etc.) 1: USA (DLT, LT, EXE, etc.)
5-181-007	A3/DLT	
5-181-008	B4/LG	
5-181-009	B5LEF/ExeLEF	

By-Pass Tray (By-Pass Size Detection)

1-007-001	LTSEF/LG	[0 to 1 / **0** / 1] 0: ISO (A3, A4, A5, etc.) 1: USA (DLT, LT, EXE, etc.)

3. Enable the NIB and/or USB function.
   - To enable the NIB function, enter the SP mode and set SP5-985-001 (On Board NIC) to "1"(Enable).
   - To enable the USB function, enter the SP mode and set SP5-985-002 (On Board USB) to "1"(Enable).
4. Exit SP mode.
5. Do some test copies to make sure that the machine operates correctly.

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

Paper Feed Unit PB3120 (D579)

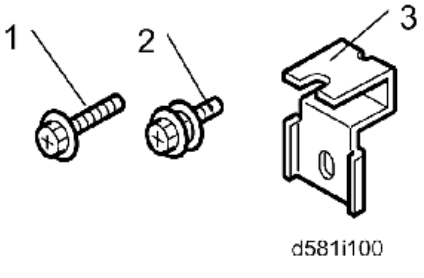
Accessory Check

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

No.	Description	Q'ty
1	Screw: M4 x 10	2
2	Screw: Spring Washer: Round Point M4 x 10	1
3	Coupling Bracket	2
-	Decal: ROHS (for CHN)	1
-	Label: ROHS (for CHN)	1
-	*Flat Screw: Knob Screw: M4 x 10	3
-	*Installation Procedure for User	1
-	*Multilingual Reference Sheet	1

Note

- *: The customer engineer does not use the flat screws, installation procedure for user, and multilingual reference sheet because these are for user installation.



Installation Procedure

⚠CAUTION

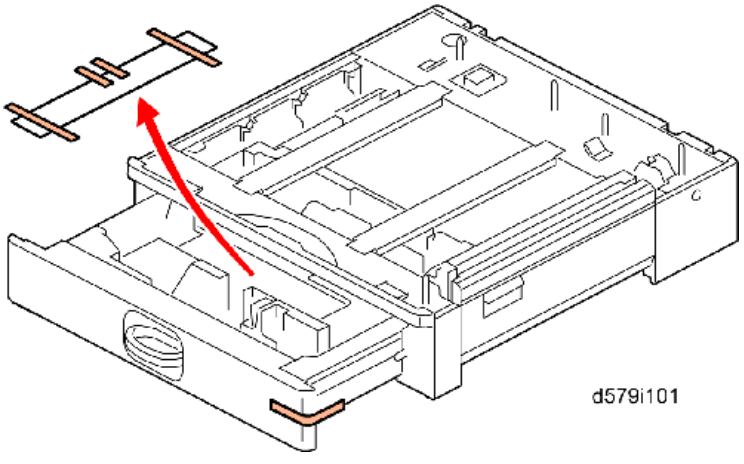
- Turn off the main power switch of the copier and unplug the power cord before you start the installation procedure.

- You need four persons to lift the copier. It is highly unstable when lifting the copier with less than four, and may cause human injury or property damage.
- Do not lift the copier with the paper feed unit installed. The handle and grips may be damaged.

Note

- The one-tray paper feed unit must be installed on the caster table (D593). Prepare the caster table first before installing this unit.

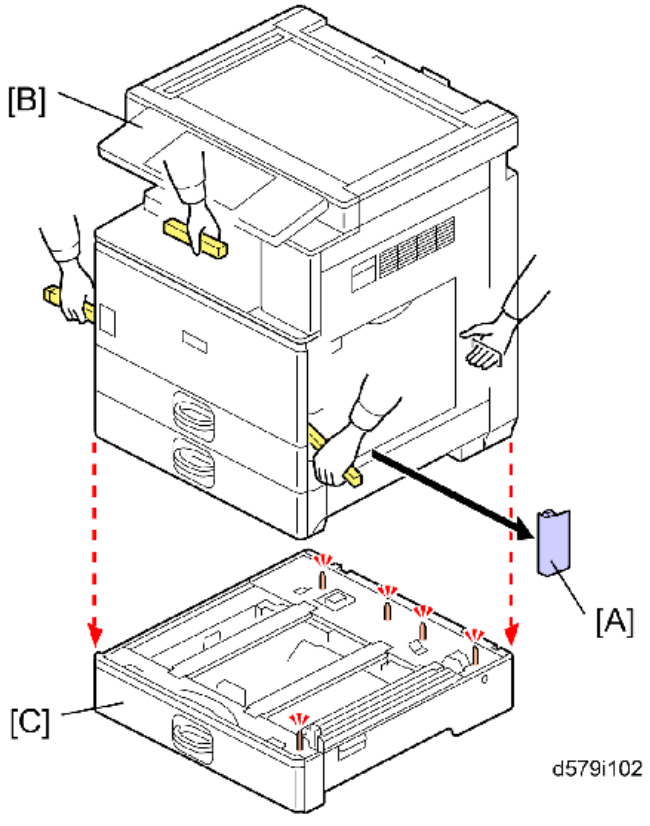
1. Remove all tape on the paper feed unit.



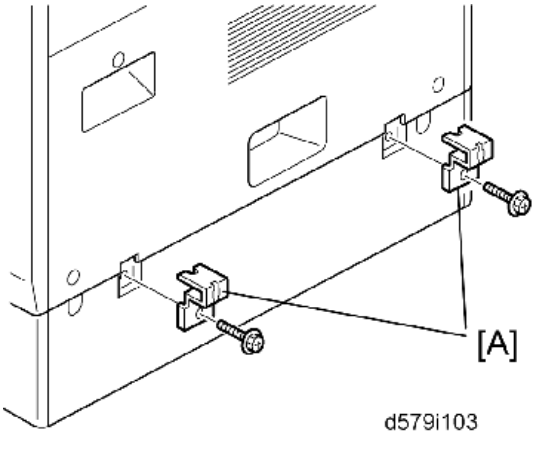
2. Remove the paper tray and remove all tapes and padding.
3. Put the paper tray unit on the caster table (D593). (page 49 "Caster Table Type D (D593)")
4. Remove the grip cover [A] at the front right of the main machine if this cover is attached.
5. Pull out three grips, then hold the handle and grips, and put the copier [B] on the paper feed unit [C].

Important

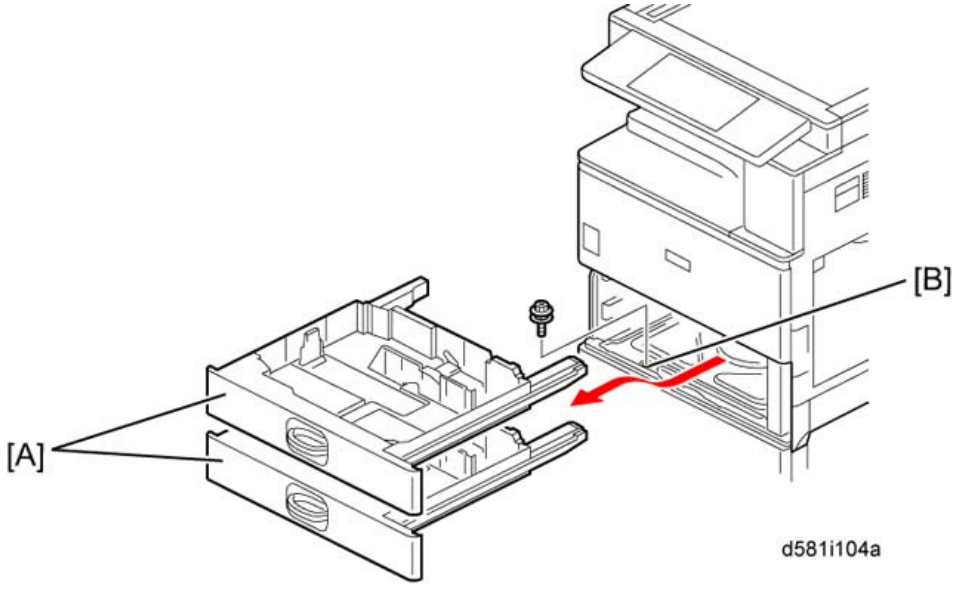
- **You need four persons to lift the copier.**



6. Reattach the grip cover to the main machine.
7. Attach the coupling brackets [A] (x1 each (M4 x 10)).



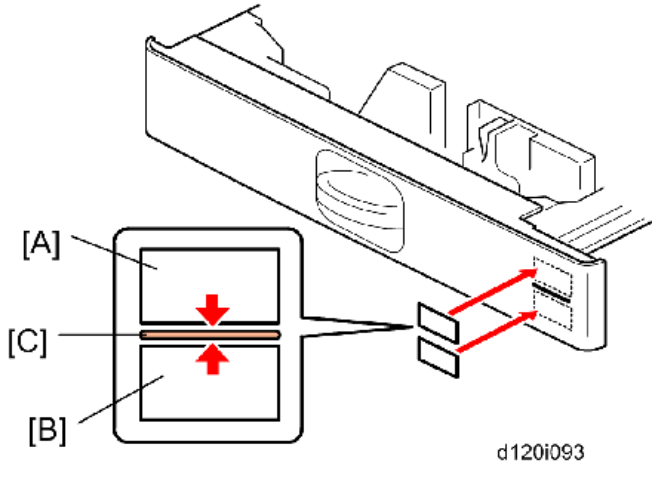
8. Remove the 1st and 2nd paper trays [A], and then secure the paper feed unit [B] (x1 (spring washer - M4 x 10)).



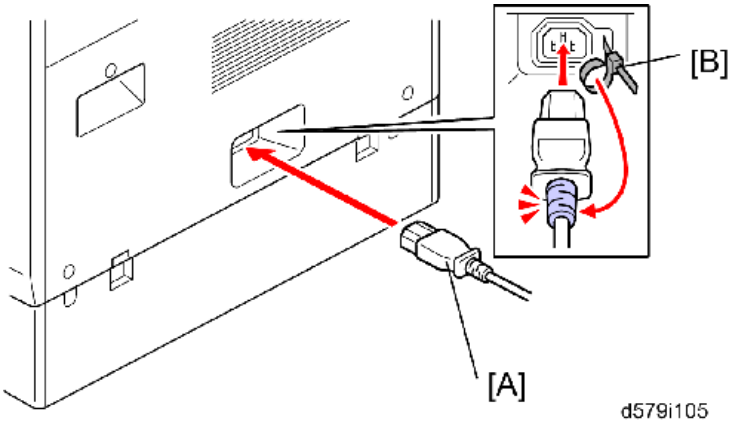
9. Reinstall the 1st and 2nd trays.
10. Attach the appropriate paper tray number decal [A] and paper size decal [B] above and below the line [C] on the tray of the paper feed unit.

Note

- The paper tray number and size sheet is in the accessory box of the main machine.



11. Lock the caster stoppers for the front two casters under the paper feed unit.
12. Load paper into the paper tray and set the side fences and bottom fence.
13. Connect the power cord [A] to the inlet of the main machine.
14. Secure the power cord with the clamp [B] on the main machine so that the power cord is never disconnected.



SP Settings

1. Connect the copier and turn on the main power switch.
2. Do SP5-181 to set automatic paper size detection for the upper tray of the paper tray unit.

Upper Tray (Size Adjust Tray 3)

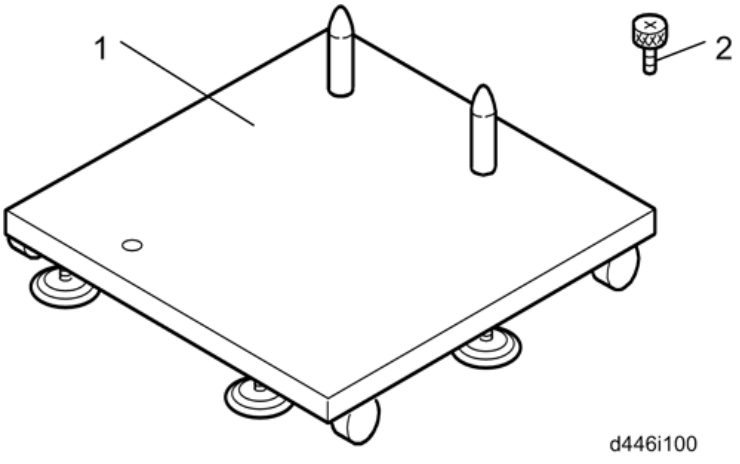
5-181-011	A3/DLT	[0 to 1 / **0** / 1] 0: ISO (A3, A4, A5, etc.) 1: USA (DLT, LT, EXE, etc.)
5-181-012	B4/LG	
5-181-013	B5LEF/ExeLEF	

3. Exit SP mode.
4. Do some test copies to make sure that the machine operates correctly.

Caster Table Type D (D593)

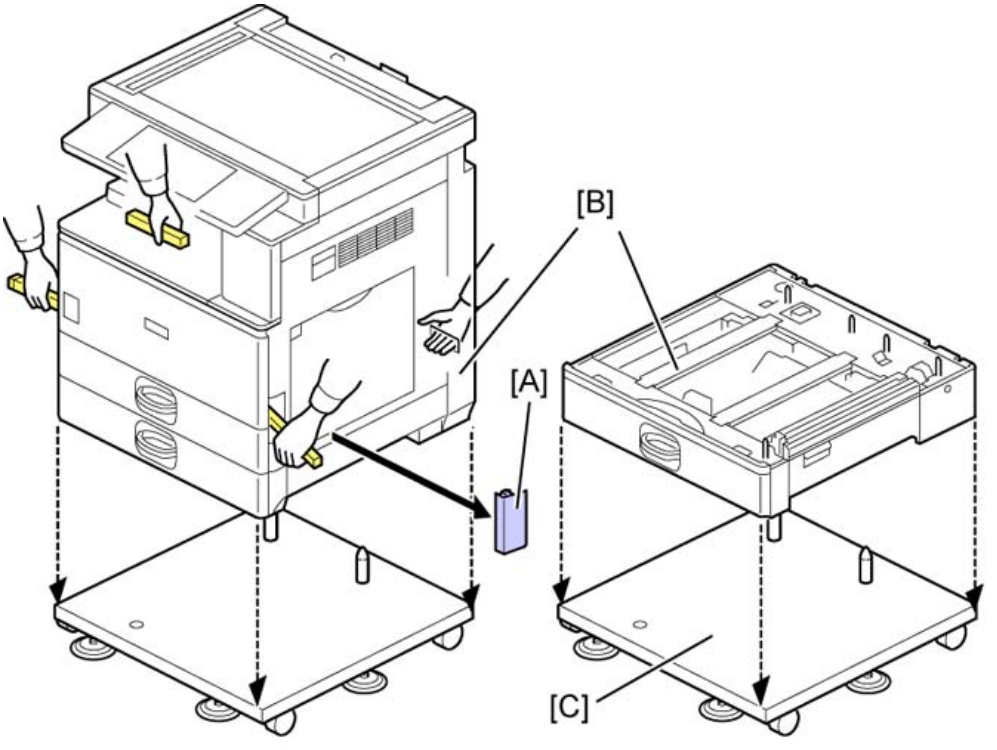
Component Check

No.	Description	Q'ty
1	Caster Table	1
2	Stud Screw	1

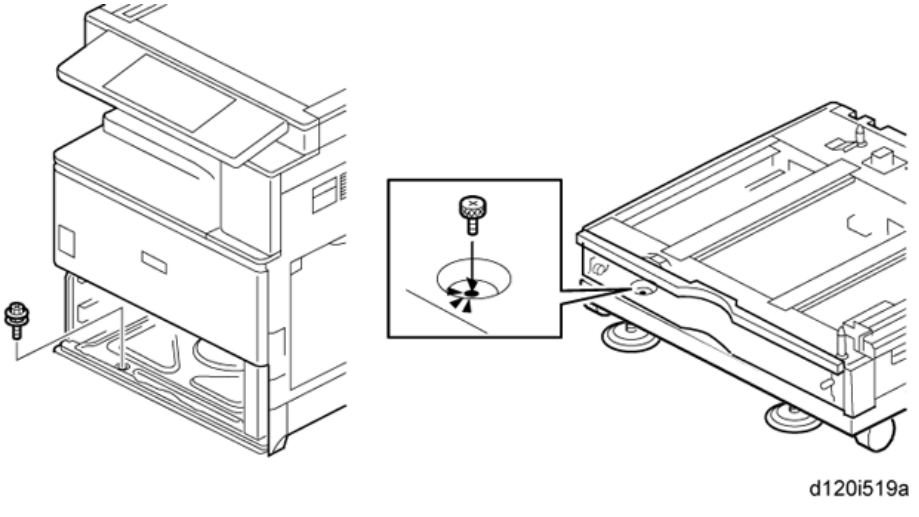


Installation Procedure

1. Put the caster table on a flat place.
2. Remove the grip cover [A] at the front right of the main machine if this cover is attached.
3. Lift the mainframe or the one-tray paper feed unit [B], and then install it on the caster table [C].



4. Pull out the tray of the mainframe or the one-tray paper feed unit.
5. Secure the mainframe or the one-tray paper feed unit to the caster table (stud screw x 1)



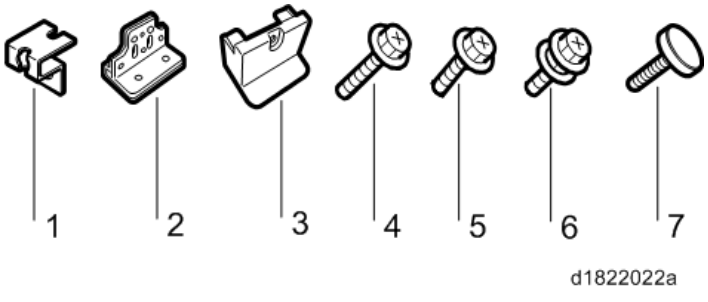
6. Reinstall the tray(s) in the mainframe or the one-tray paper feed unit.
7. Adjust the five leveling adjustors of the caster table.

Paper Feed Unit PB3180 (D746)

Accessory Check

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

No.	Description	Q'ty
1	Securing Bracket	2
2	Adjuster bracket	2
3	Adjuster cover	2
4	Screw - M4 x 12	6
5	Screw - M4 x 10	2
6	Screw with Spring Washer - M4 x 10	1
7	Thumbscrew	4

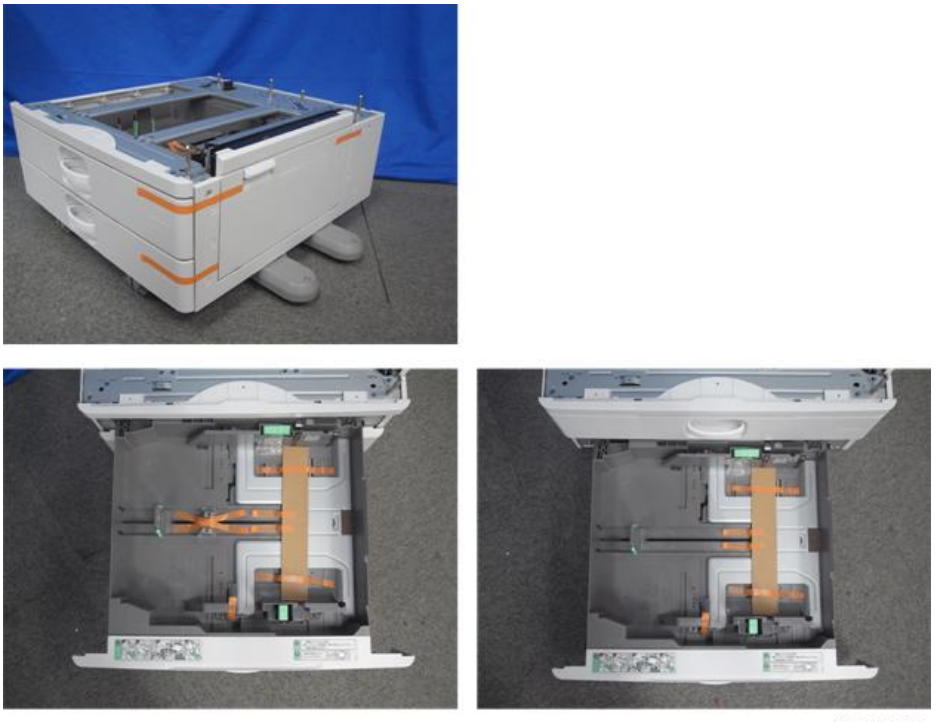


Installation Procedure

⚠CAUTION

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

1. Remove all tape on the paper feed unit.
2. Remove the paper tray and remove all tapes and padding.

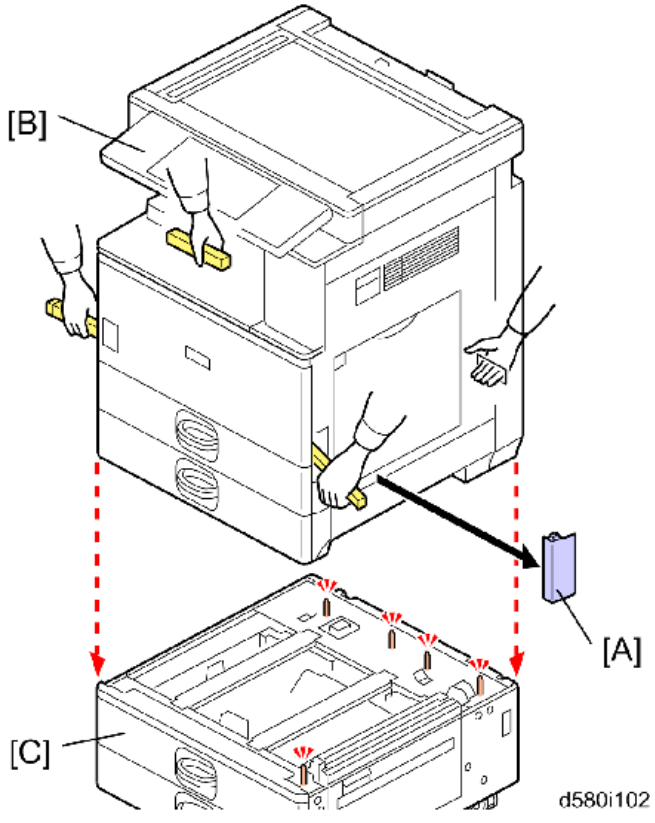


d1822017

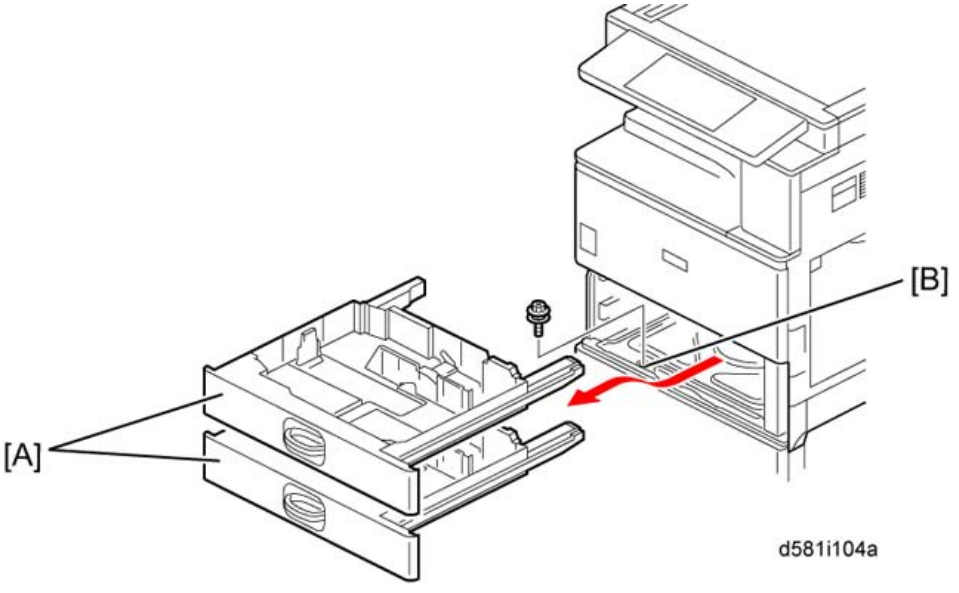
3. Remove the grip cover [A] at the front right of the main machine if this cover is attached.
4. Pull out three grips, then hold the handle and grips, and put the copier [B] on the paper feed unit [C].

Important

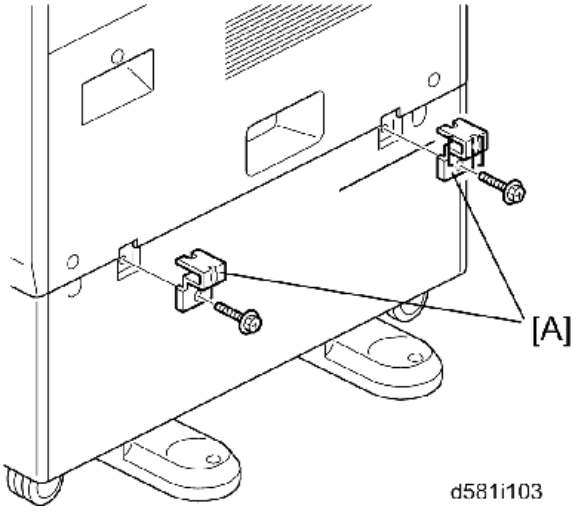
- **You need four persons to lift the copier.**



5. Reattach the grip cover to the main machine.
6. Remove the 1st and 2nd paper trays [A].
7. Fasten the paper tray unit at [B] (x1 (spring washer - M4 x 10)).



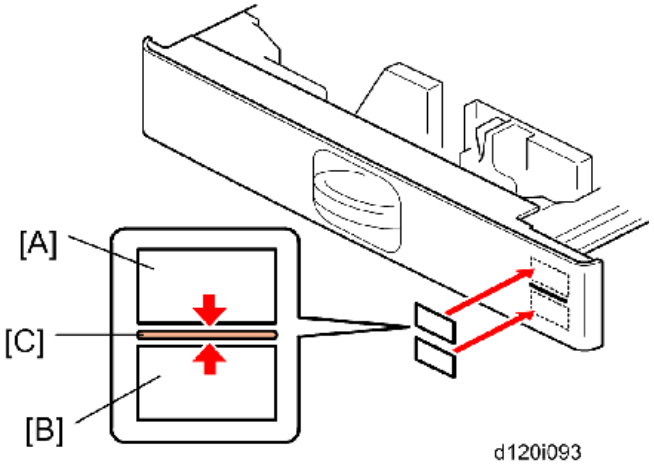
8. Attach a securing bracket [A] to each side of the paper tray unit, as shown (x1 each (M4 x 10)).



9. Reinstall all the paper trays.
10. Attach the appropriate paper tray number decal [A] and paper size decal [B] above and below the line [C] on each tray of the paper feed unit.

Note

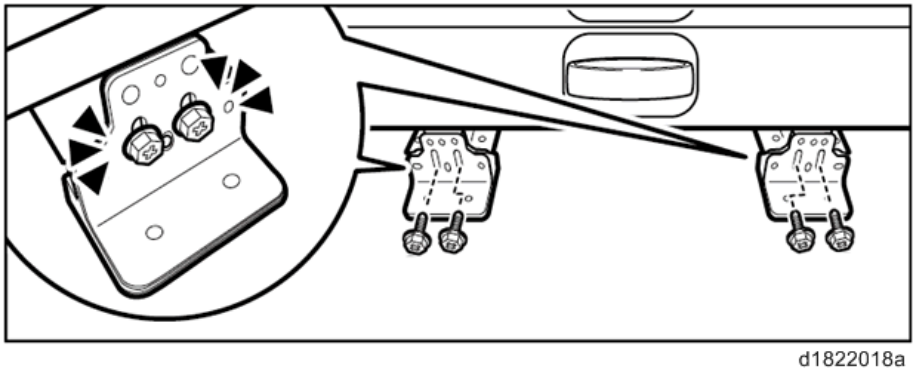
- The paper tray number and size sheet is in the accessory box of the main machine.



d120i093

11. Place the adjuster bracket in front of the bracket at the bottom right of the paper feed unit (x2 (M4 x 12)).

    Fix the other adjuster bracket to the bracket at the bottom left of the paper feed unit in the same way(x2 (M4 x 12)).

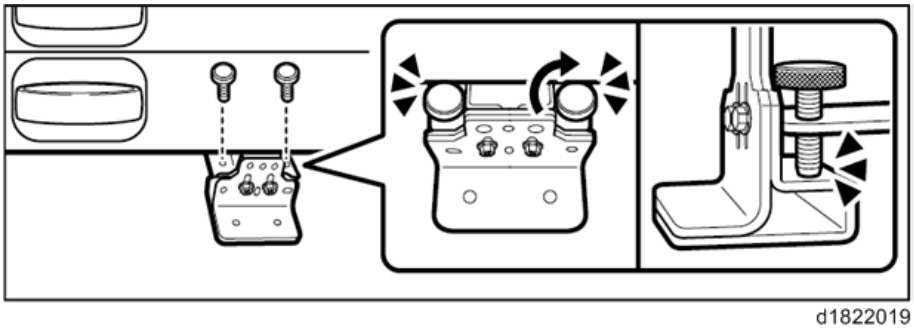


d1822018a

12. Fix the adjuster bracket on the right (x2 (thumbscrew)).

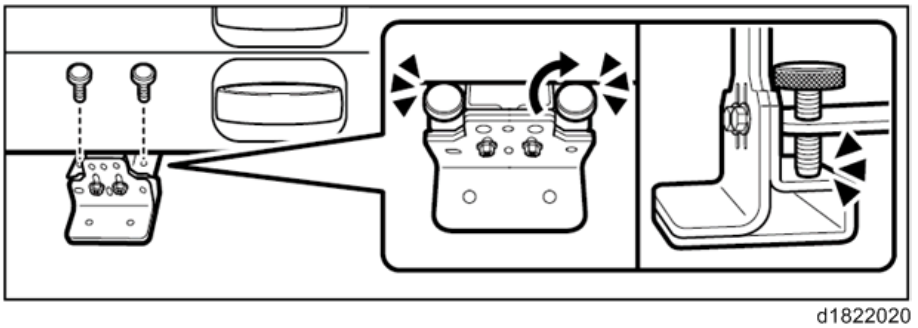
    Tighten the thumbscrews with your hands until they no longer turn.

    Visually check that the thumbscrews are flat against the adjuster bracket.



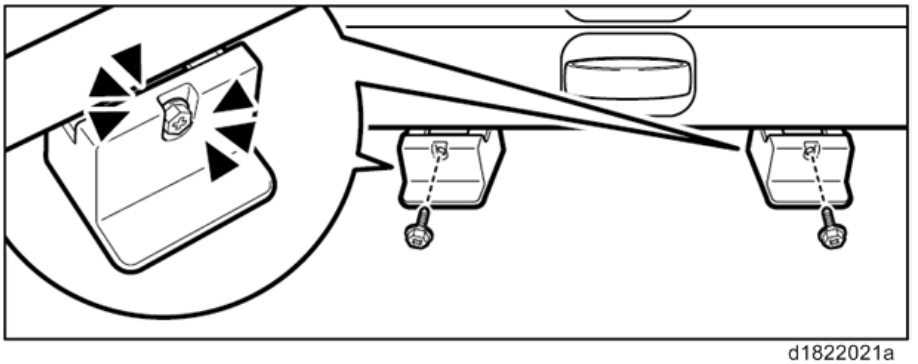
d1822019

Fix the adjuster bracket on the left in the same way (x2 (thumbscrew)).



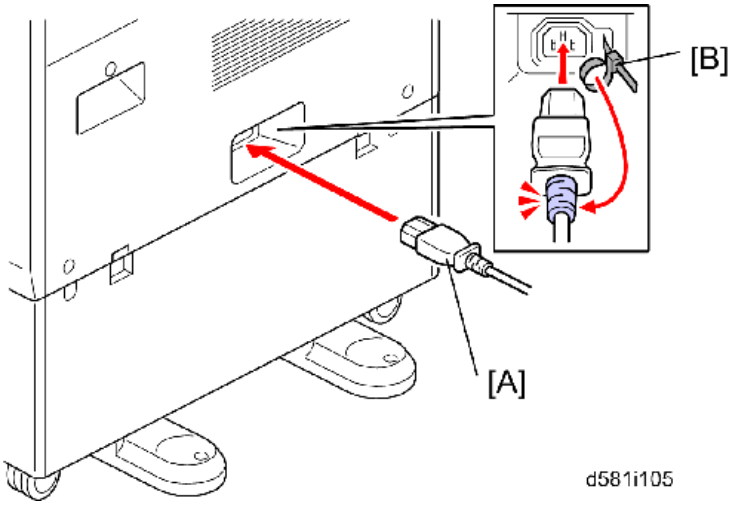
d1822020

13. Put the adjuster cover over each adjuster bracket (x1 each (M4 x 12)).



d1822021a

14. Load paper into the paper trays and set the side fences and bottom fence.
15. Connect the power cord [A] to the inlet of the main machine.
16. Secure the power cord with the clamp [B] on the main machine so that the power cord is never disconnected.



d581i105

SP Settings

1. Connect the copier and turn on the main power switch.
2. Do SP5-181 to set automatic paper size detection for the upper and lower tray of the paper tray unit.

Upper Tray (Size Adjust Tray 3)

5-181-011	A3/DLT	[0 to 1 / **0** / 1] 0: ISO (A3, A4, A5, etc.) 1: USA (DLT, LT, EXE, etc.)
5-181-012	B4/LG	
5-181-013	B5LEF/ExeLEF	

Lower Tray (Size Adjust Tray 4)

5-181-014	A4/LEF	[0 to 1 / **0** / 1] 0: ISO (A3, A4, A5, etc.) 1: USA (DLT, LT, EXE, etc.)
5-181-015	B3/DLT	
5-181-016	B4/LG	
5-181-017	B5LEF/ExeLEF	

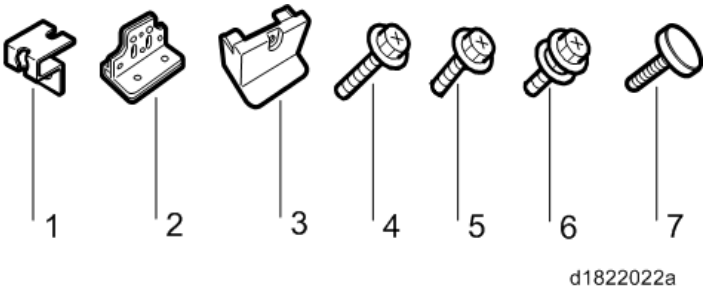
3. Exit SP mode.
4. Do some test copies to make sure that the machine operates correctly.

LCIT PB3190 (D747)

Accessory Check

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

No.	Description	Q'ty
1	Securing Bracket	2
2	Adjuster bracket	2
3	Adjuster cover	2
4	Screw - M4 x 12	6
5	Screw - M4 x 10	2
6	Screw with Spring Washer - M4 x 10	1
7	Thumbscrew	4



Installation Procedure

⚠CAUTION

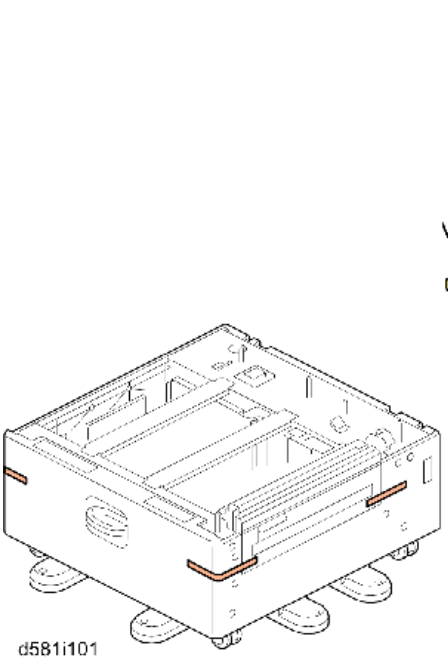
- Unplug the machine power cord before starting the following procedure.
- The handles of the main machine for lifting must be inserted inside the machine and locked, unless these handles are used for the installation or relocation of the main machine.
- You need four persons to lift the copier. It is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

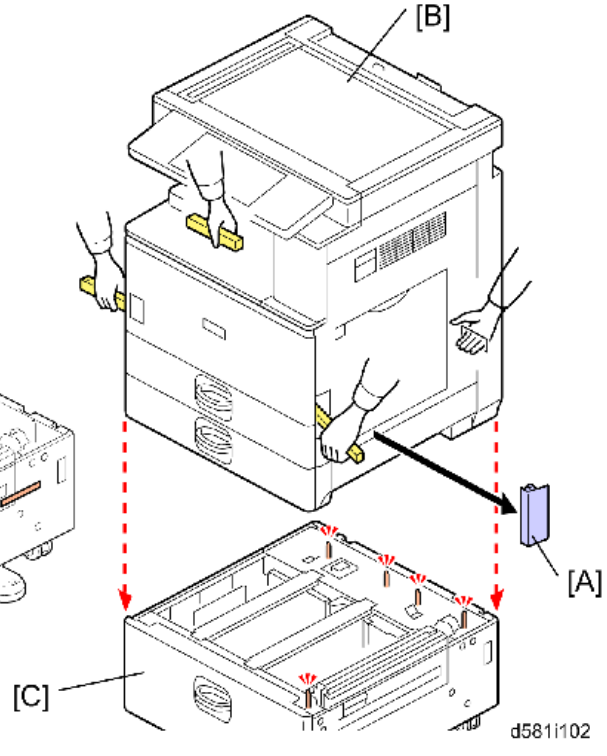
1. Remove the strips of tape.
2. Remove the grip cover [A] at the front right of the main machine if this cover is attached.

3. Pull out three grips, then hold the handle and grips, and put the copier [B] on the LCT [C].

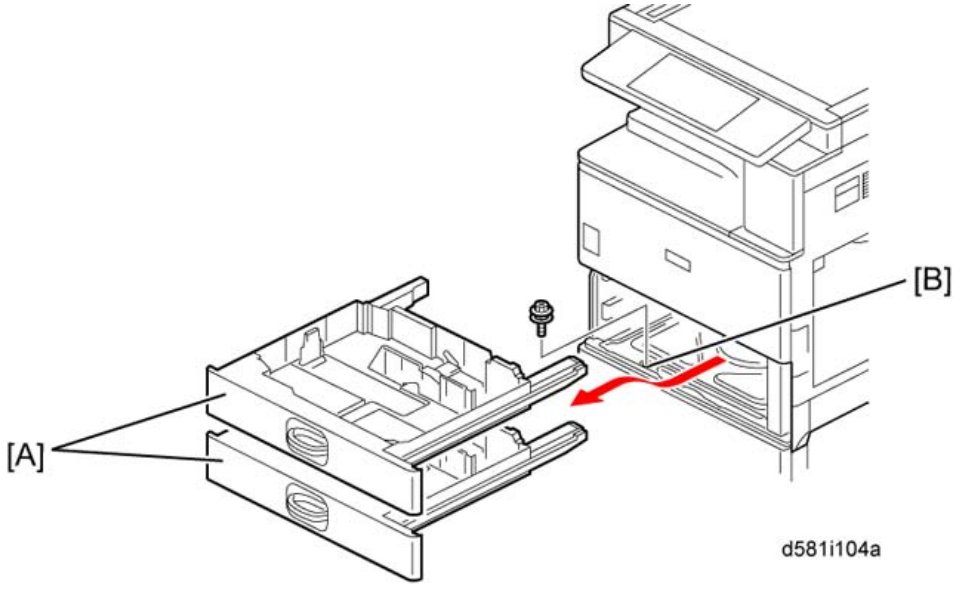
Important

- **You need four persons to lift the copier.**

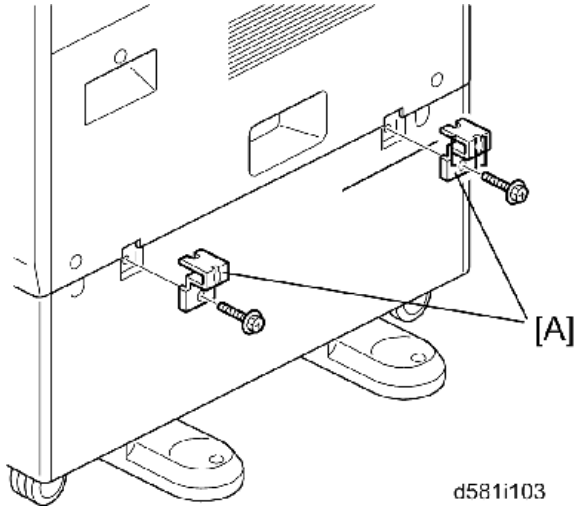




4. Reattach the grip cover to the main machine.
5. Remove the 1st and 2nd paper trays [A], and then secure the LCT [B] (x1 (spring washer - M4 x 10)).



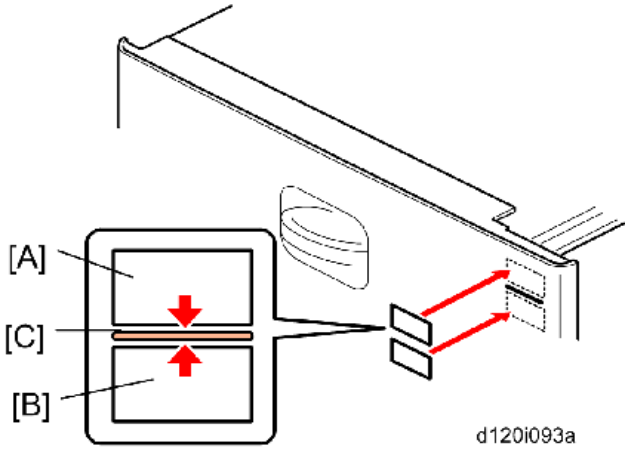
6. Attach a securing bracket [A] to each side of the LCT, as shown (x1 each (M4 x 10)).



7. Reinstall the 1st and 2nd paper trays.
8. Attach the appropriate paper tray number decal [A] and paper size decal [B] to the line [C] on the tray of the LCT.

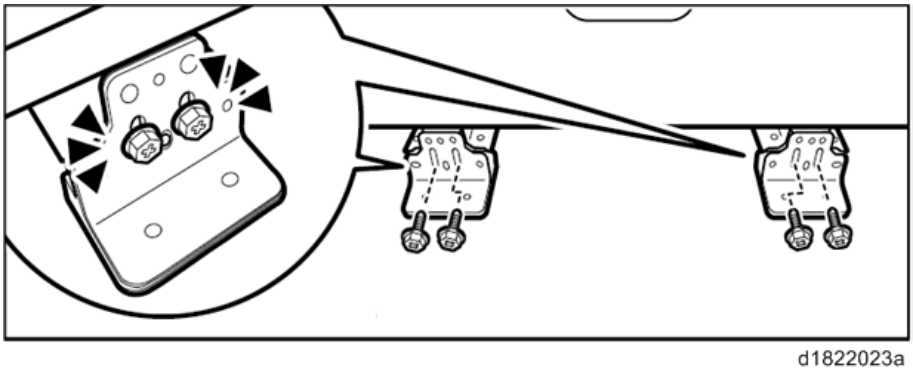
Note

- The paper tray number and size sheet is in the accessory box of the main machine.



9. Place the adjuster bracket in front of the bracket at the bottom right of the paper feed unit (x2 (M4 x 12)).

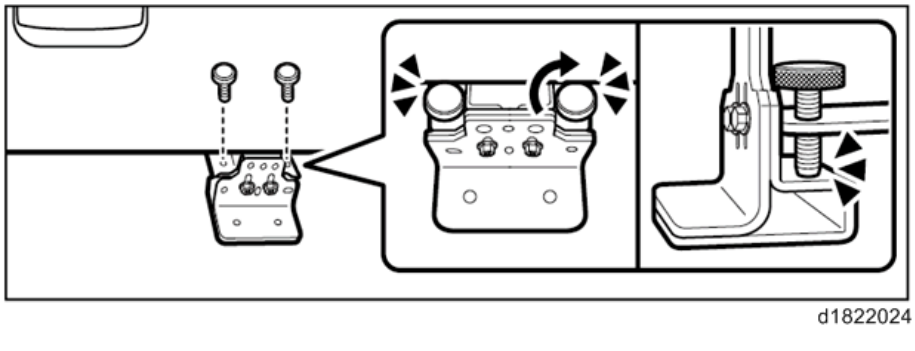
   Fix the other adjuster bracket to the bracket at the bottom left of the paper feed unit in the same way(x2 (M4 x 12)).



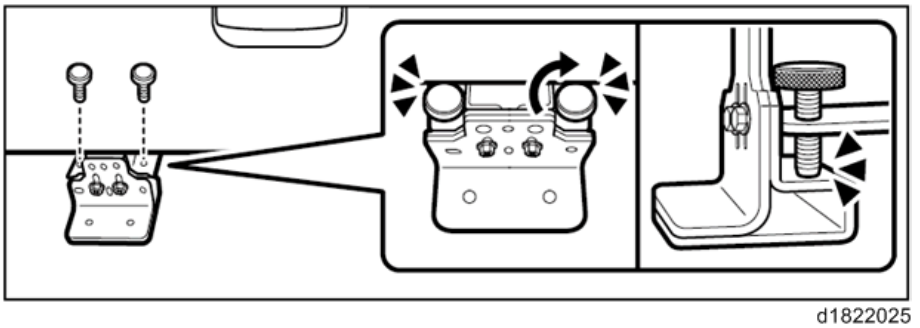
10. Fix the adjuster bracket on the right (x2 (thumbscrew)).

    Tighten the thumbscrews with your hands until they no longer turn.

    Visually check that the thumbscrews are flat against the adjuster bracket.

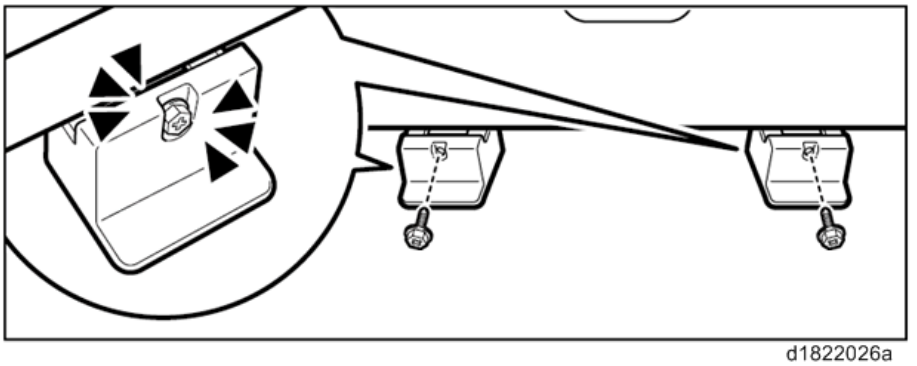


Fix the adjuster bracket on the left in the same way (x2 (thumbscrew)).



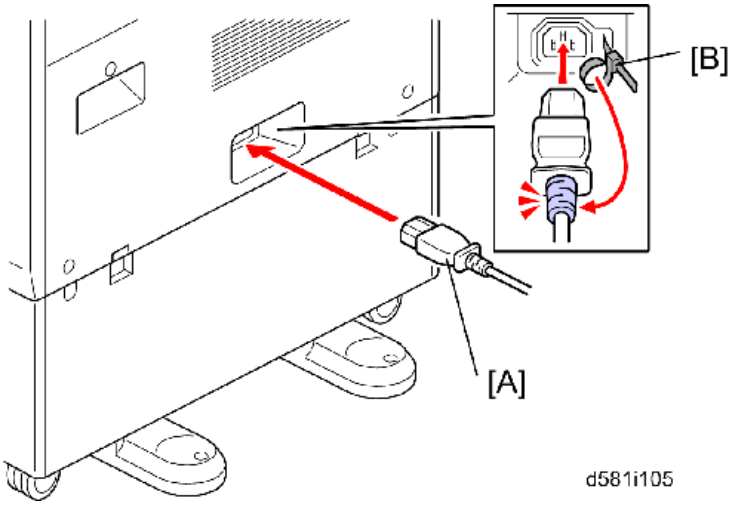
d1822025

11. Put the adjuster cover over each adjuster bracket (x1 each (M4 x 12)).



d1822026a

12. Lock the caster stoppers for the front two casters under the paper feed unit.
13. Load paper into the LCT.
14. Connect the power cord [A] to the inlet of the main machine.
15. Secure the power cord with the clamp [B] on the main machine so that the power cord is never disconnected.



d581i105

SP Settings

1. Connect the copier and turn the main machine on.
2. Do SP5-181-010 to set automatic paper size detection for the LCT paper tray.

LCT Paper Tray (Size Adjust Tray 3 / LCT)

5-181-010	A4 LEF/LT LEF	[0 to 1 / **0** / 1] 0: ISO (A3, A4, A5, etc.) 1: USA (DLT, LT, EXE, etc.)

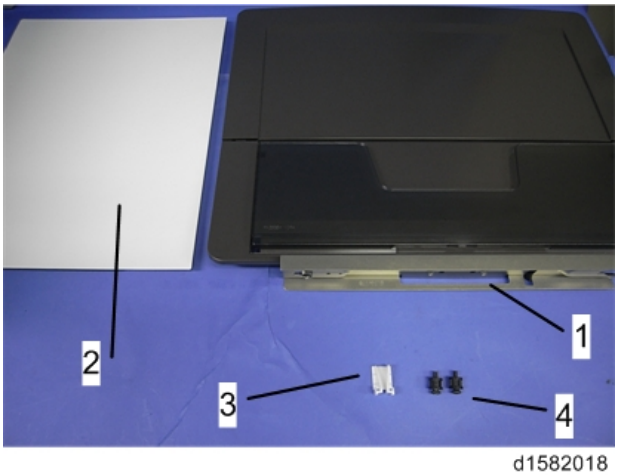
3. Exit SP mode.
4. Do some test copies to make sure that the machine operates correctly.

Platen Cover PN2000 (D700)

Accessory Check

Check that you have the accessories indicated below.

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



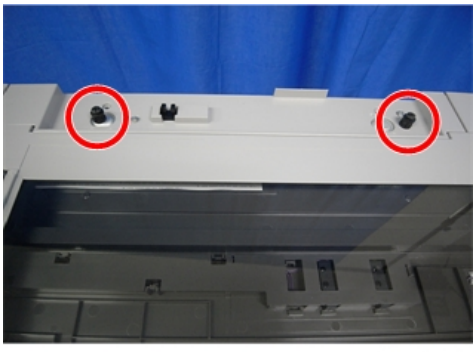
d1582018

Installation Procedure

⚠CAUTION

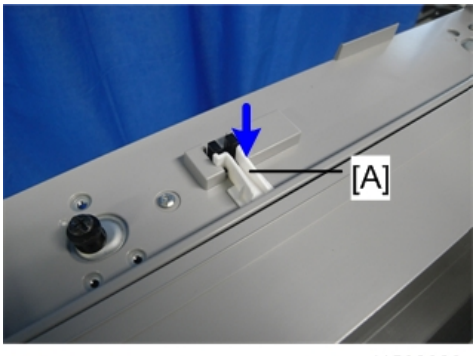
- Unplug the machine power cord before starting the following procedure.

1. Install the stepped screws (× 2).



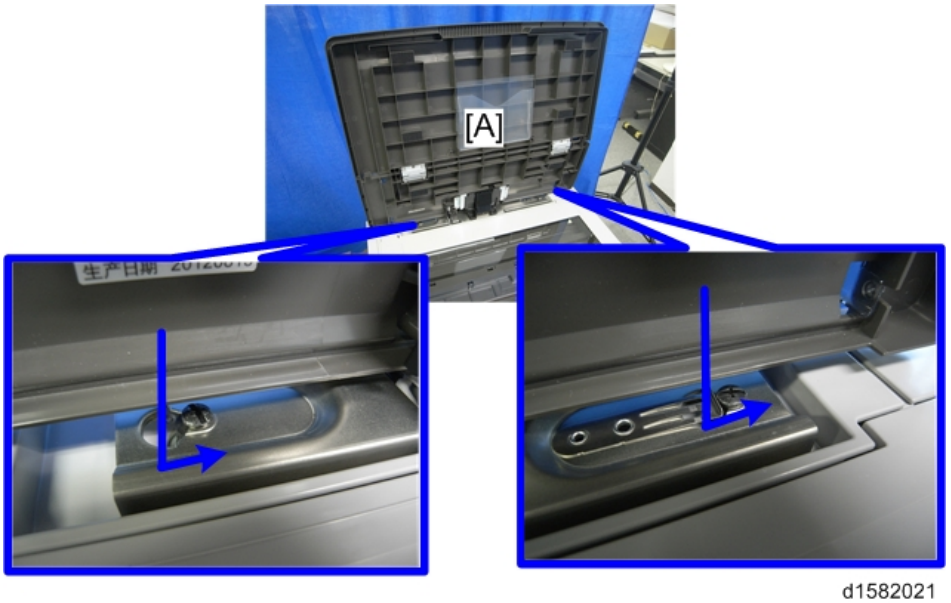
d1582019

2. Install the feeler guide [A].



d1582020

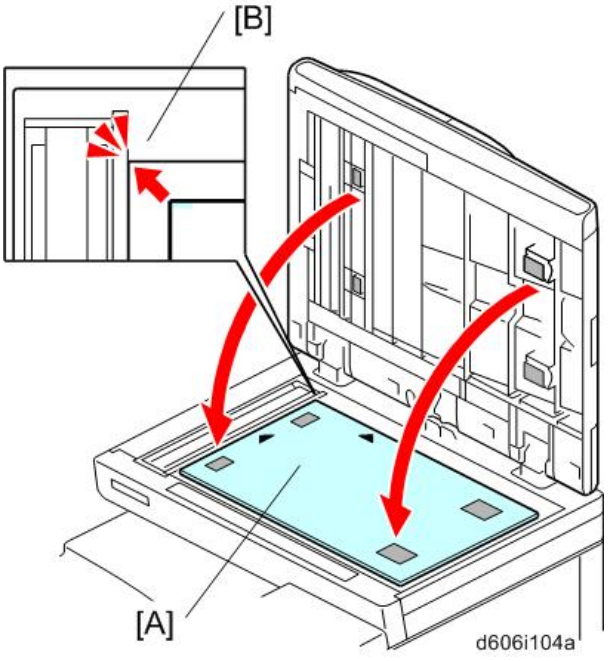
3. Install the platen cover [A].



d1582021

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

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



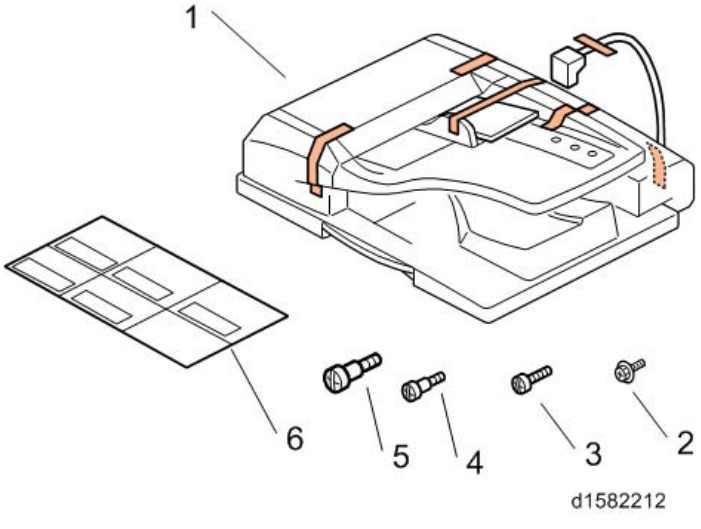
6. Close the platen cover.
7. Open the platen cover.
8. Press the surface of the platen sheet gently to fix it on the platen cover securely.

ARDF DF3090 (D779)

Accessory Check

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

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



RTB 63
A new mylar is added. Install on the exposure glass as shown in this RTB.

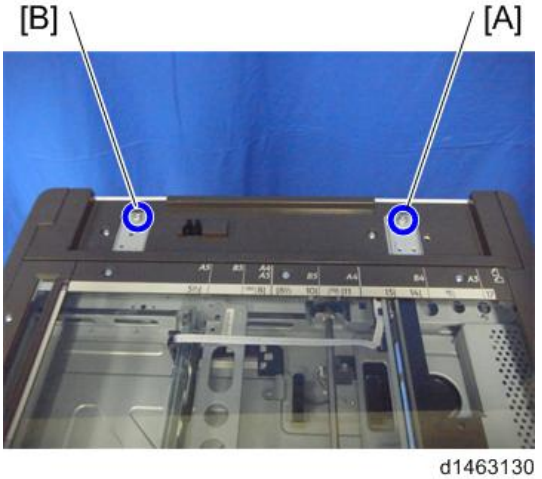
Installation Procedure

⚠CAUTION

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

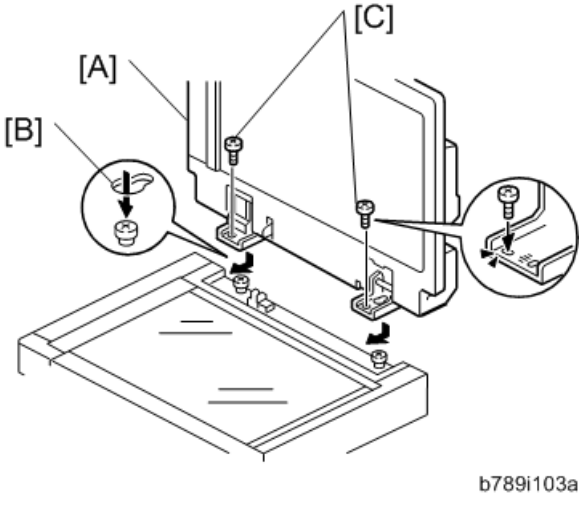
1. Remove all tapes and shipping retainers.

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



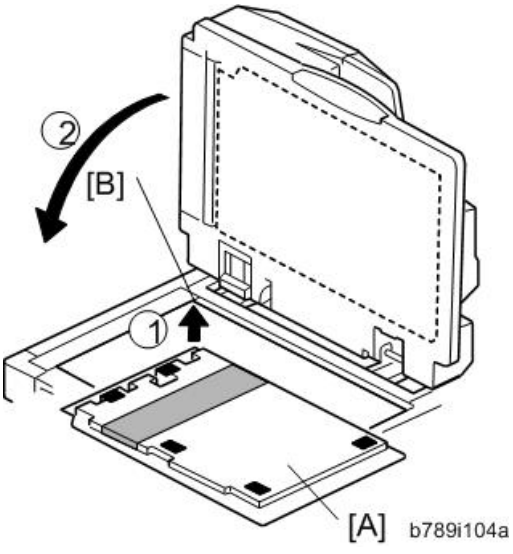
d1463130

3. Mount the ARDF [A] by aligning the screw keyholes [B] of the ARDF support plate over the stud screws.
4. Slide the ARDF toward the front of the machine.
5. Secure the ARDF with the two knob screws [C].

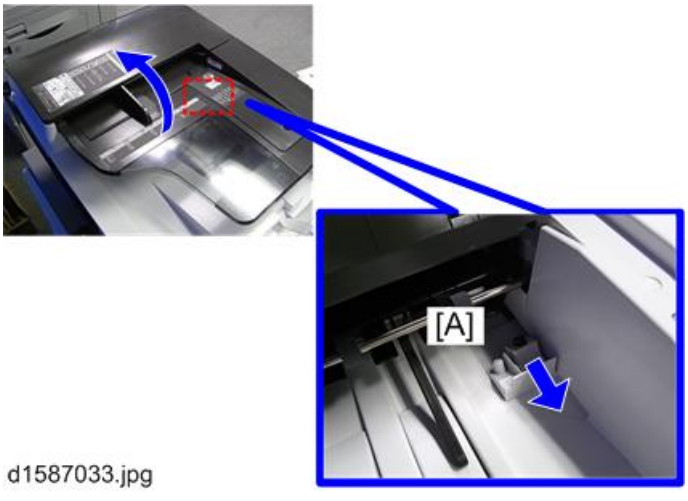


b789i103a

6. Align the rear left corner of the platen sheet [A] with the corner [B] on the exposure glass.
7. Close the ARDF.
8. Open the ARDF and check that the platen sheet is correctly attached.



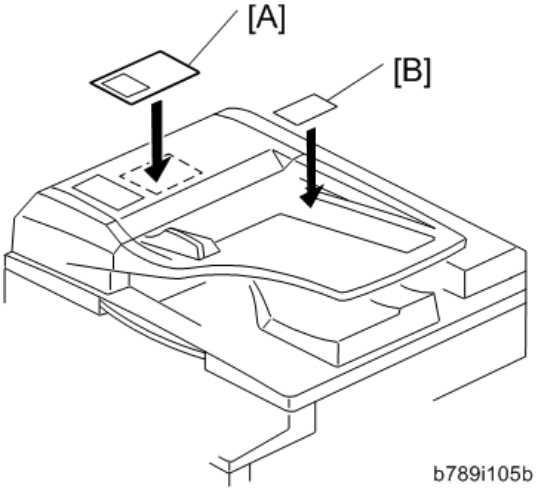
9. Lift the ARDF original tray.
10. Slide the stamp holder [A] out and install the stamp cartridge in it, if necessary.



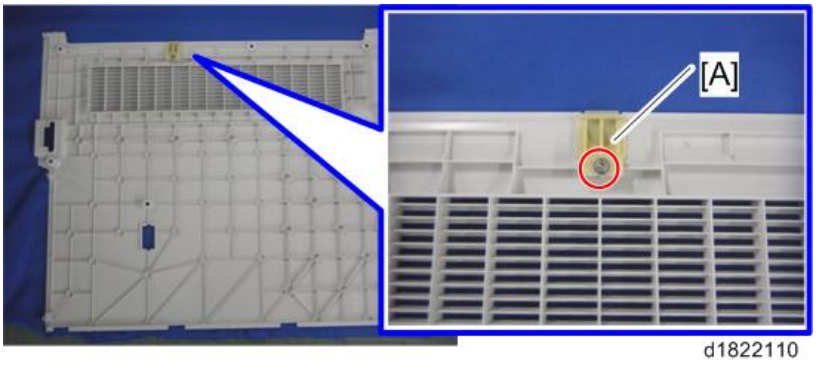
Note

- After the stamp installation, be sure to slide the holder in correctly. If not, jam detection (J001) will occur.

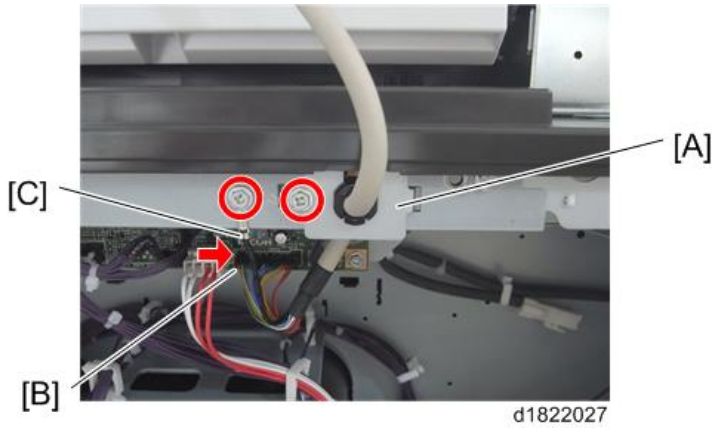
11. Attach the decals [A] [B] to the top cover as shown. Choose the language that you want.



12. Remove the upper rear cover. (page 225 "Upper Rear Cover")
13. Remove the cable hole cover [A] (×1).



14. Attach the bracket [A] (×1).
15. Connect the harness to the SIO [B].
16. Fasten the grounding wire [C] (×1).



17. Attach the upper rear cover.
18. Plug in and turn on the main power switch of the machine, and then check the ARDF operation.
19. Make a full size copy. Check that the registrations (side-to-side and leading edge) and image skew are correct. If they are not, adjust the registrations and image skew. (page 340 "ADF Image Adjustment").

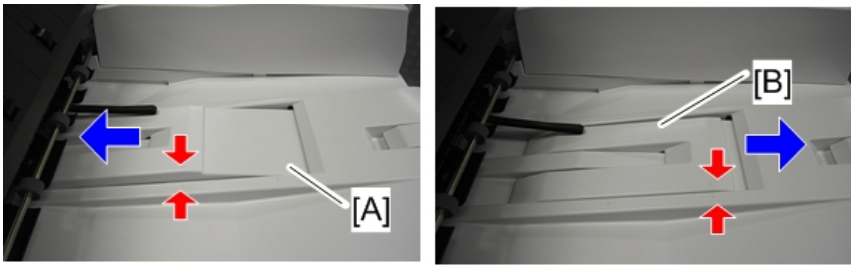
When feeding thin paper

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

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

If not, it may cause problems as follows:

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

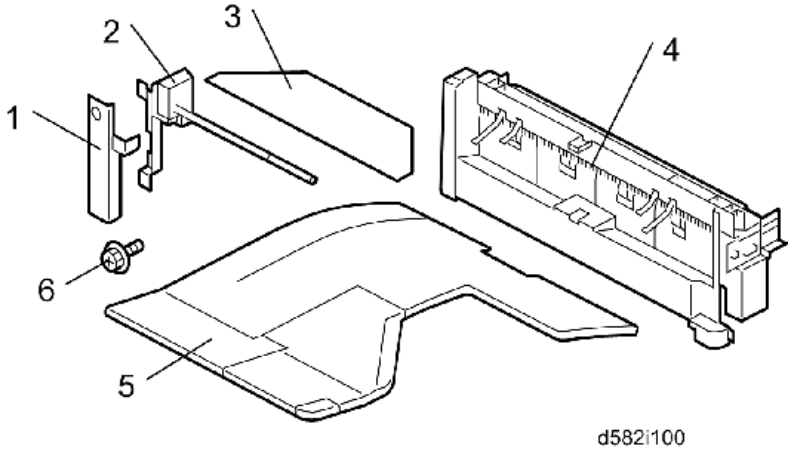


1 Bin Tray BN3090 (D582)

Component Check

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

No.	Description	Q'ty
1	Support Bar Cover	1
2	Tray Support Bar	1
3	Guide Sheet	1
4	1 Bin Tray Unit	1
5	Tray	1
6	Tapping Screw M3 x 8	2



Installation Procedure

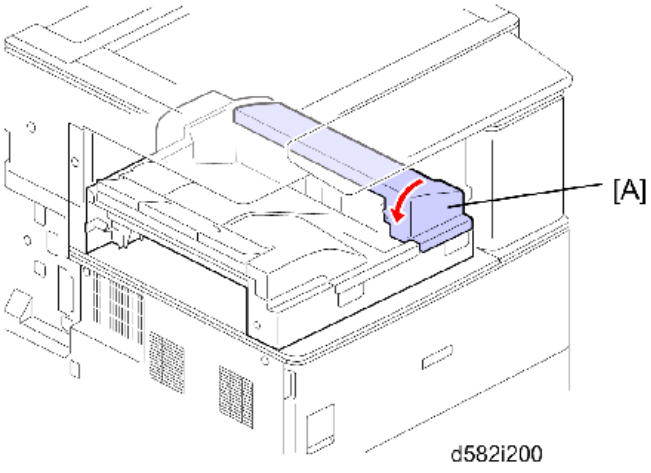
⚠CAUTION

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

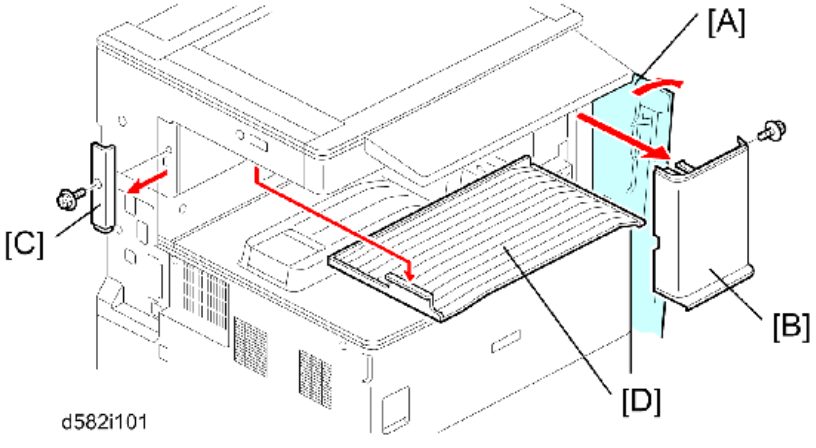
1. Remove all tapes.
2. If the optional bridge unit has been installed, open the right guide [A] of the bridge unit.

   -or-

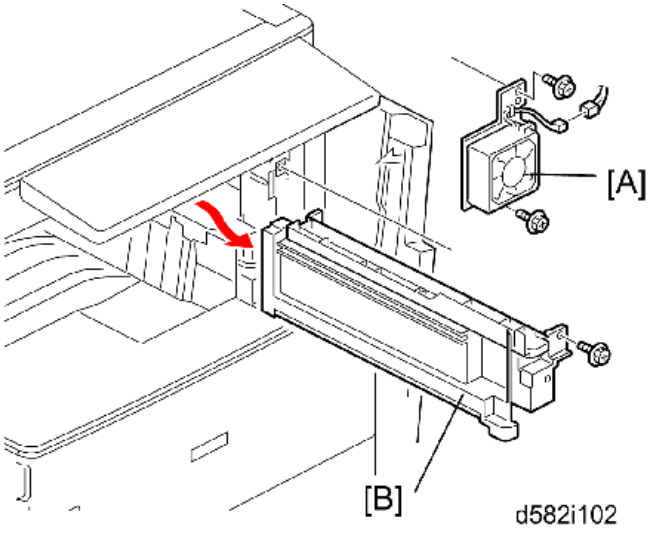
If the optional bridge unit is not installed, skip this step.



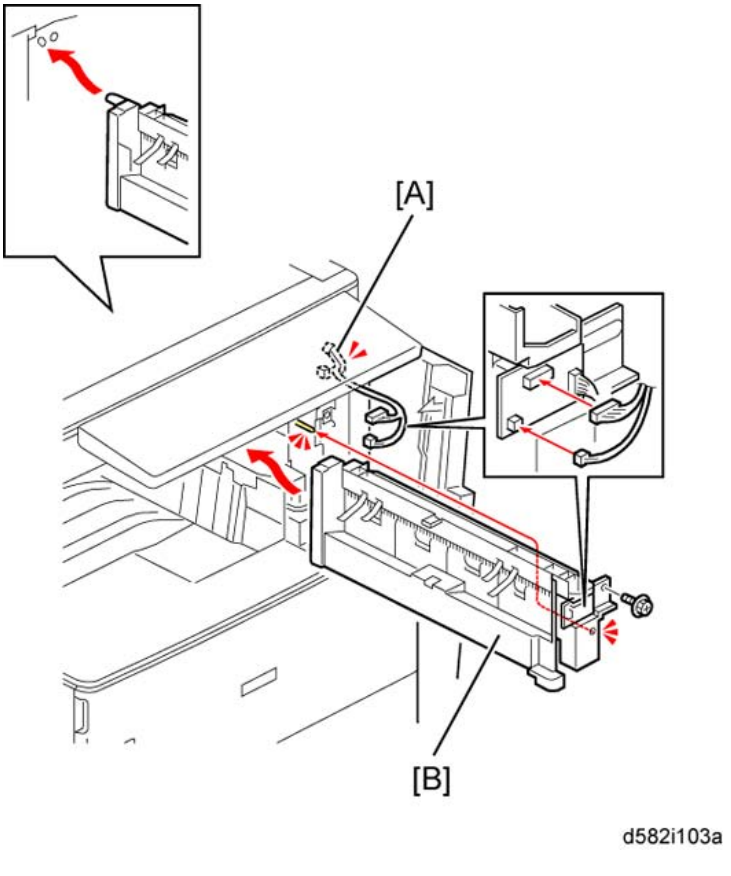
3. Open the right cover [A].
4. Remove the front right cover [B] (x1).
5. Remove the left frame cover [C] (x1).
    - Keep this screw for a later step.
6. Take out the duplex tray [D].



7. Remove the fusing fan [A] (x2, x1)
8. Remove the duplex guide [B] (x1).
    - Keep this screw for a later step.



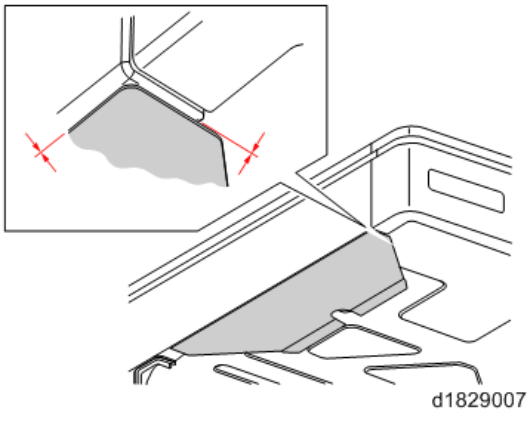
9. Remove the harness from the clamp [A].
10. Install the 1-bin tray unit [B] (x1, x2).
    - Use the screw which was removed in step 8.



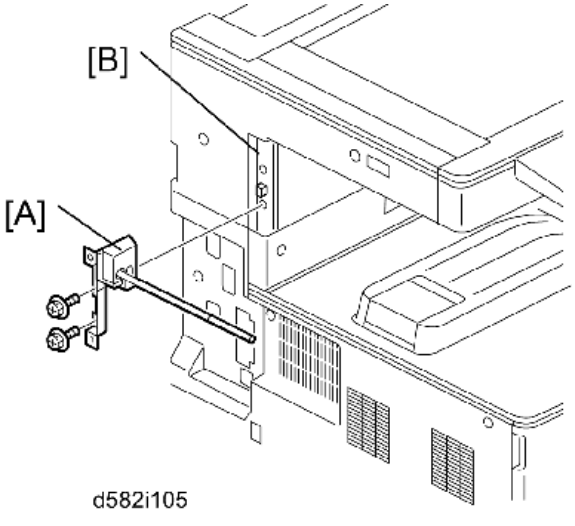
11. Re-install the fusing fan (x2) and front right cover (x1).
12. Peel off the double sided tapes from the guide sheet, and then attach the guide sheet [A] to the bottom of the scanner.

Note

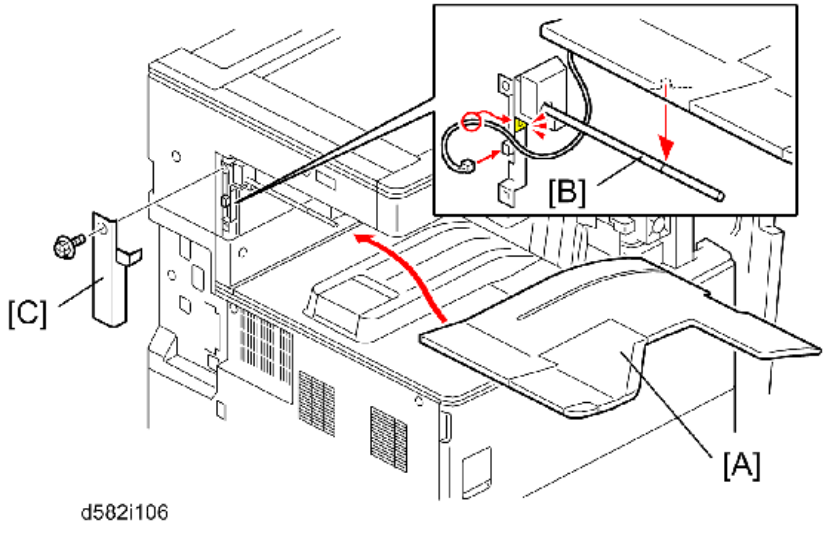
- Align the sheet with the corner of the scanner left cover and attach the sheet with tension.



13. Install the tray support bar [A] (x2) in the left frame [B] of the main machine.



14. Install the tray [A], and then attach the tray to the tray support bar [B] (x1, x1).
15. Attach the support bar cover [C] (x1).
    - Use the screw which was removed in step 5.



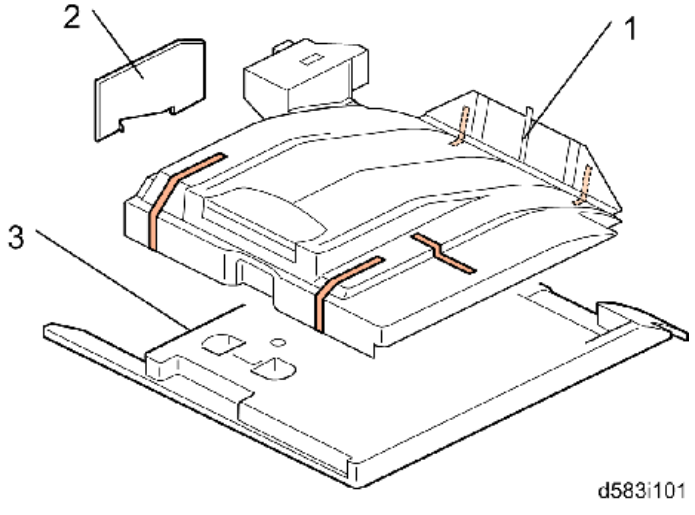
16. Turn on the main power switch and check the 1-bin tray unit operation.

Internal Shift Tray SH3050 (D583)

Component Check

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

No.	Description	Q'ty
1	Shift Tray Unit	1
2	Drawer Cover	1
3	Base	1

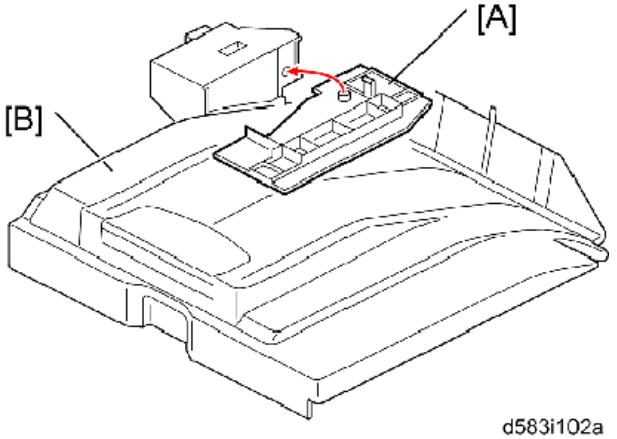


Installation Procedure

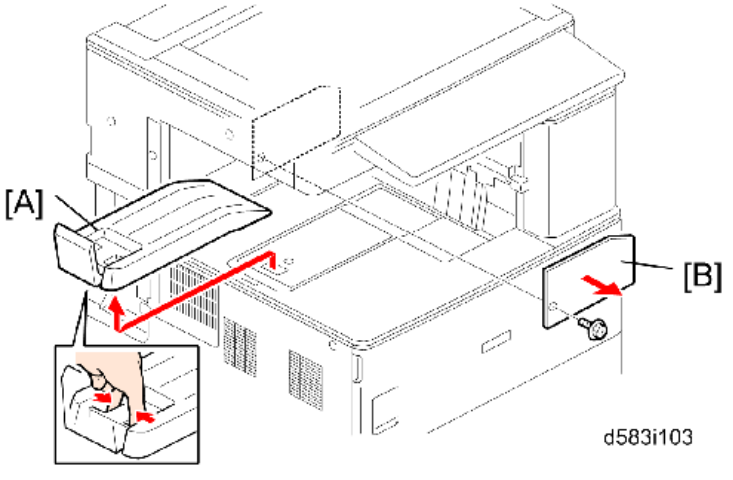
⚠CAUTION

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

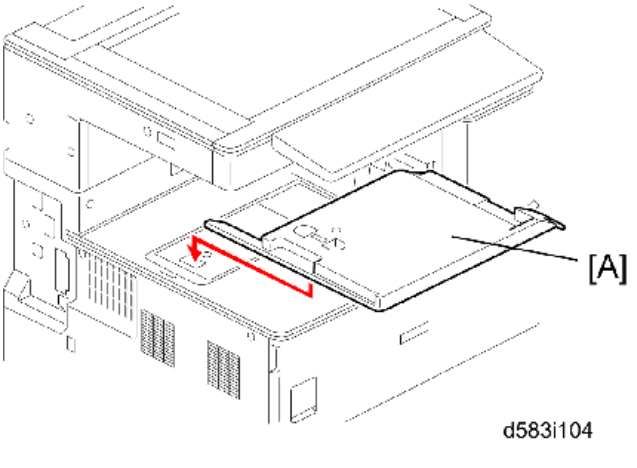
1. Remove all tapes.
2. Attach the drawer cover [A] to the shift tray unit [B].



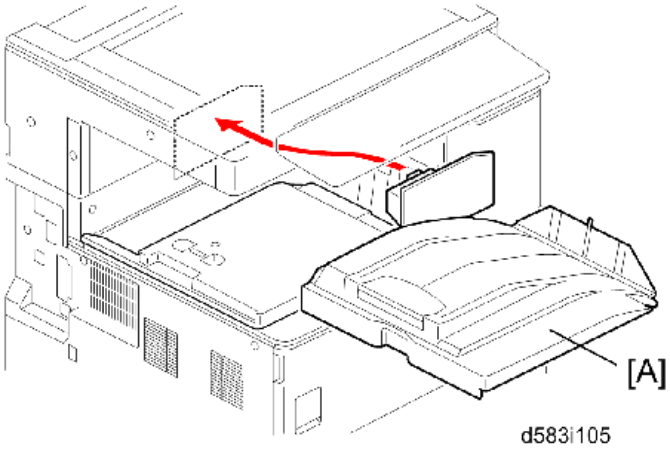
3. Remove the inner tray [A].
4. Remove the connector cover [B] (x1).



5. Install the shift tray base [A].



6. Install the shift tray unit [A], as shown.



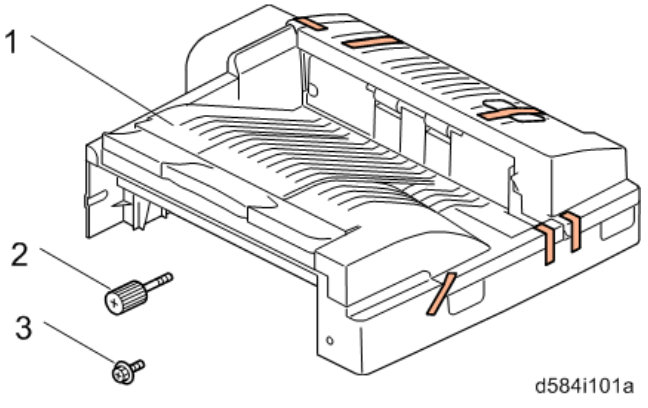
7. Turn on the main power switch and check the shift tray operation.

Bridge Unit BU3050 (D584)

Component List

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

No.	Description	Q'ty
1	Bridge Unit	1
2	Shoulder Screw	1
3	Screw	1



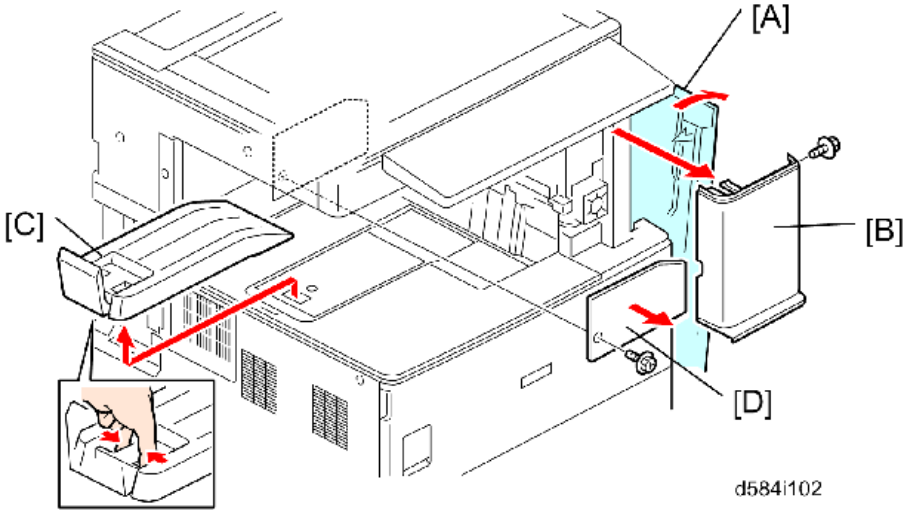
Installation Procedure

⚠CAUTION

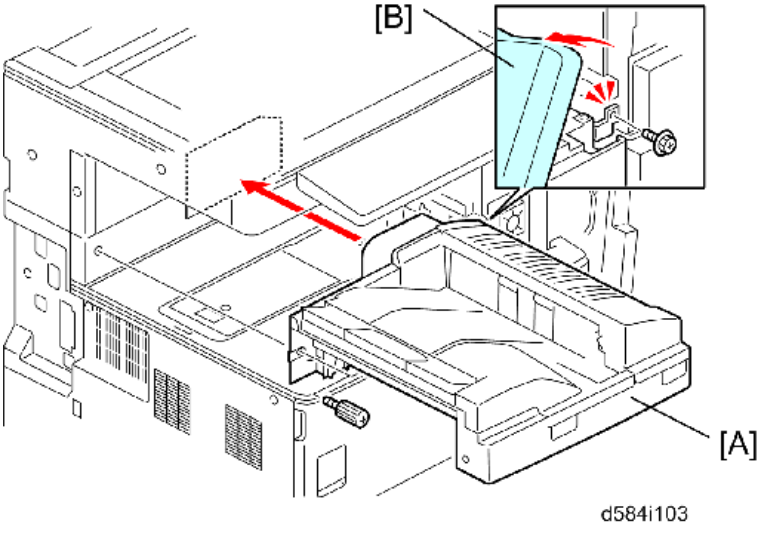
- Unplug the copier power cord before starting the following procedure.

Installation Procedure

1. Remove all tapes.
2. Open the right cover [A].
3. Remove the front right cover [B] (x1).
4. Remove the inner tray [C].
5. Remove the connector cover [D] (x1).



6. Install the bridge unit [A], and then secure it (shoulder screw x 1).
    - Open the bridge right cover [B] to secure the right screw.



7. Reinstall the front right cover (x1).
8. Install the optional finisher (refer to the finisher installation procedure).

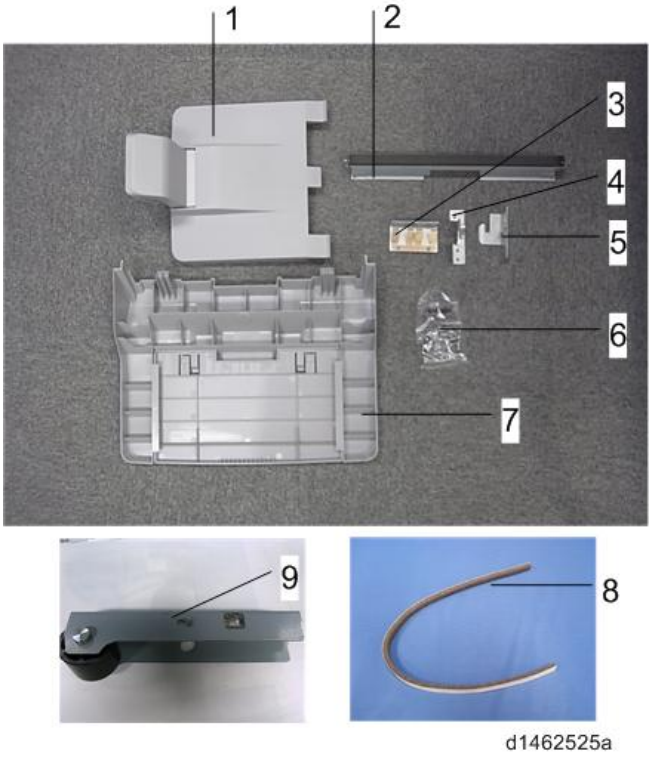
Booklet Finisher SR3150 (D686) / Finisher SR3140 (D687)

Accessory Check

Booklet Finisher SR3150 / Finisher SR3140

No.	Description	Q'ty	Remarks
1	Tray	1	SR3150 only
2	Guide Plate	1	Not used
3	Ground Plate Joint Bracket	1	
4	Front Bracket	1	
5	Rear Bracket	1	Not used
6	Screws - M4 × 12	4	Not used
6	Tapping screws - M3 × 6	4	
6	Tapping screw - M4 × 8	1	
7	Shift Tray	1	
8	Cushion	1	Not used
9	Arm Of The Anti-tip Component	1	SR3140 only

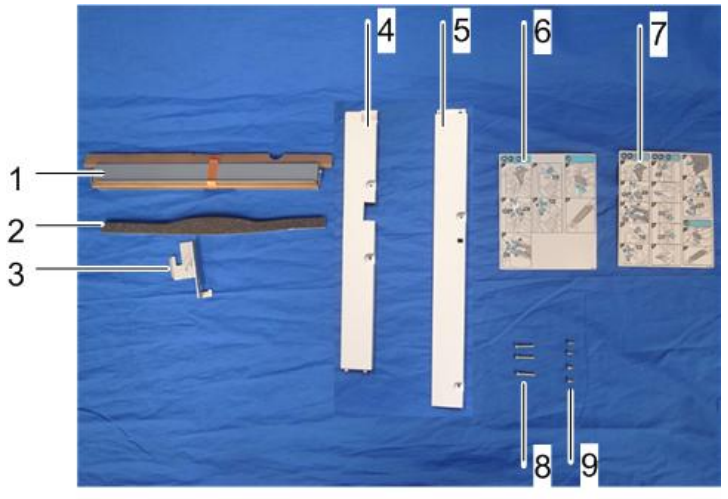
RTB 36
Accessories list modified



To install the Booklet Finisher SR3150 / Finisher SR3140 to this copier, the Finisher Adapter Type M7 is required.

Finisher Adapter Type M7

No.	Description	Q'ty	Remarks
1	Relay Guide Plate	1	
2	Cushion	1	
3	Rear Bracket	1	
4	Upper Right Cover	1	
5	Lower Right Cover	1	
6	Decal: Misfeed Removal: Bind	1	SR3140 only
7	Decal: Misfeed Removal	1	SR3150 only
8	Pan Head Screw:M4×25	3	
9	Tapping screw - M3 × 8	4	



d1822030

Installation Procedure

Important

- **Only for SP3140, two stabilizers are included as accessories.**
- **They must be attached to the finisher just after it is taken out of the shipping box.**

⚠CAUTION

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

Note

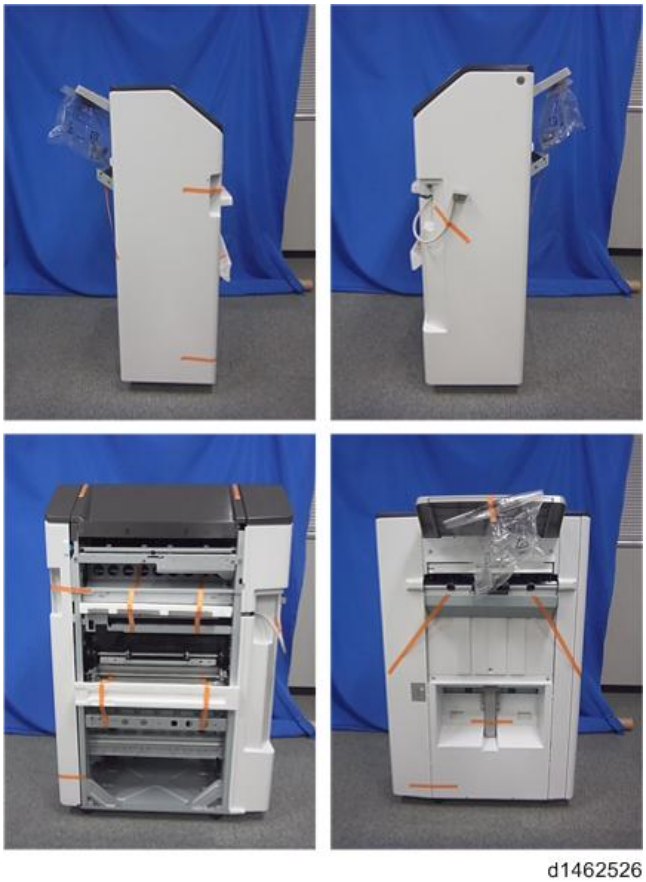
- Before installing this option, attach the "Bridge Unit BU3050" first.
- Attach the "Paper Feed Unit PB3180" or "Paper Feed Unit PB3190" first before installing this option.

1. SR3140 only: install the anti-tip component [A].



d1465019

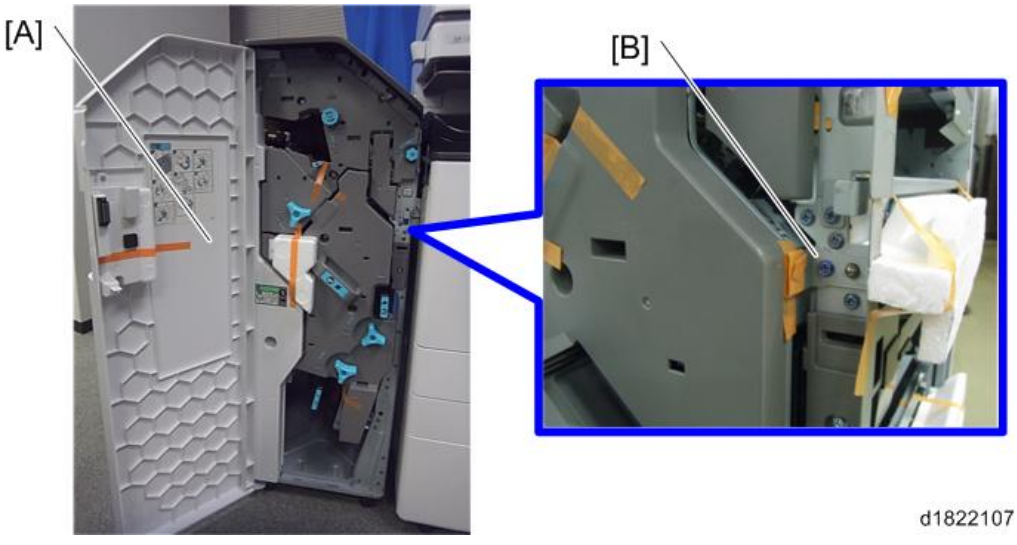
2. Remove the external orange tape and shipping retainers.



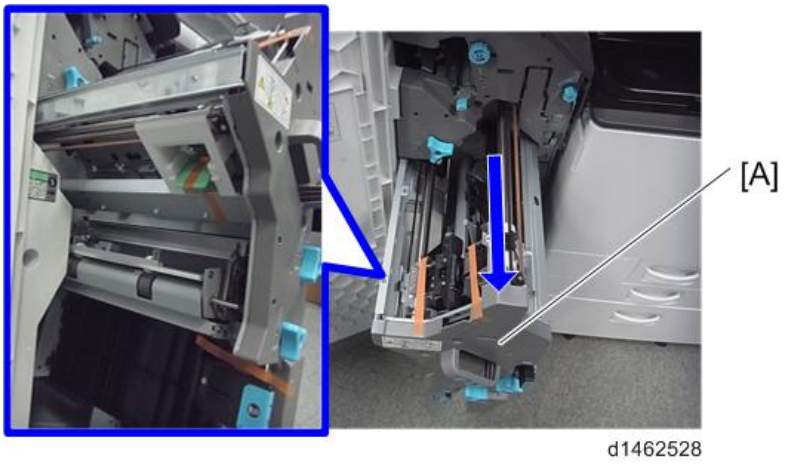
d1462526

3. Open the front cover [A], and remove the filament tape and packing materials.

4. SR3150 only: Remove the bracket [B].



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



6. Open the finisher top cover [A].



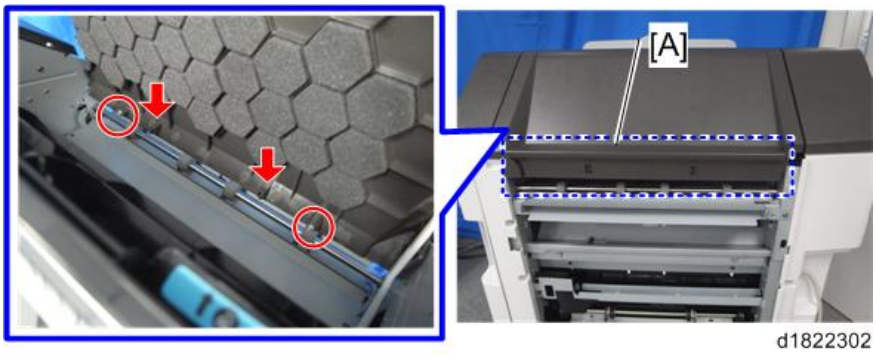
d1822031

7. Remove the snap ring at the top cover [A].



d1822301

8. Remove the auxiliary cover [A] from the top cover (hooks x 2, x2).

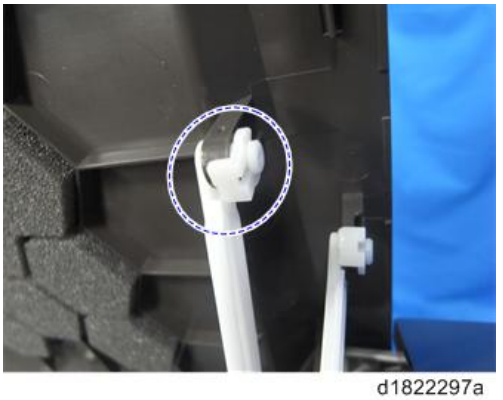


d1822302

9. Reattach the snap ring at the top cover.

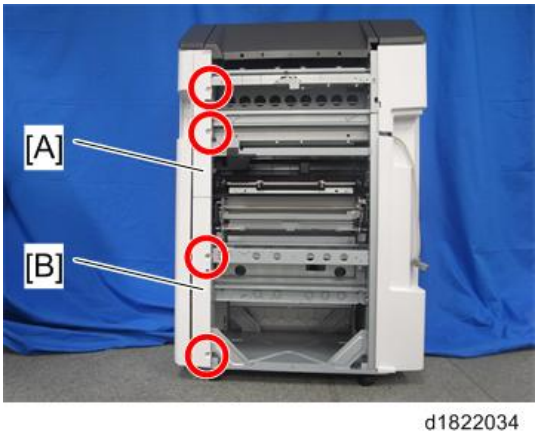
Note

- When attaching the snap ring, attach it in the direction shown in the figure below.



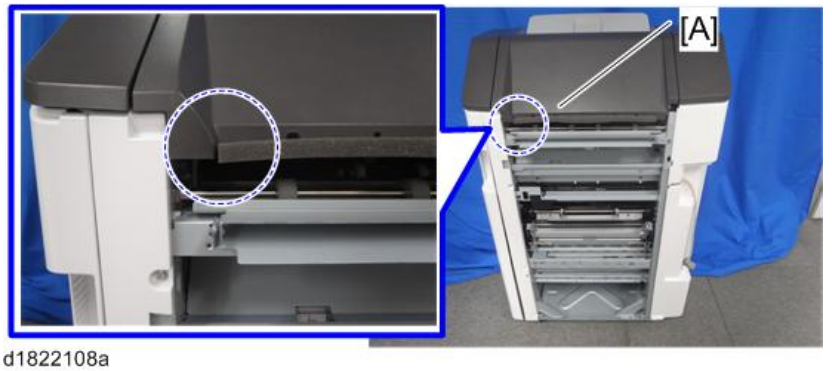
d1822297a

10. Attach the lower right cover [B] and upper right cover [A] to the finisher in this order. (x4 (M3 x 8): supplied with the finisher adapter).



d1822034

11. Wipe the surface of the top cover with alcohol, and then attach the cushion [A] (supplied with the finisher adapter) to the top cover.



d1822108a

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



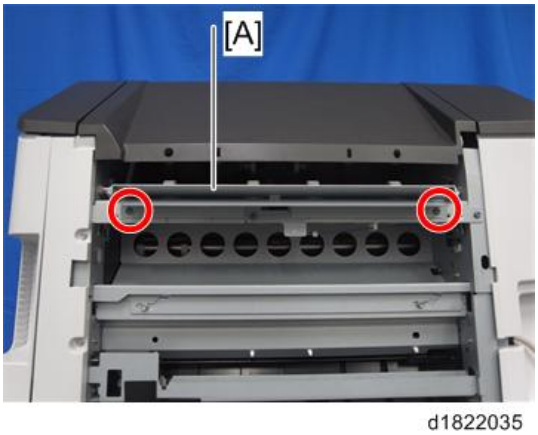
d1462529

13. SR3150 only: attach the booklet tray [A].



d1822296

14. Attach the relay guide plate supplied with the finisher adapter [A] to the finisher (x 2 (M3 x 6)). Do not use the relay guide plate that comes with the finisher.



d1822035

15. Attach the ground plate bracket [A] (x2 (M3 x 6)).



d1462532

16. Attach the connecting bracket that comes with the finisher adapter [A] to the finisher (x1: M4×25: supplied with the finisher adapter).

    Do not use the connecting bracket that comes with the finisher.

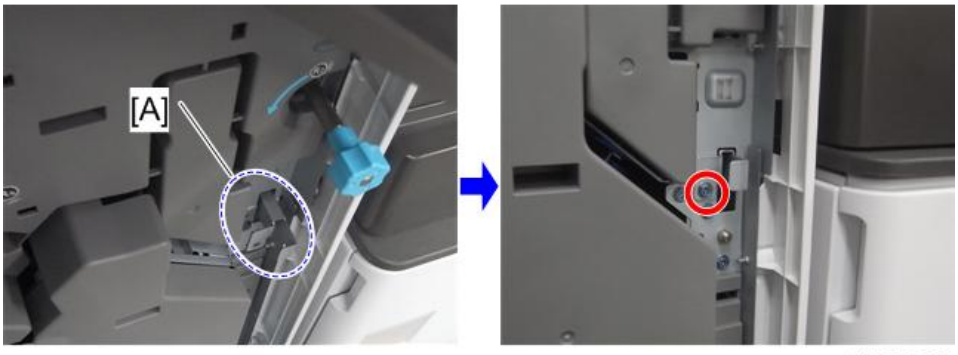
17. Attach the connecting bracket that comes with the finisher [B] to the finisher (2: M4×25: supplied with the finisher adapter).



d1822036

RTB 36, pages 2 and 3
Extra step and additional instructions added here.

18. Connect the finisher to the machine with the connection lever [A] (x1).



d1822037

19. Connect the interface cable to the machine.



d1822038

20. Attach the decal that comes with the finisher adapter to the front cover of the finisher. Wipe the place to attach the decal with alcohol.
    - For the Booklet Finisher SR3150: "Decal: Misfeed Removal: Bind" (5 squares x 3 squares)
    - For the Finisher SR3140: "Decal: Misfeed Removal" (3 squares x 3 squares)



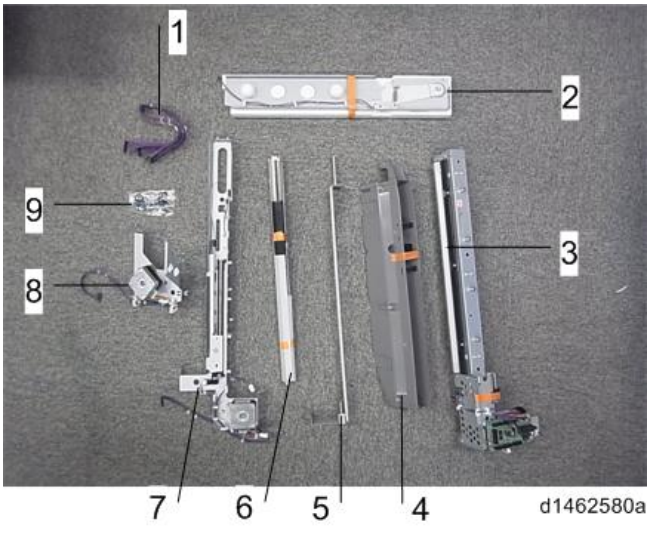
d1822039

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

Punch Unit PU3050 (D717)

Accessory Check

No.	Description	Q'ty
1	Harness: punch: main	1
2	Stay	1
3	Punch unit	1
4	Hopper	1
5	Hopper: lock	1
6	Guide plate: registration	1
7	Registration Sensor unit	1
8	Bracket: punch: move: DC stepper motor: ass'y	1
9	Tapping screws - M3 x 6	15

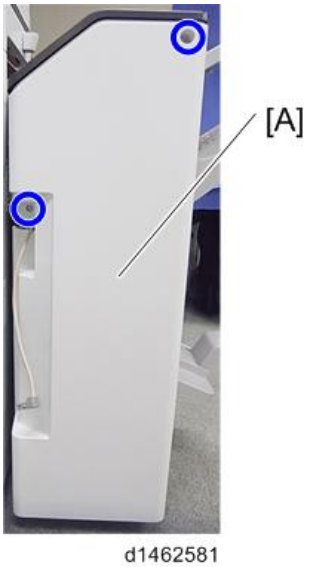


Installation Procedure

⚠CAUTION

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

1. Unpack the box, and remove the filament tape and packing material.
2. Pull out the finisher interface cable, and move it away from the machine.
3. Remove the finisher rear cover [A] (x2).



d1462581

4. Remove the arm [A] of the guide plate from the finisher top cover (x2).

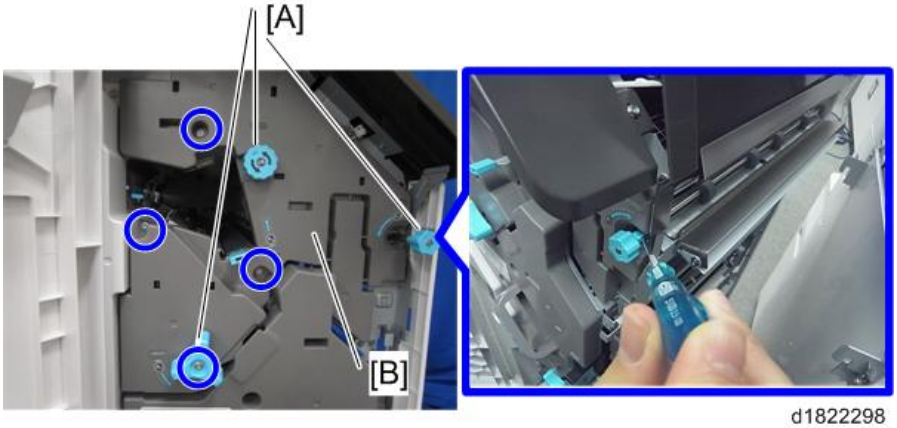


d1822032a

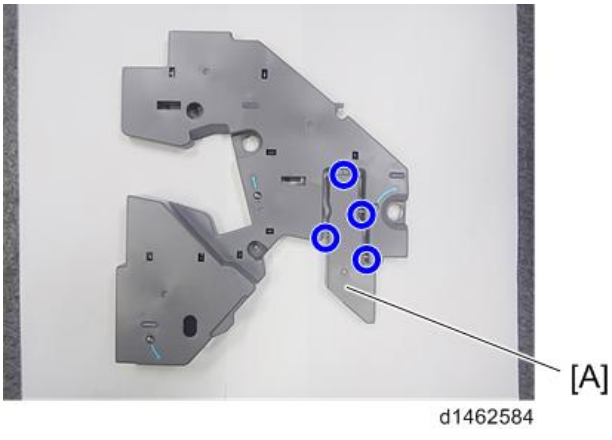
5. Open the finisher front cover, remove the three knobs [A], and remove the finisher inner cover [B] (x4, x1).

Note

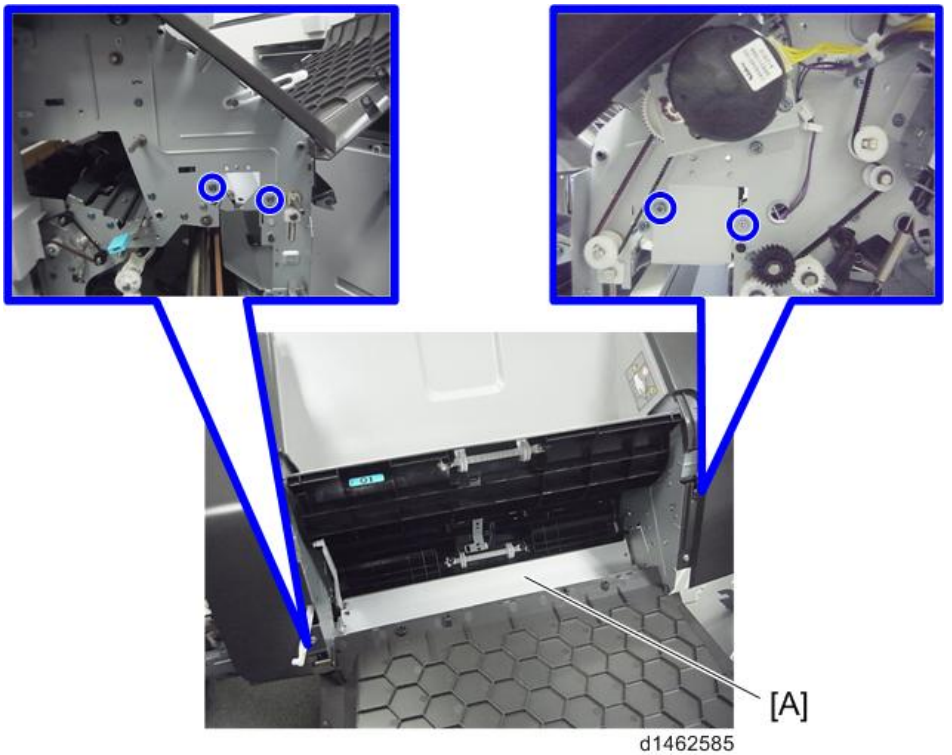
- Knobs with a lock mechanism are removed using a knob screwdriver or similar while releasing the lock.



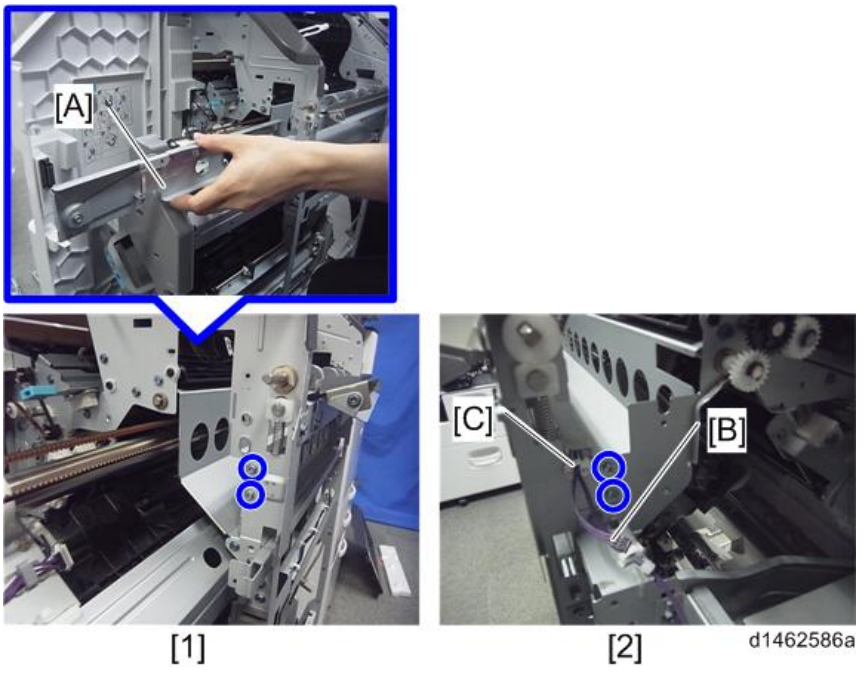
6. Cut off part of the finisher inner cover [A].



7. Remove the guide plate [A] (x4).



8. Insert and attach the hopper guide plate [A] from the front (x4).
   At this time, pass the harness [B] through the clamp [C].



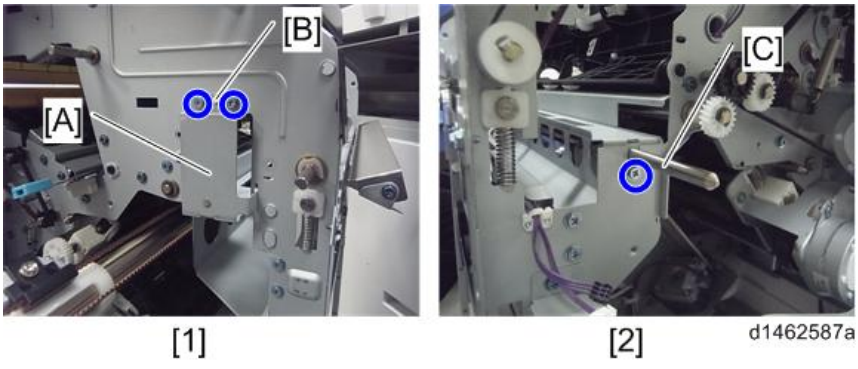
[1]: Front side

[2]: Rear side

9. Attach the stay [A] (x3).

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

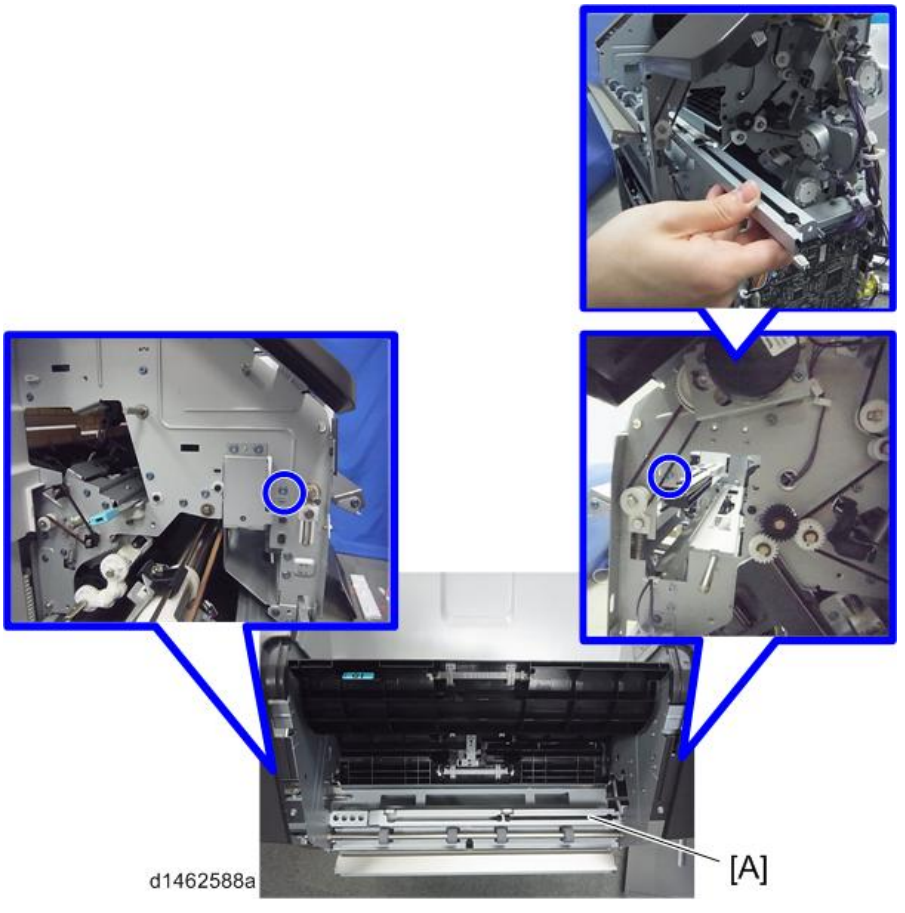
   Rear [C]: Place the axis of the stay on the notch in the finisher.



[1]: Front side

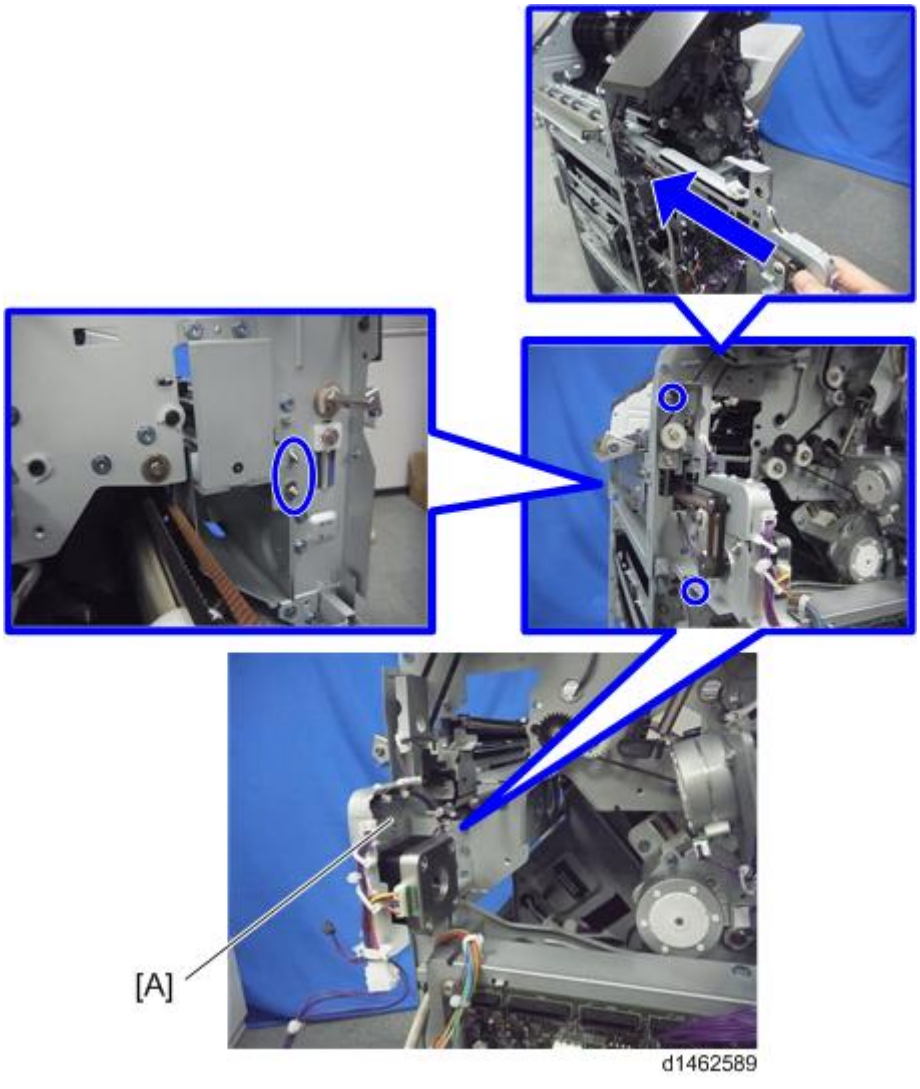
[2]: Rear side

10. Insert and attach the guide plate [A] from the rear (x2).

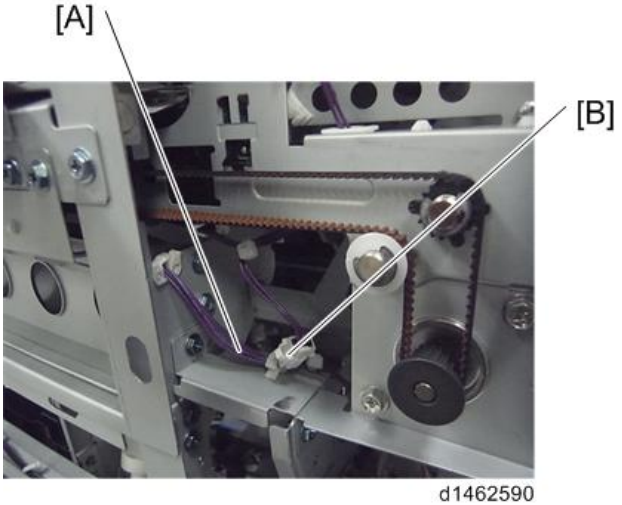


11. Insert and attach the registration sensor unit [A] from the rear (x2).

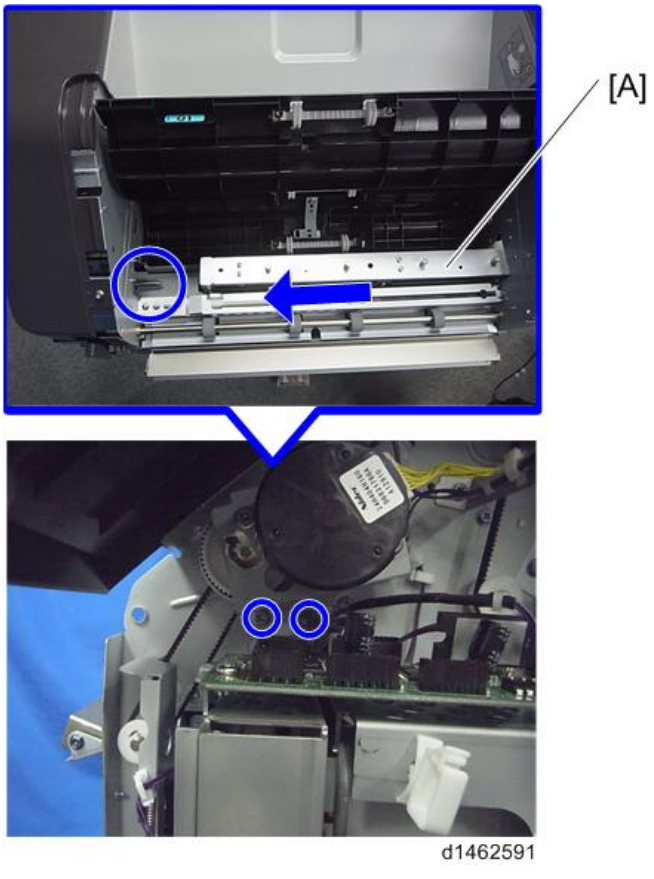
    Front: The two shafts of the unit are passed through bearings in the finisher.



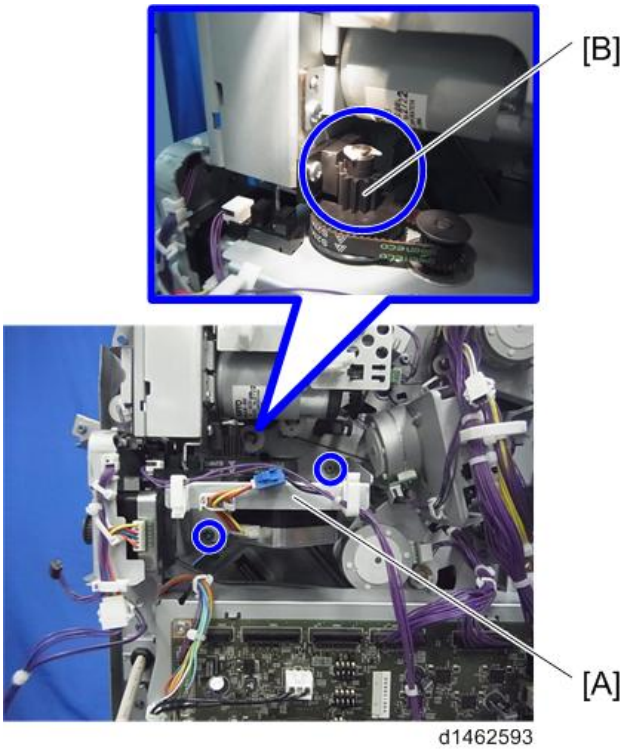
12. Connect the harness [A] of the hopper guide plate to the relay connector [B] of the registration sensor unit.



13. Insert and attach the punch unit [A] from the rear (x2).

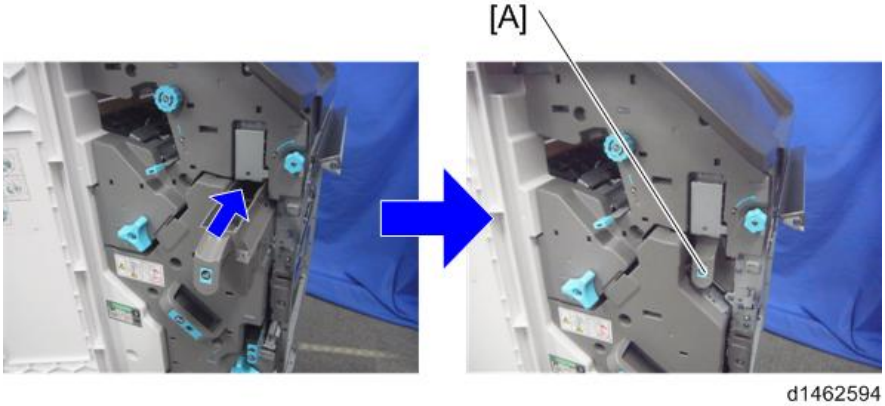


14. Attach the stepping motor bracket [A] so that the gear [B] meshes firmly (x2).



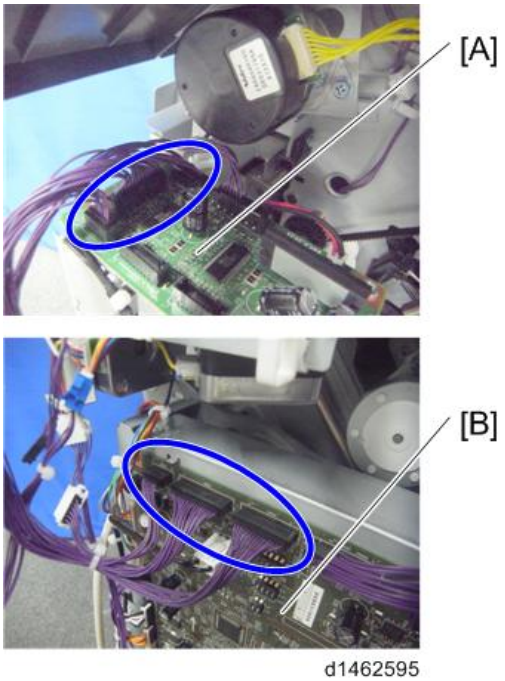
d1462593

15. Insert the hopper [A].

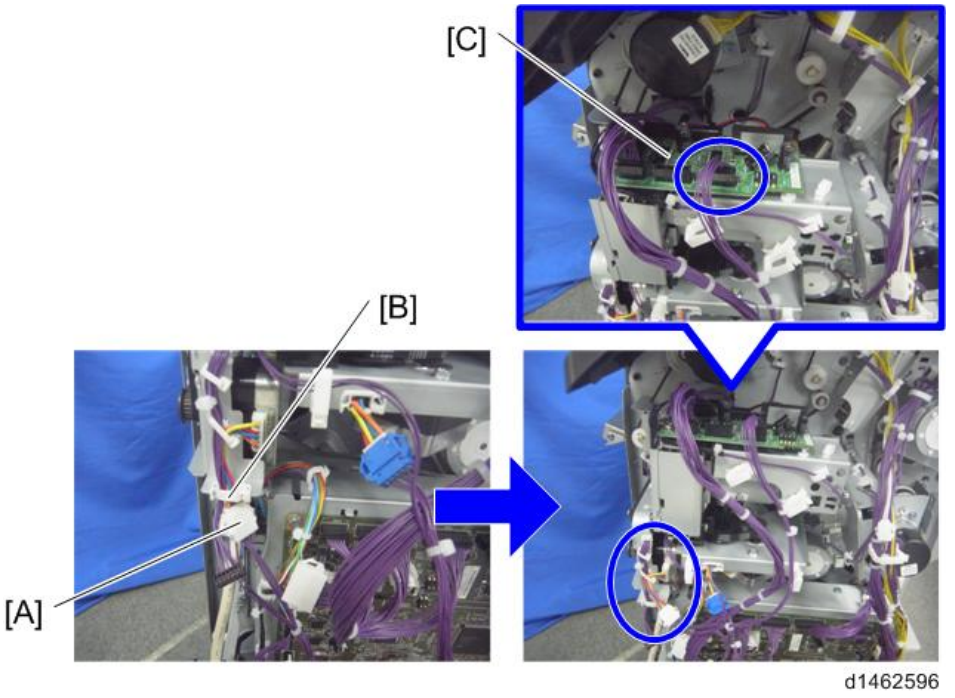


d1462594

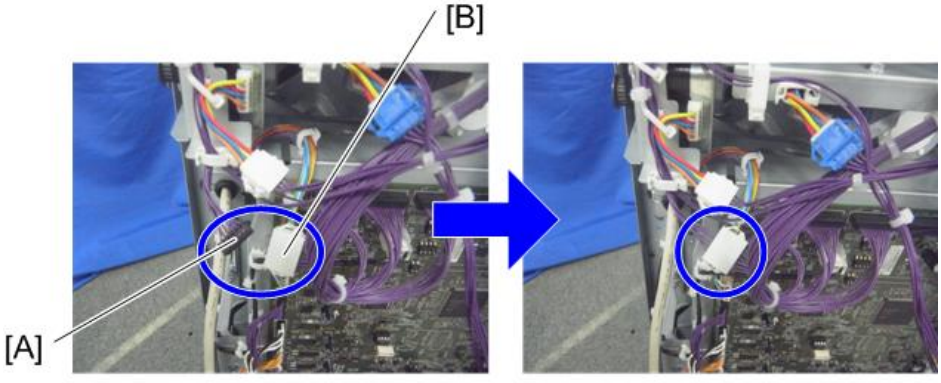
16. Connect the harness provided to the punch unit board [A] and the control board [B] of the finisher (x6).



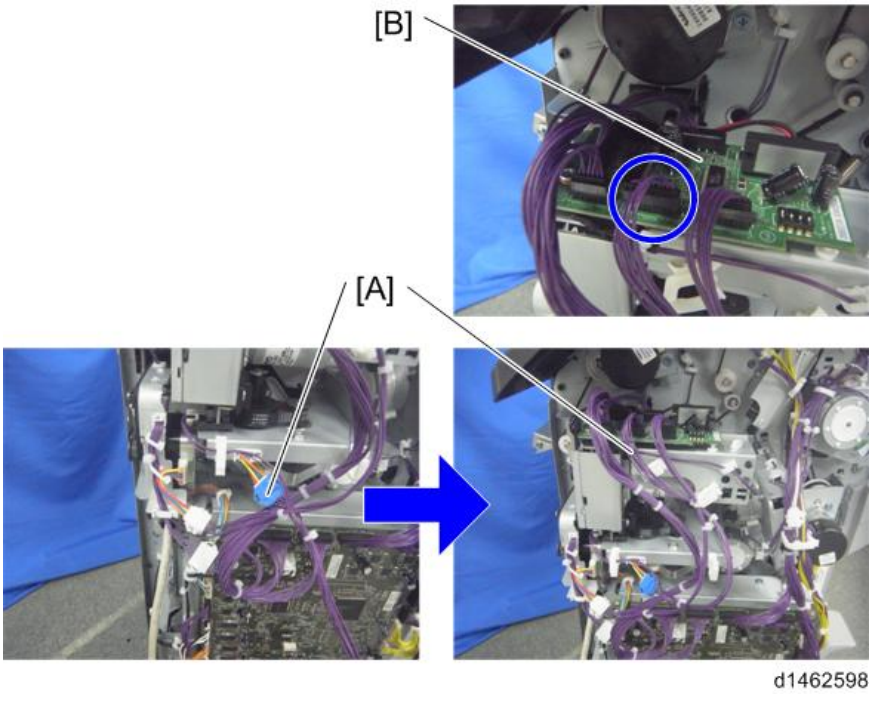
17. Remove the harness [A] from the clamp [B], and connect it to the punch unit board [C] (x1).



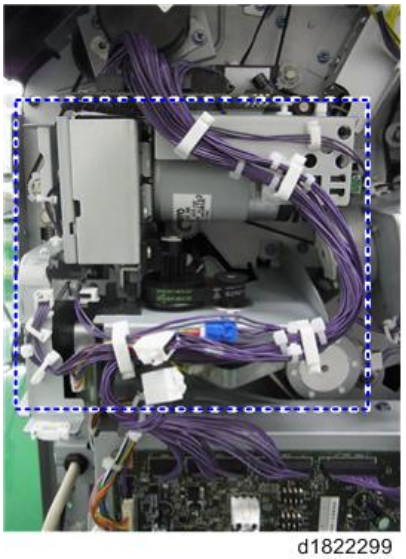
18. Connect the harness [A] of the registration sensor unit to the relay connector [B] of the harness (x1).



19. Connect the harness [A] of the stepping motor bracket to the punch unit board [B] (x1).



20. Clamp the harnesses.



d1822299

21. Attach the finisher rear cover.
22. Attach the finisher inner cover and three knobs.
23. Close the front cover.
24. Close the top cover.
25. Attach the finisher to the machine, and connect the interface cable.
26. Turn the power switch on.
27. Check that the punch can be selected at the operation panel, and check the operation.

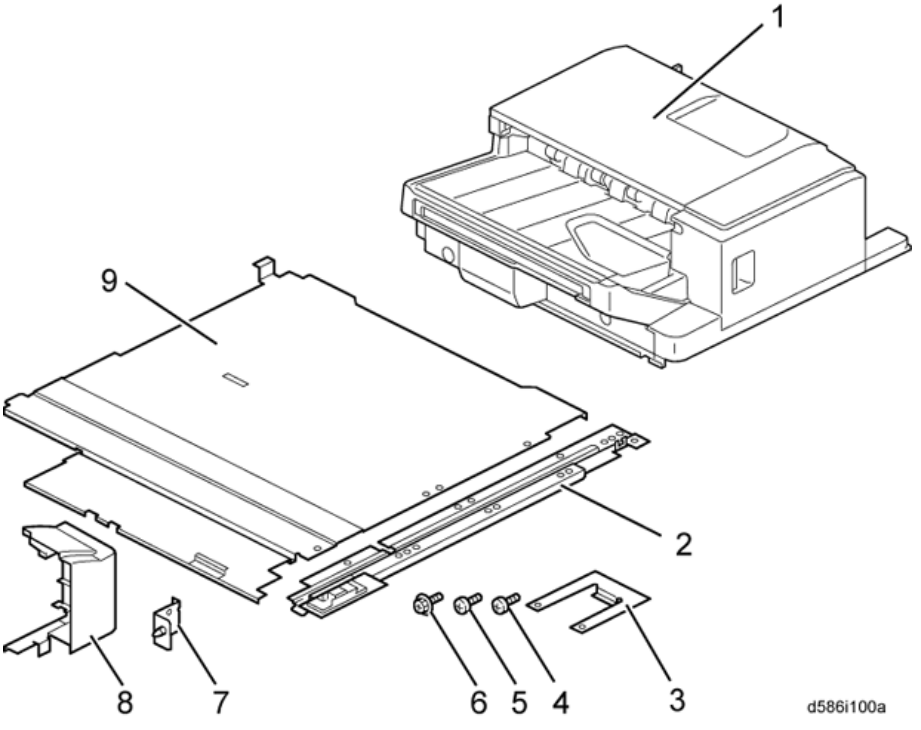
Internal Finisher Type 3352 (D586)

This procedure explains how to install the internal finisher, without installing the punch unit at the same time.

Component Check

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

No.	Description	Q'ty
1	Internal Finisher	1
2	Guide Rail	1
3	Stopper	1
4	Screw - M4 x 6	1
5	Bind Screw - M3 x 6	8
6	Screw - M3 x 6	2
7	Positioning Pin Bracket	1
8	Finisher Right Cover	1
9	Inner Bottom Plate	1



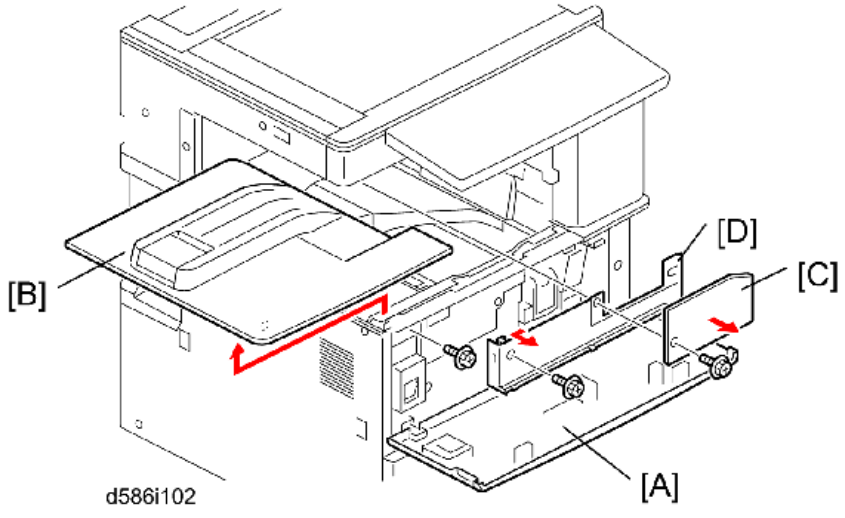
Installation Procedure

⚠CAUTION

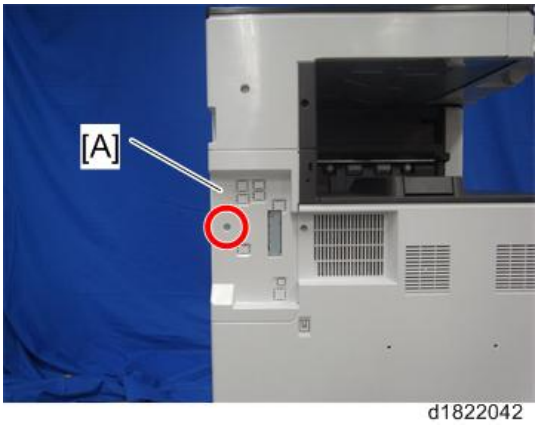
- Unplug the copier power cord before starting the following procedure.

Preparing before Installing the Internal Finisher

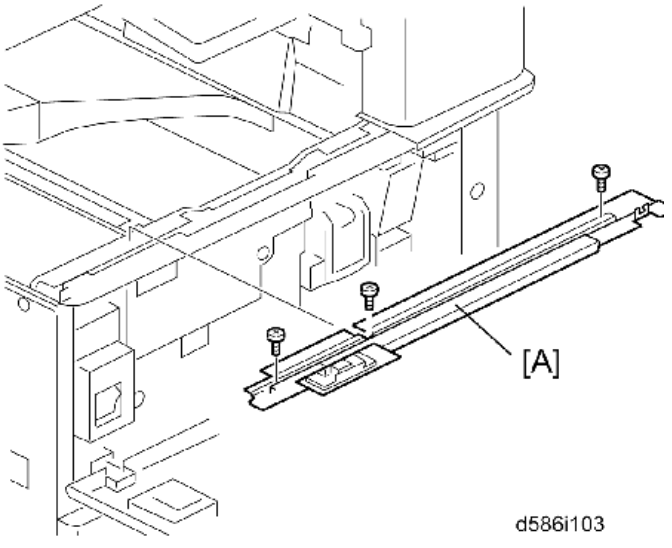
1. Remove all tapes from the internal finisher.
2. Open the front cover [A].
3. Remove the output tray [B] (x1).
4. Remove the connector cover [C] (x1).
5. Remove the inner rear cover [D] (x1).



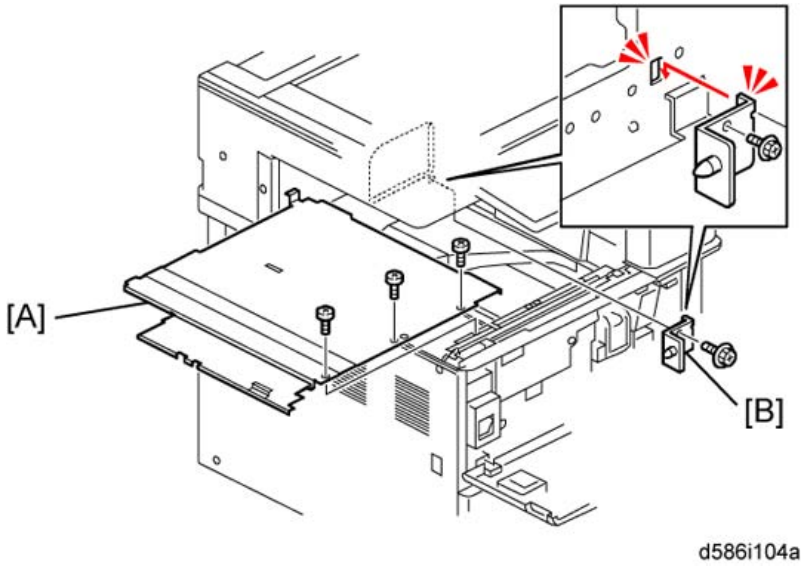
6. Remove the controller cover [A] (x1).



7. Install the guide rail [A] in the front frame of the main machine (bind screw x 3; M3 x 6).

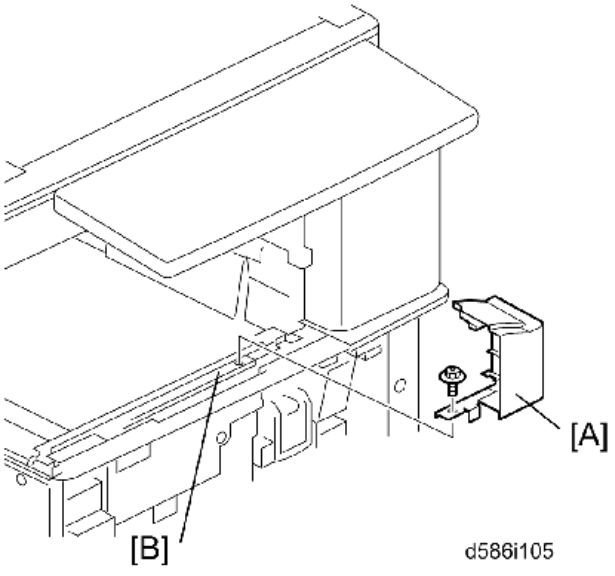


8. Install the inner bottom plate [A] (bind screw x 3; M3 x 6).
9. Install the positioning pin bracket [B] in the rear frame of the main machine (x 1; M3x6).

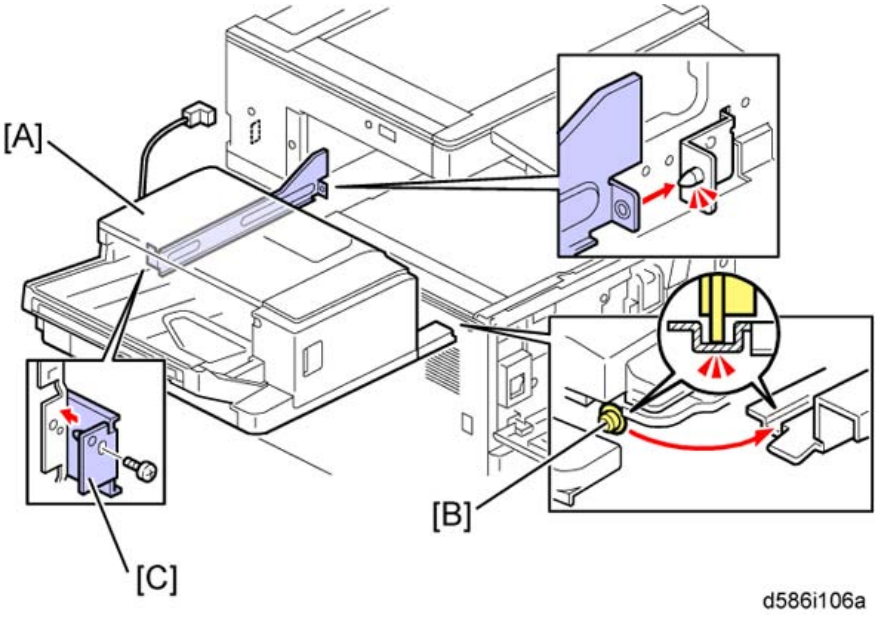


Internal Finisher Installation

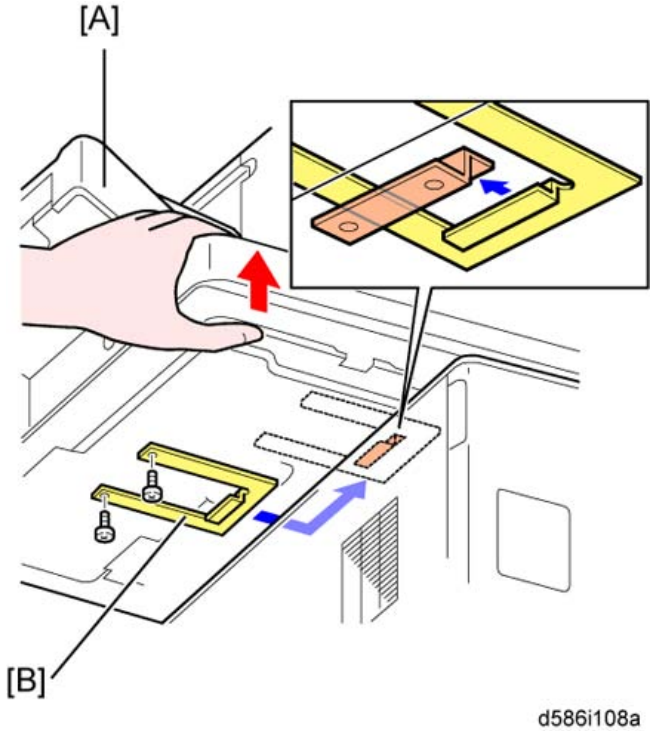
1. Attach the finisher right cover [A] to the guide rail [B] (x1; M3 x 6).



2. Install the internal finisher [A].
    - Align the wheel [B] at the front of the internal finisher with the groove on the guide rail when installing the internal finisher
3. Insert the rear rail [C] into the left frame of the main machine (x1: M4 x 6).

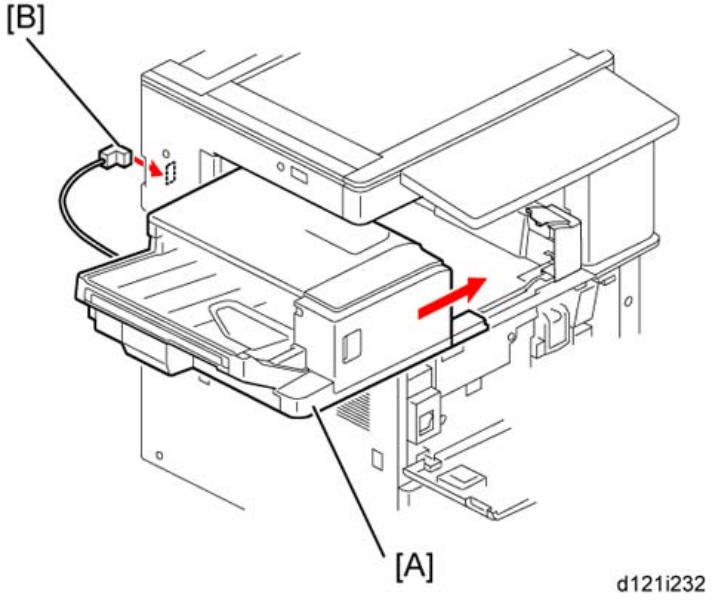


4. Push up the internal finisher [A] from the bottom, and then install the stopper [B] to the bottom side of the internal finisher (bind screw x 2; M3 x 6).



d586i108a

5. Push the internal finisher [A], and then connect the cable [B] to the inlet of the main machine.



d121i232

6. Reassemble the machine.
7. Turn on the main power switch.
8. Check the internal finisher operation.

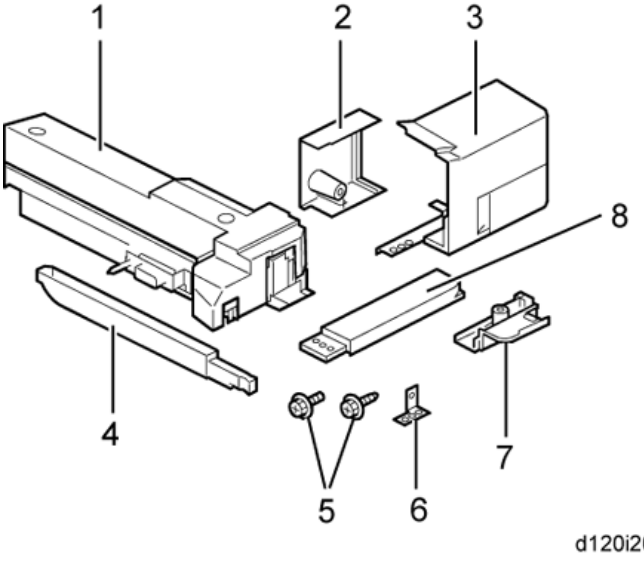
Punch Kit PU3020 (D587)

This procedure explains how to install the punch kit for the internal finisher, after installing the internal finisher.

Component Check

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

No.	Description	Q'ty
1	Punch Unit	1
2	Tray Lower Rear Cover	1
3	Punch Cover	1
4	Hopper	1
5	Screw: M3x6	7
6	Bracket	1
7	Tray Lower Front Cover	1
8	Front Right Lower Cover	1

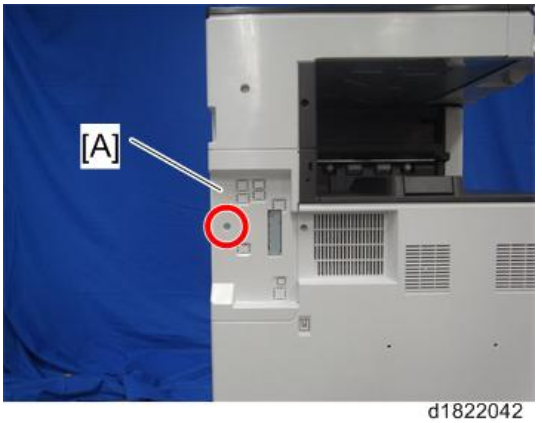


Installation Procedure

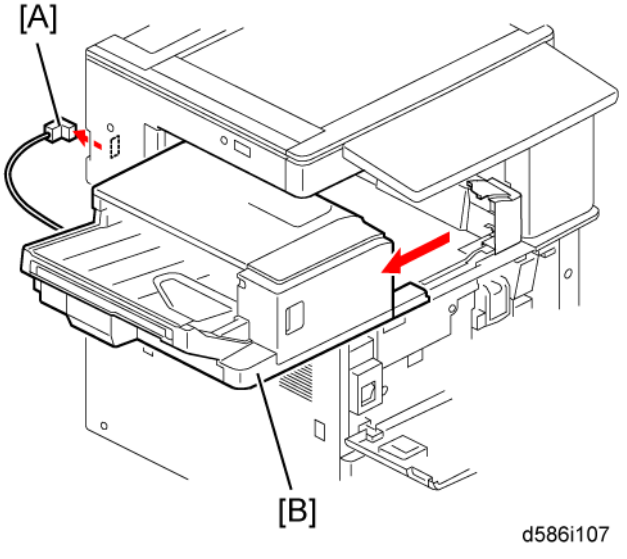
⚠CAUTION

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

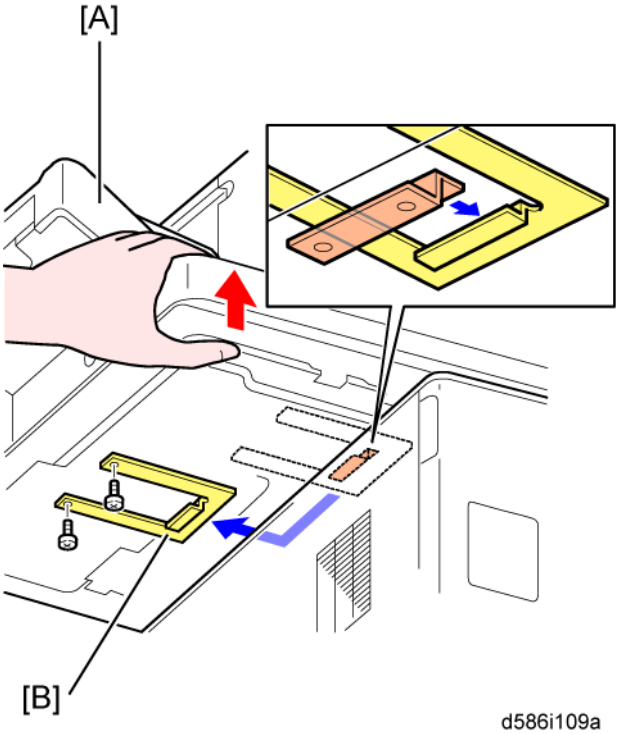
1. Remove the controller cover [A] (x1).



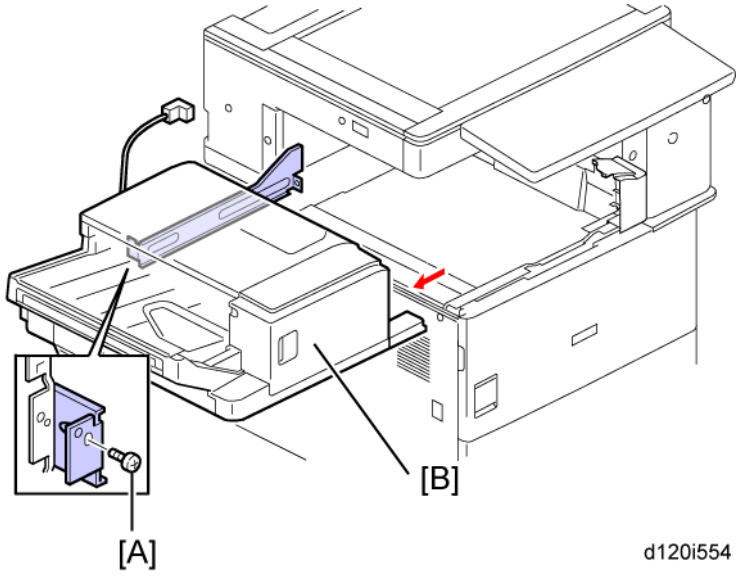
2. Disconnect the cable [A] from the inlet of the main machine.
3. Pull out the internal finisher [B].



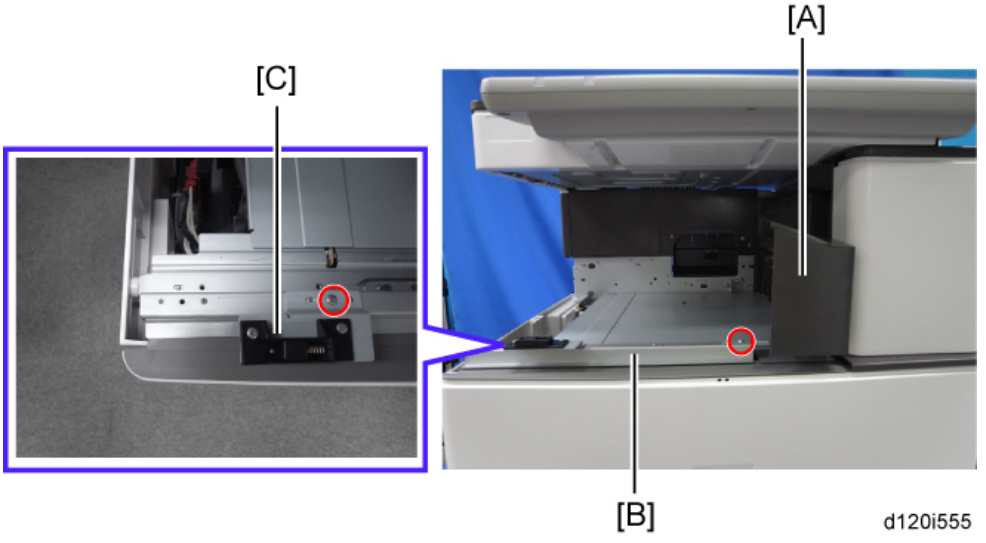
4. Push up the internal finisher [A] from the bottom, and then remove the stopper [B] from the bottom side of the internal finisher (x2).



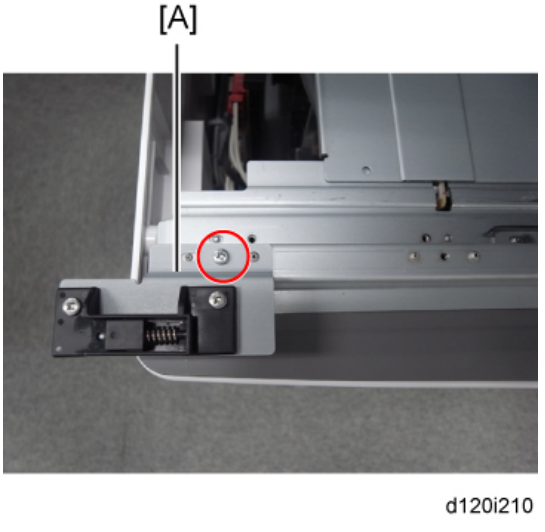
5. Remove the screw from the rear rail [A].
6. Remove the internal finisher [B] by pulling it off the main machine.



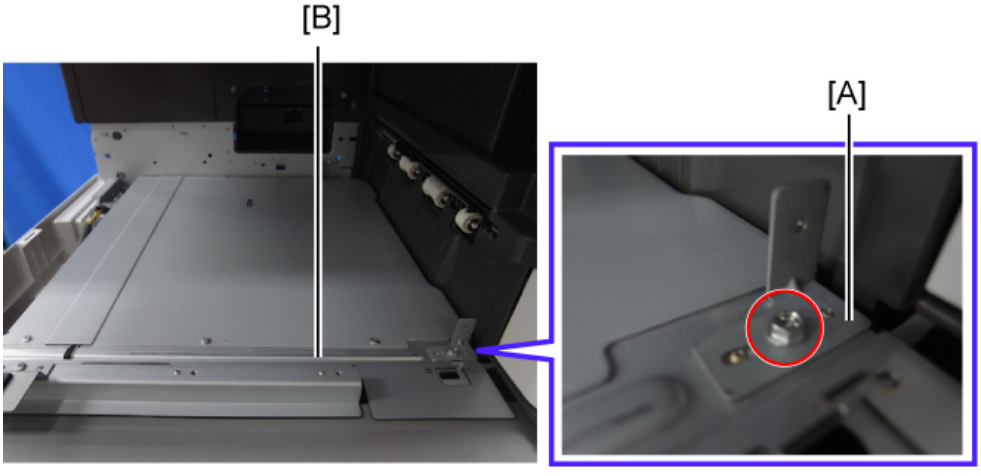
7. Remove the finisher right cover [A] from the guide rail [B] (x1).
8. Remove the bracket [C] form the guide rail.



9. Attach the bracket [A] removed in step 8 on the guide rail shown above.

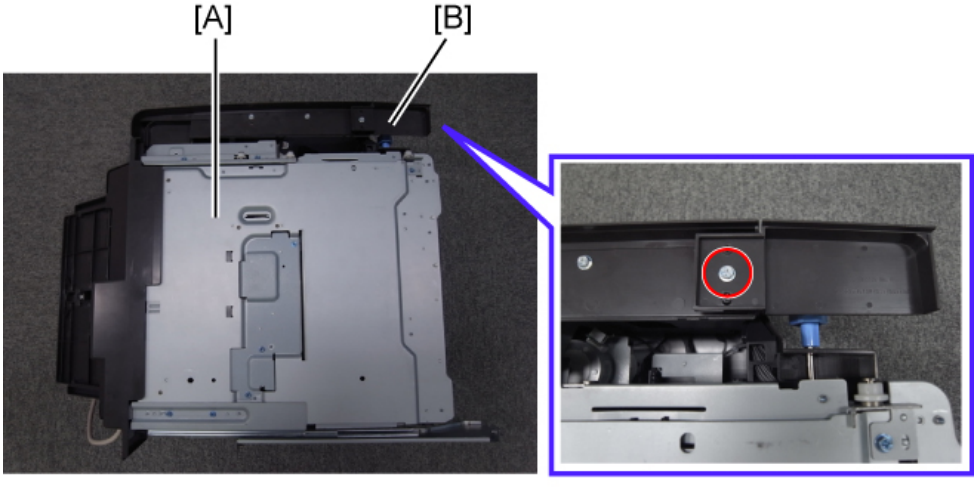


10. Install the bracket [A] on the guide rail [B] (x1; M3 x 6).



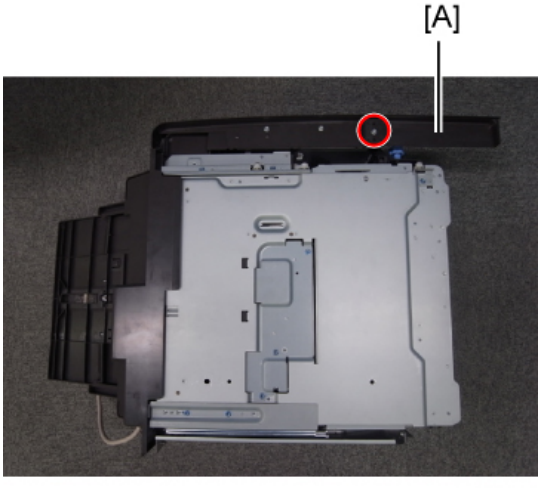
d120i556

11. Turn the internal finisher [A] over, and then remove the finisher front cover [B] (x1).



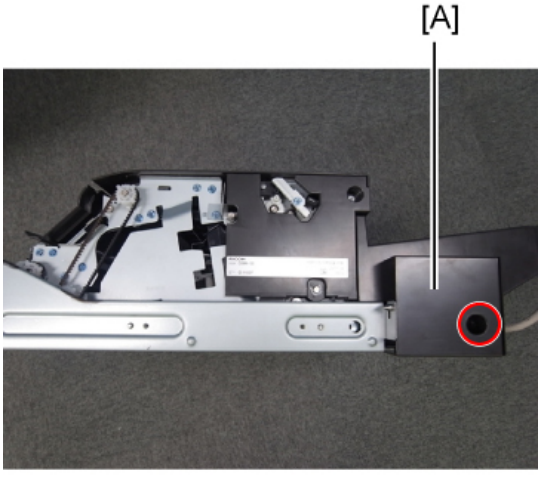
d120i557

12. Install the front right lower cover for punch unit [A] on the internal finisher (x1; M3 x 6).



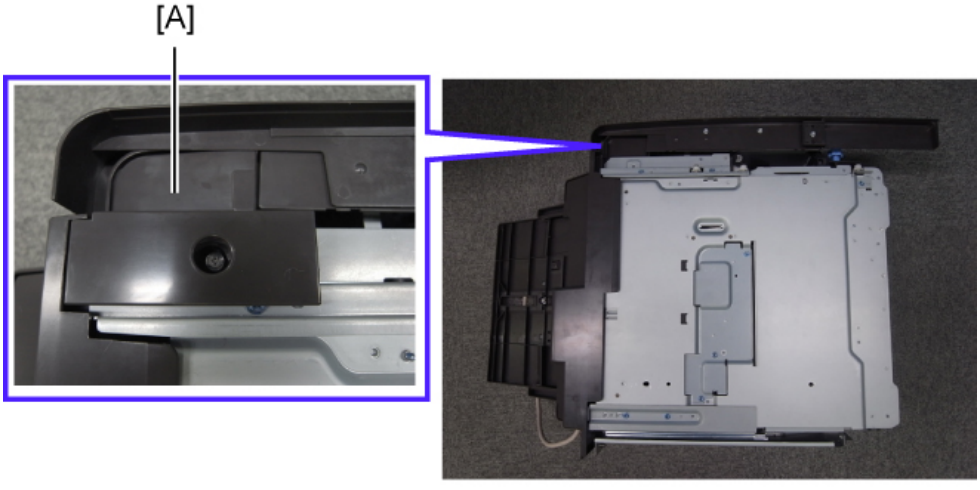
d120i558

13. Install the tray lower rear cover [A] on the rear side of the internal finisher (x 1; M3 x 6).



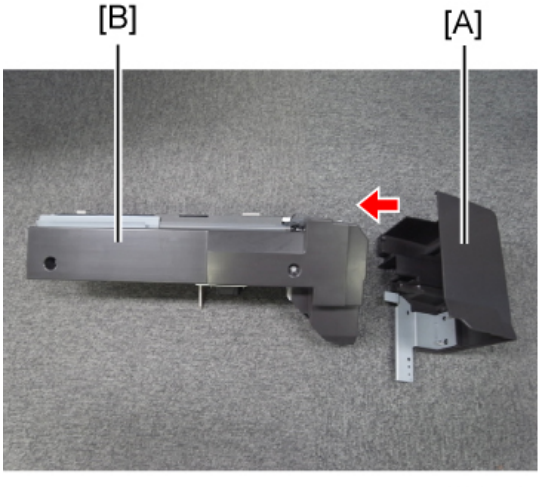
d120i559

14. Install the tray lower front cover [A] on the internal finisher (x1; M3 x 6).



d120i560

15. Attach the punch cover [A] to the punch unit [B].



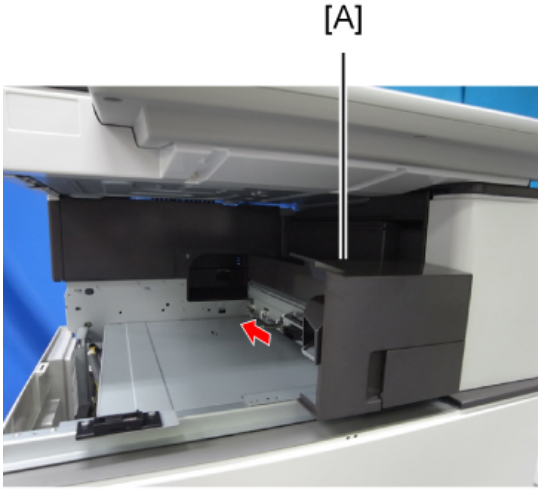
d120ri561

16. Open the punch cover's front door [A], and then secure the punch cover to the punch unit (x2: M3 x 6).



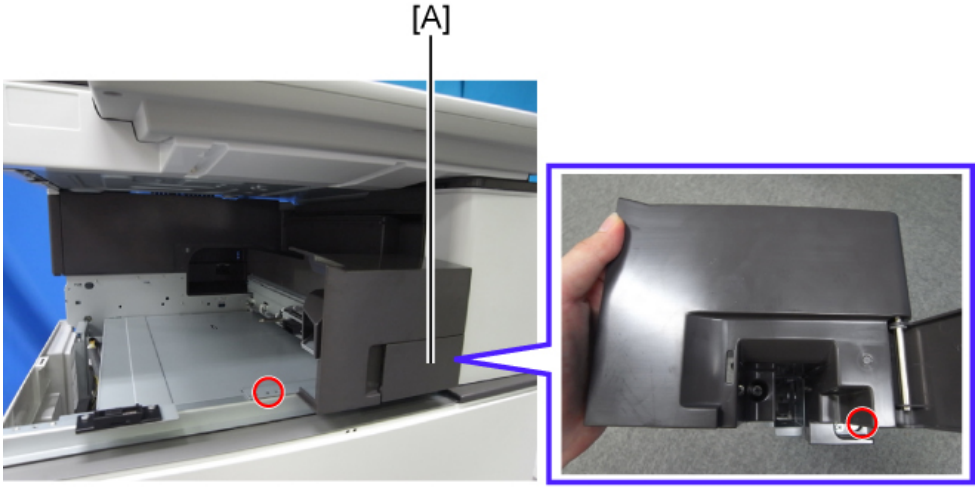
d120i562

17. Install the punch unit [A] on the main machine.



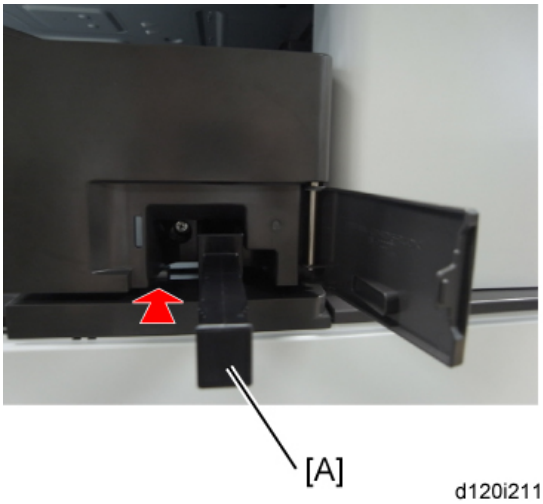
d120i563

18. Open the punch cover's front door [A], and then secure the punch unit to the main machine (x2: M3 x 6).



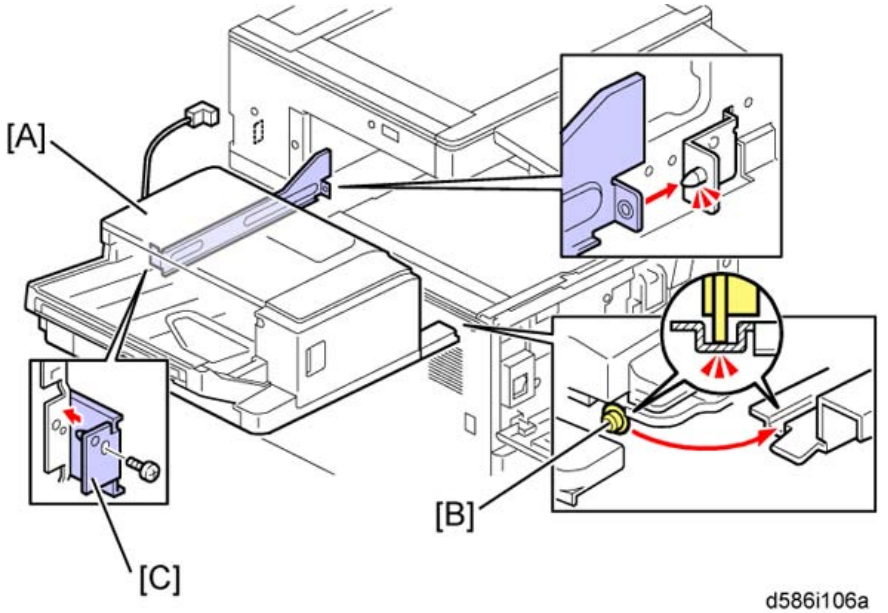
d120i564

19. Install the hopper [A] from the front.

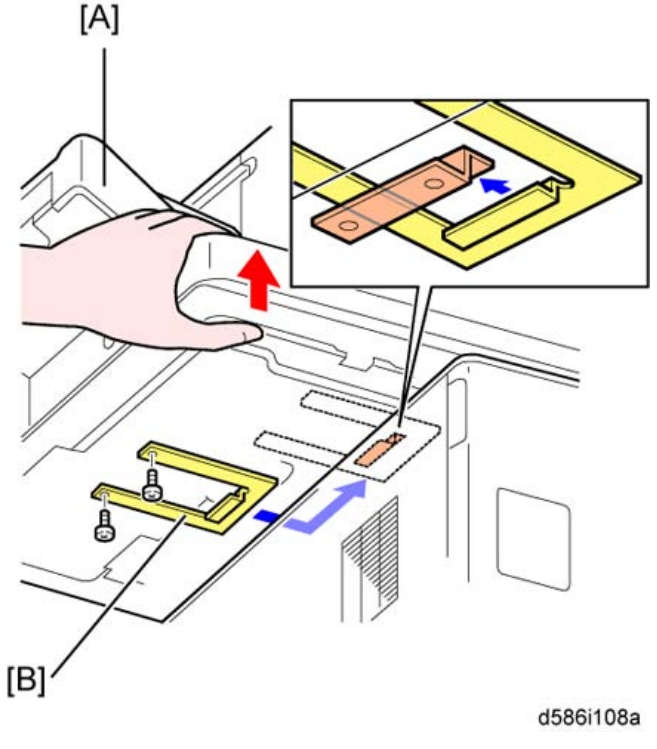


d120i211

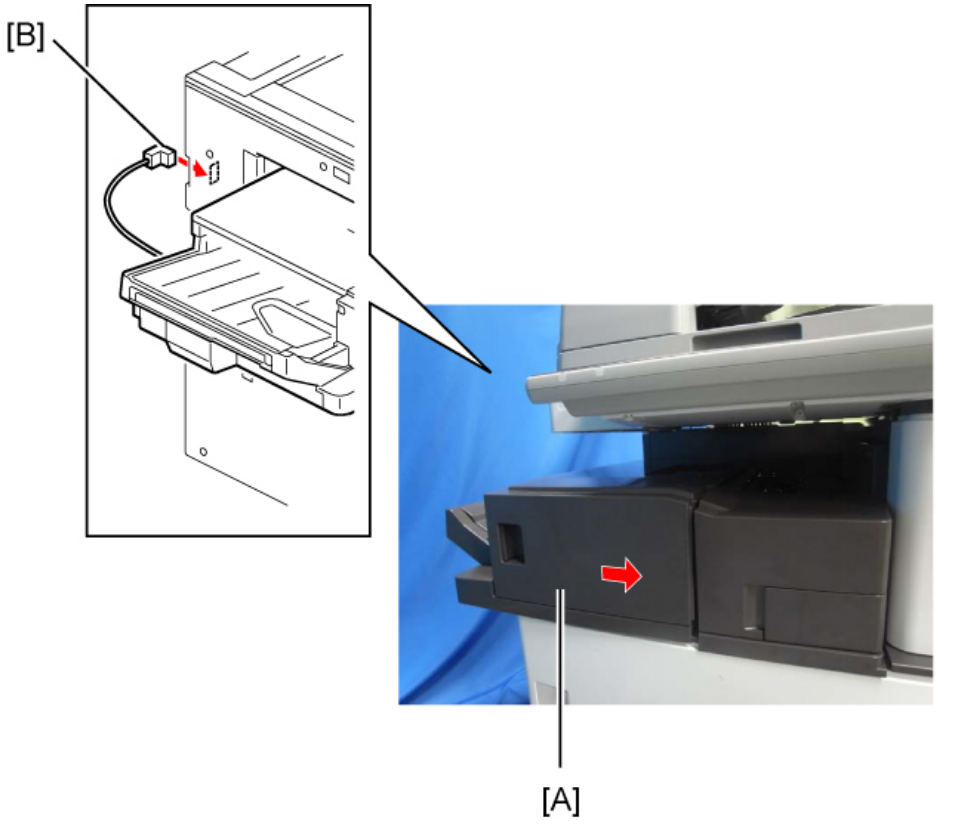
20. Install the internal finisher [A].
    - Align the wheel [B] at the front of the internal finisher with the groove on the guide rail when installing the internal finisher
21. Insert the rear rail [C] into the left frame of the main machine (x1: M4 x 6).



22. Push up the internal finisher [A] from the bottom, and then install the stopper [B] to the bottom side of the internal finisher (bind screw x 2; M3x6).



23. Push the internal finisher [A], and then connect the cable [B] to the inlet of the main machine.



d121i232a

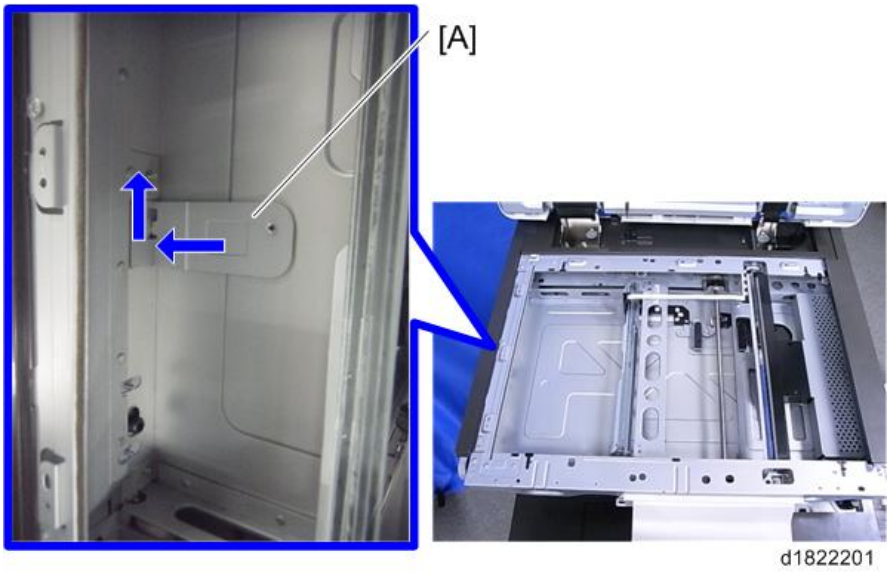
24. Reassemble the machine.
25. Turn on the main power switch.
26. Check the internal finisher operation.

Heaters

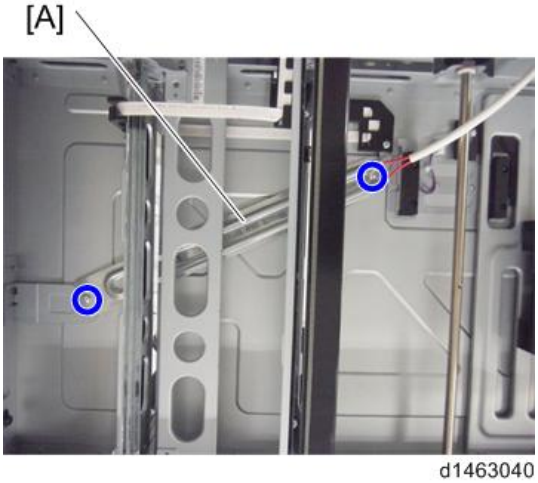
Anti-Condensation Heater (Scanner Unit)

Installation Procedure

1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Remove the exposure glass. (page 245 "Exposure Glass")
3. Open the ARDF or platen cover.
4. Move the scanner carriage to the center.
5. Attach the bracket [A] to the left of the scanner.

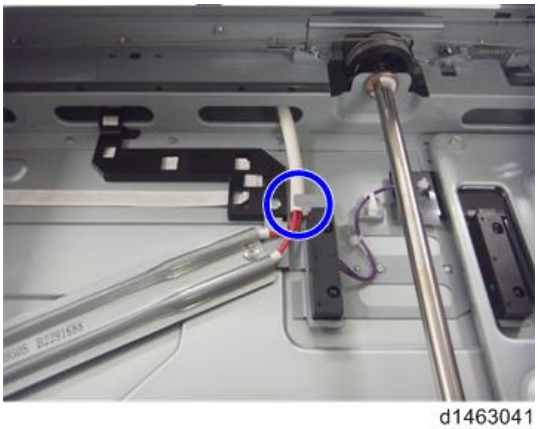


6. Attach the anti-condensation heater [A] (x2).



d1463040

7. Route the harness as shown.



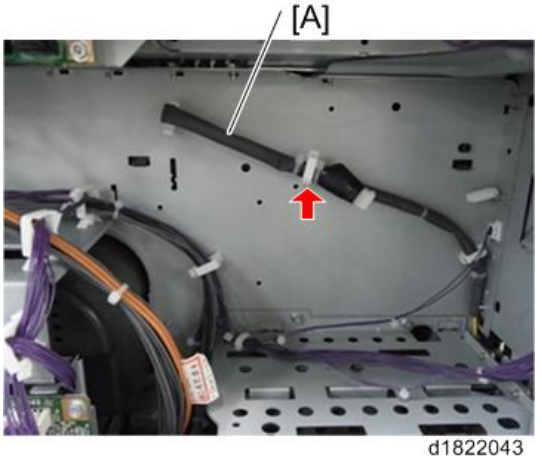
d1463041

8. Put the harness through the hole in the frame.



d1463042

9. Open one clamp holding the harness [A] of the main machine and connect the harness with the heater harness.



d1822043

Note

- Relock the clamp [A] after releasing the connector.
- Do not put the harness through the clamp [B].



d1822202

10. Reassemble the machine.

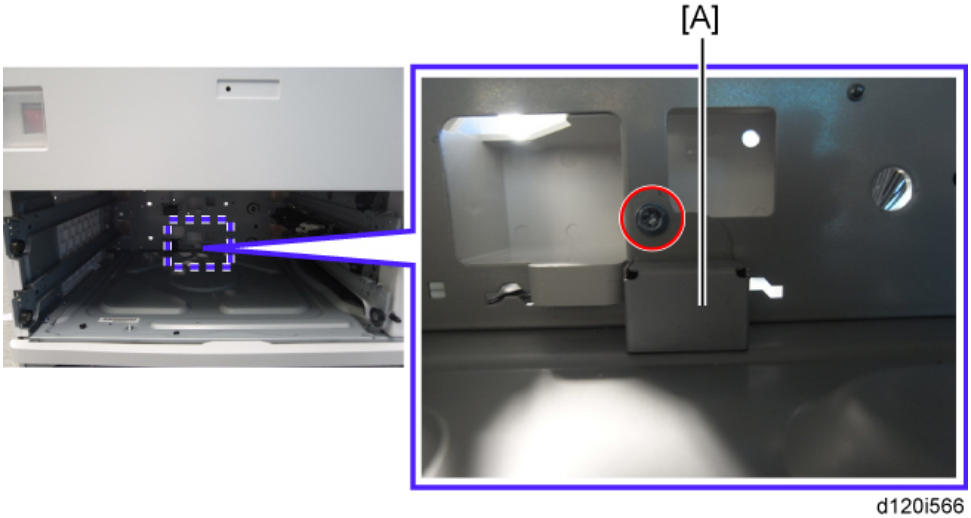
Tray Heater (Copier)

⚠CAUTION

- Disconnect the copier power cord before you start this procedure.

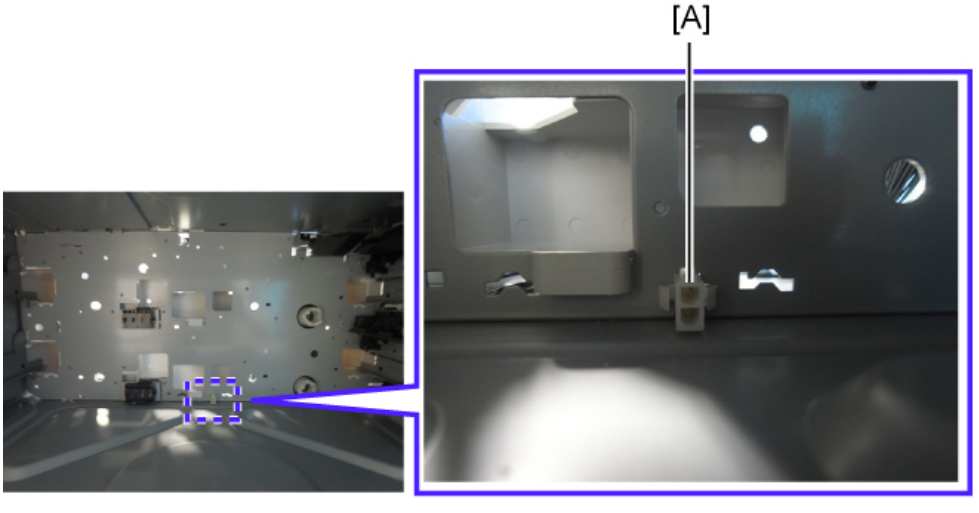
1. Pull out the 1st and 2nd paper trays.
2. Remove the lower rear cover (page 227 "Lower Rear Cover").

3. Remove the bracket [A] from the main machine (x1).



d120i566

4. Connect the heater cable to the ac cable at [A].



d120i567

5. Install the tray heater assembly [A] (x1).



d120i568

6. Reassemble the main machine and 1st and 2nd paper trays.

Tray Heater (Optional Paper Feed Unit)

For Installing the Tray Heater in D579

⚠CAUTION

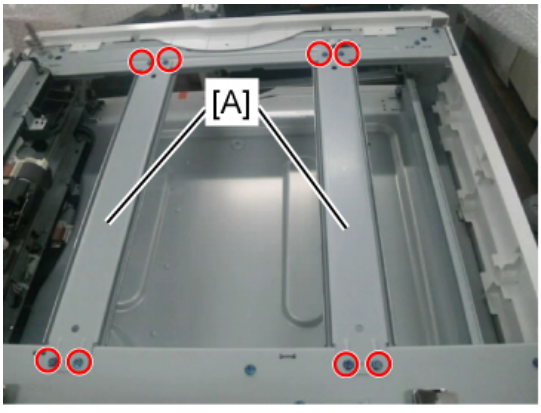
- Disconnect the copier power cord before you start this procedure.

1. If the optional paper feed unit has been installed to the main machine, remove it from the main machine.
2. Pull out the tray in the optional paper feed unit.
3. Remove the rear cover [A] of the optional paper feed unit (x2).



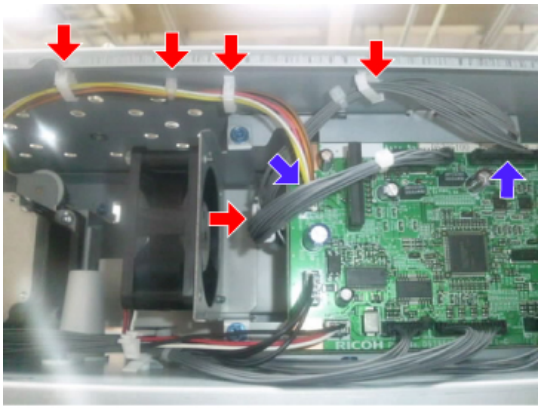
d120i587

4. Remove the upper stays [A] (x8).



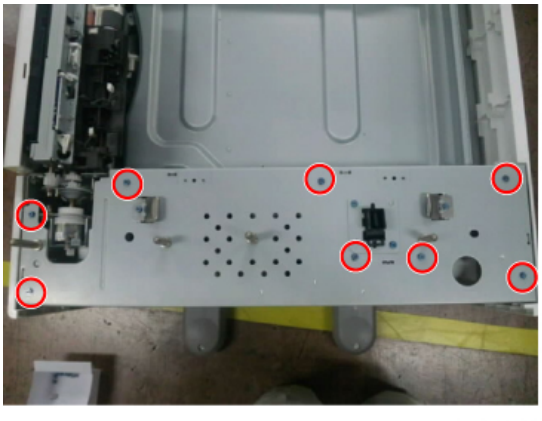
d120i588

5. Remove the harness from the clamps (x 5: red arrows).
6. Remove the cables from the connectors (x 2: blue arrows).



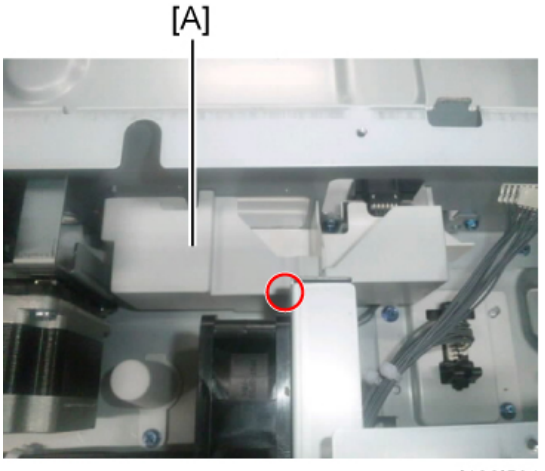
d120i589

7. Remove the upper rear stay [A] (x8).



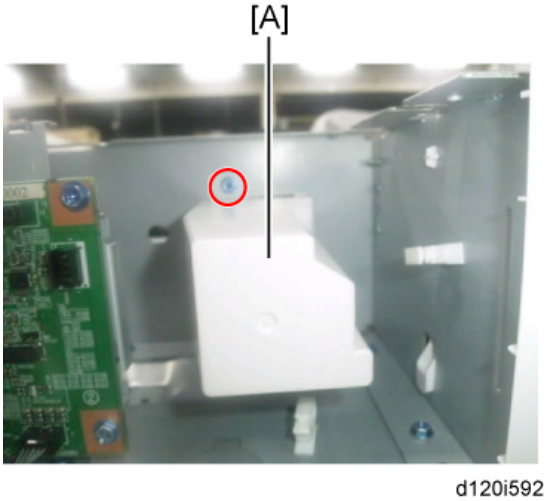
d120i590

8. Remove the PCB cover [A] (x1).



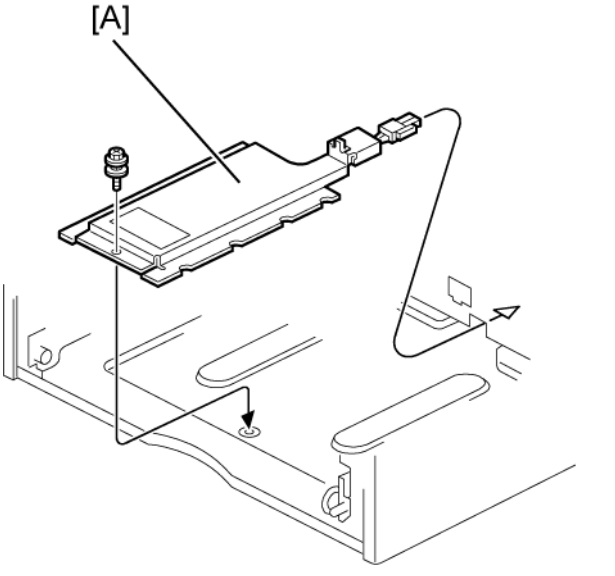
d120i591

9. Remove the tray bar cover [A] (x1).



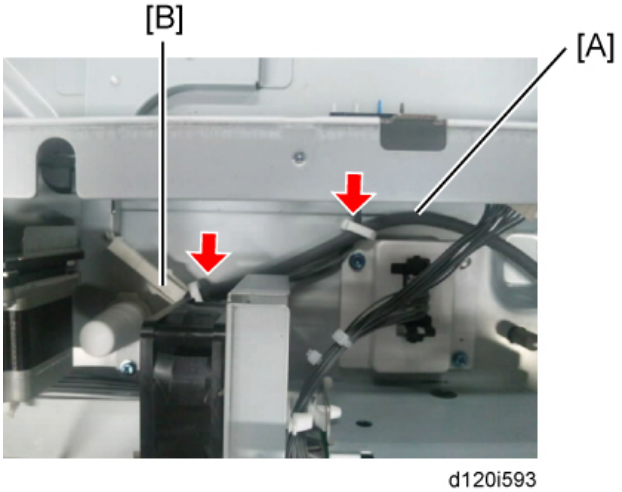
d120i592

10. Install the tray heater [A] in the optional paper feed unit (x1).



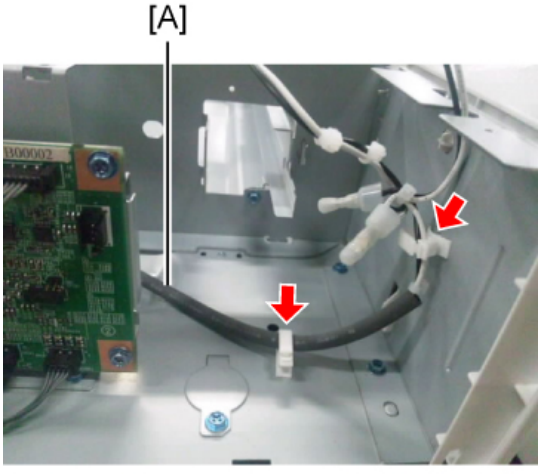
g832i250

11. Connect the harness [A] to the connector [B] of the tray heater (x2).



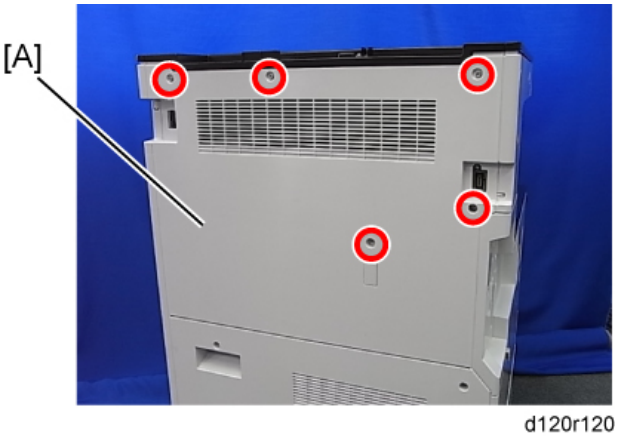
d120i593

12. Route the harness [A] as shown and clamp it with two clamps (x2).



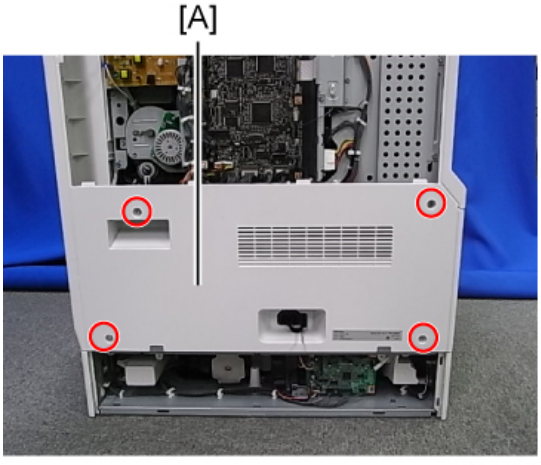
d120i594

13. Reassemble the optional paper feed unit except the rear cover.
14. Install the paper feed unit to the main machine.
15. Remove the upper rear cover [A] (x5).



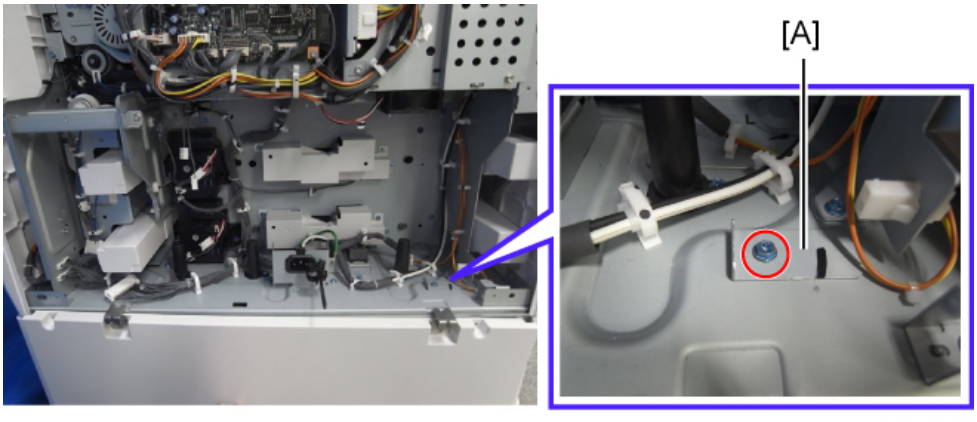
d120r120

16. Remove the lower rear cover [A] (x4).



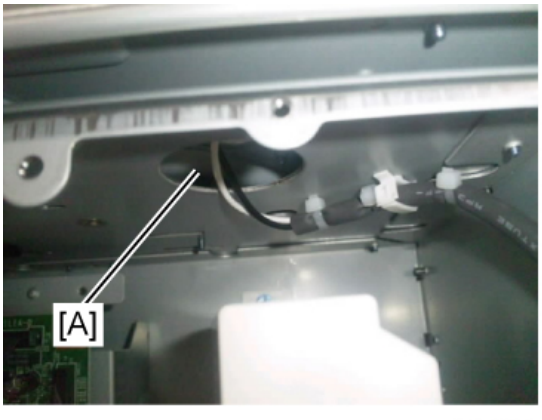
d120i595

17. Remove the harness cover bracket [A] from the main frame (x1).



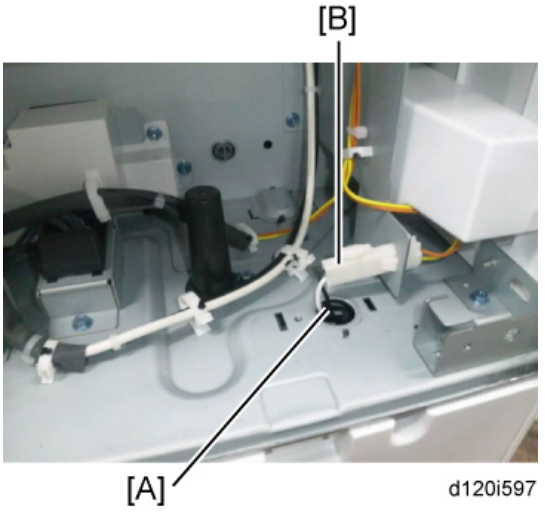
d120i571

18. Pass the harness from the lower paper feed unit through the hole [A].



d120i596

19. Connect the harness [A] to the connector [B] of the main frame.



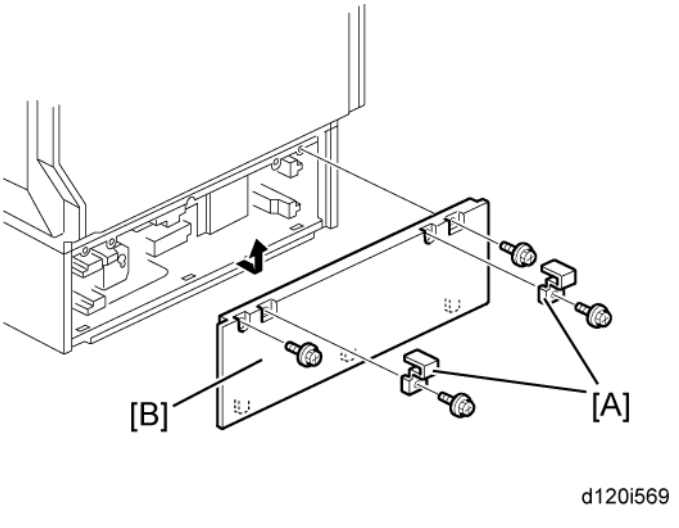
20. Reassemble the main machine and optional paper feed unit.

For Installing the Tray Heater in D746

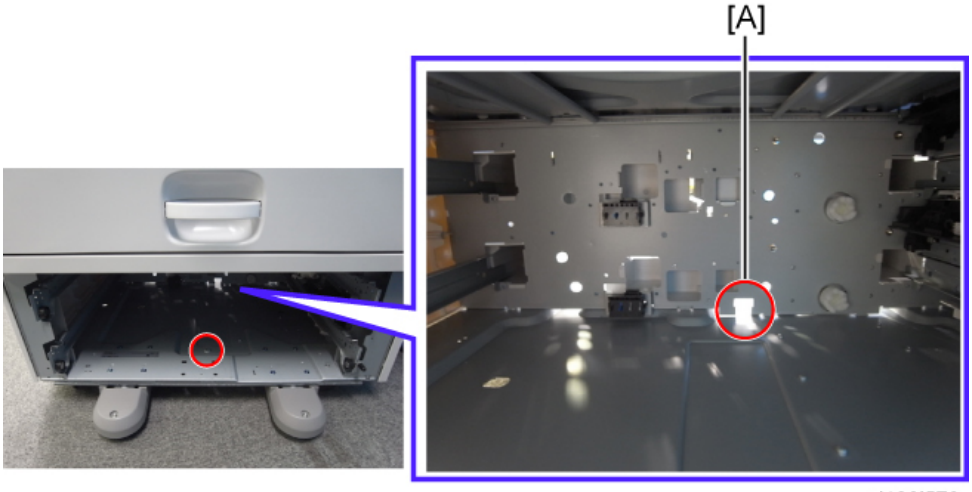
⚠CAUTION

- Disconnect the copier power cord before you start this procedure.

1. Pull out the two trays in the optional paper feed unit.
2. Remove the joint bracket [A] (x 1 each).
3. Remove the cover [B] for the optional paper tray unit (x2).

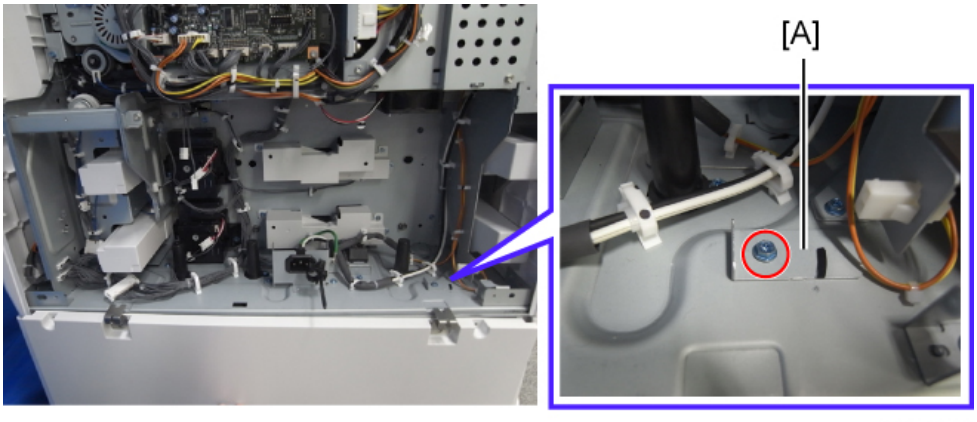


4. Pass the heater cable through the opening [A], and then install the tray heater in the optional paper feed unit (x1).



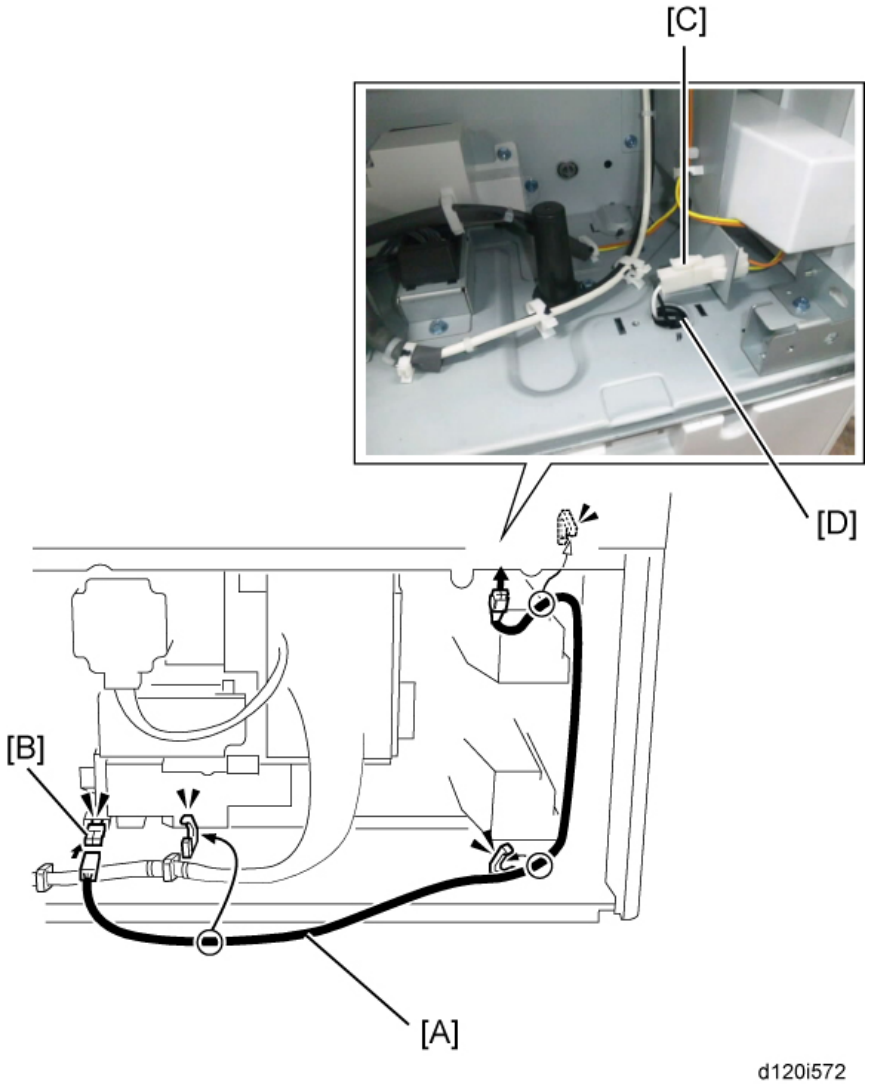
d120i570

5. Remove:
    - Upper rear cover (page 225 "Upper Rear Cover")
    - Lower rear cover (page 227 "Lower Rear Cover")
6. Remove the harness cover bracket [A] from the main frame (x 1).



d120i571

7. Connect the harness [A] to the connector [B] of the tray heater.
8. Route the harness [A] and clamp it as shown (x 3).
9. Connect the harness [A] to the connector [C] of the main frame through the hole [D].



10. Reassemble the main machine and optional paper feed unit.

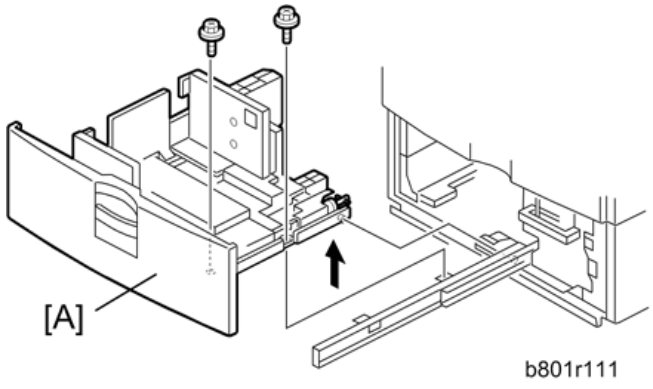
Tray Heater (Optional LCT)

1. Pull out the LCT drawer.

Note

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

2. Remove the left tray [A] (x2).

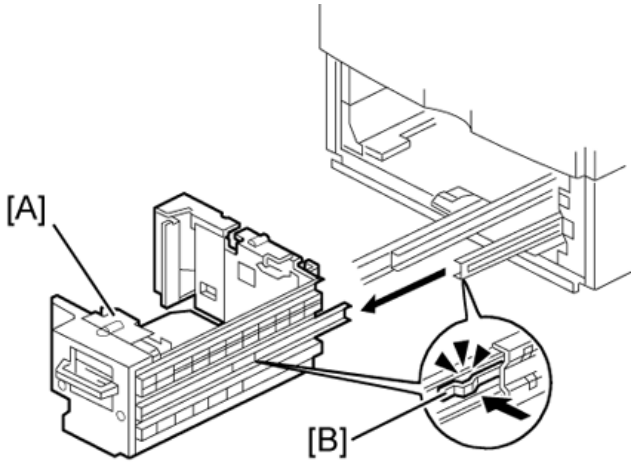


b801r111

3. Remove the right tray [A] while pressing down the stopper [B].

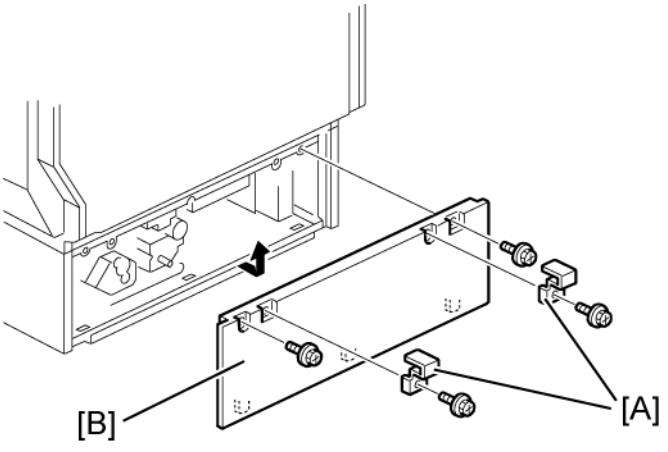
Note

- While 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.



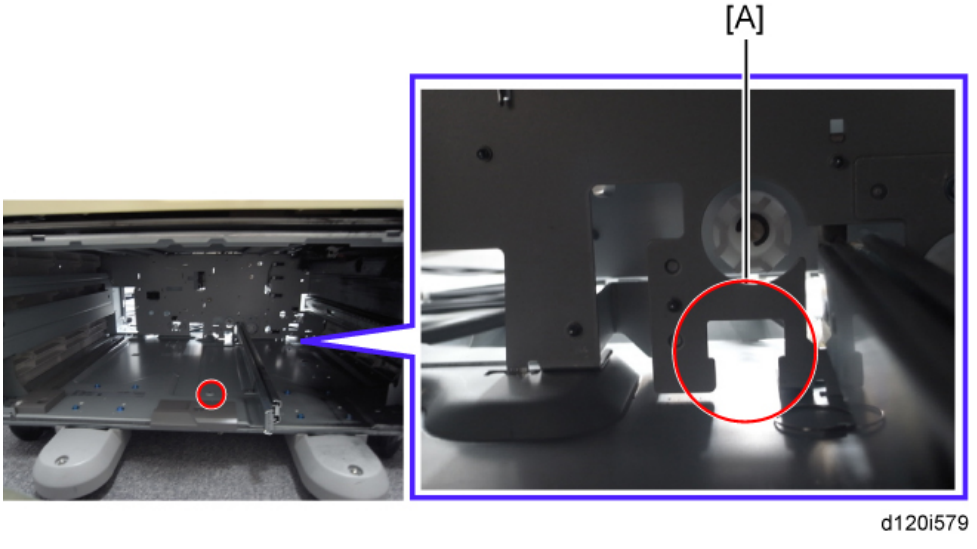
b801r112

4. Remove the two securing brackets [A] (x1 each), and then the rear cover [B] of the optional LCT (x2).



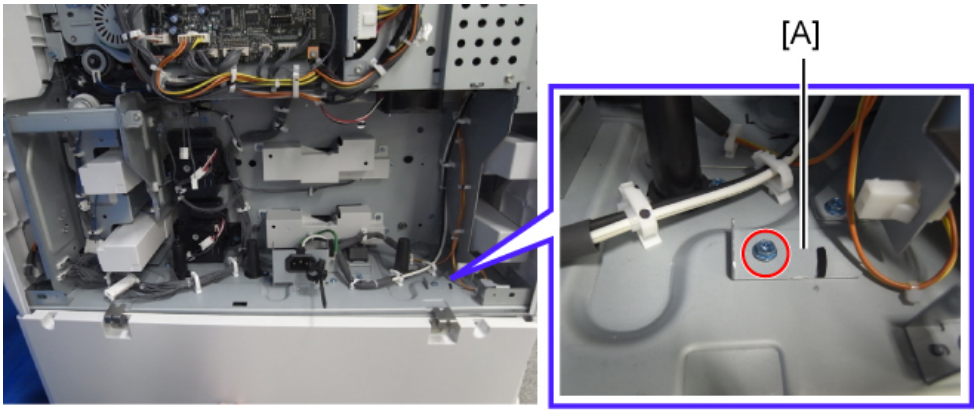
b801i251

5. Pass the heater cable through the opening [A], and then install the tray heater in the optional paper LCT (x1).



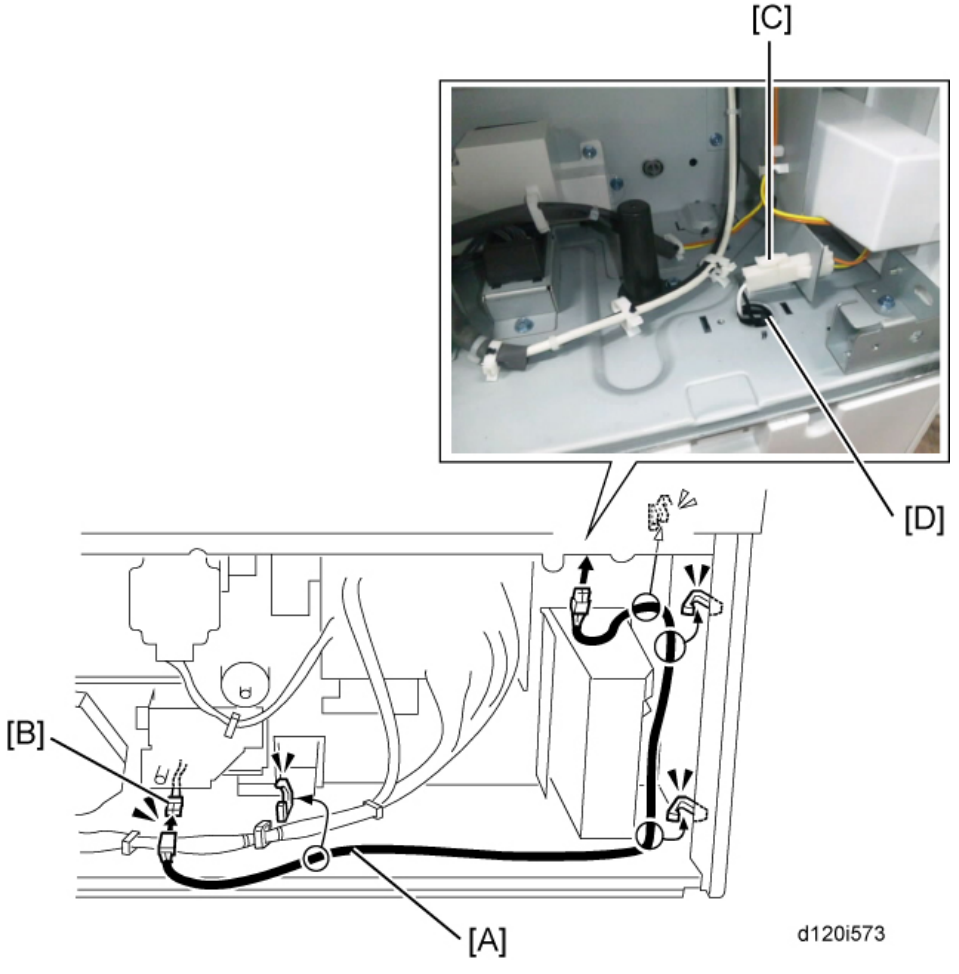
d120i579

6. Remove:
   - Upper rear cover (page 225 "Upper Rear Cover")
   - Lower rear cover (page 227 "Lower Rear Cover")
7. Remove the harness cover bracket [A] from the main frame (x1).



d120i571

8. Connect the harness [A] to the connector [B] of the tray heater.
9. Route the harness [A] and clamp it with four clamps as shown (x 4).
10. Connect the harness [C] to the connector [C] of the main frame through the hole [D].



11. Reassemble the mainframe and the optional LCT.

Smart Card Reader Built-in Unit Type M7 (D773)

Accessory Check

Description	Q'ty
IC card reader cover	1
Lower cover	1
Sponge 20 × 20	2

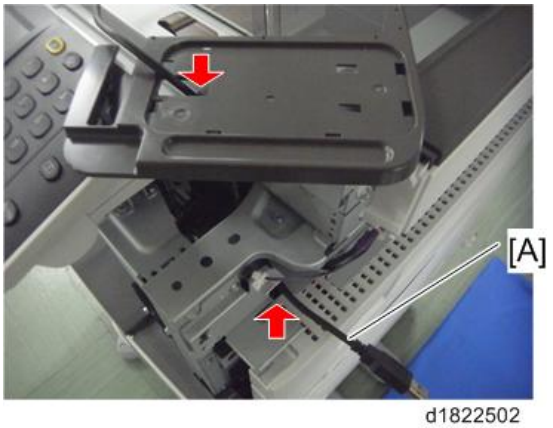
Installation Procedure

1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Remove the scanner front cover. (page 233 "Scanner Front Cover")
3. Remove the scanner right cover. (page 236 "Scanner Right Cover")
4. Remove the right cover. (page 231 "Right Cover")
5. Remove the left cover. (page 228 "Left Cover")
6. Remove the right front cover. (page 230 "Right Front Cover")
7. Remove the cover above the right front cover [A] (x1).



d1822209

8. Pass the USB cable [A] through the hole in the supplied lower cover, and then through the bracket of the main machine.



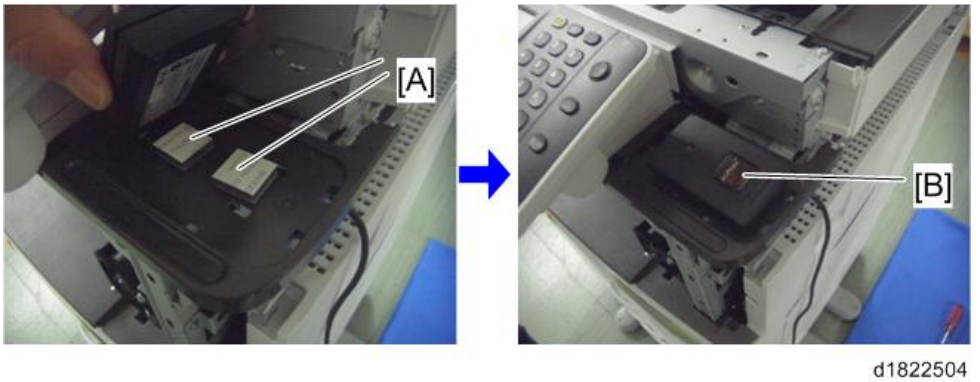
d1822502

9. Attach the lower cover [A] to the main machine (x1).



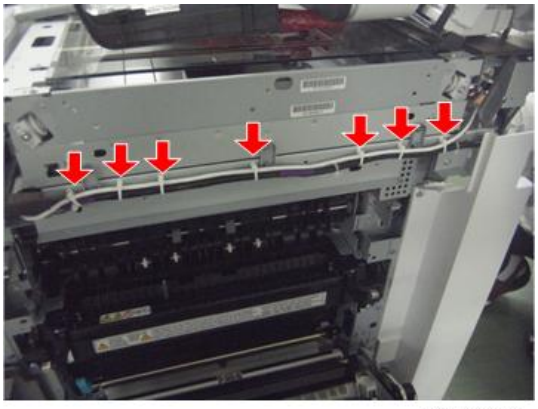
d1822503

10. Attach two strips of double-faced adhesive tape [A], and then the IC card Reader/Writer [B].



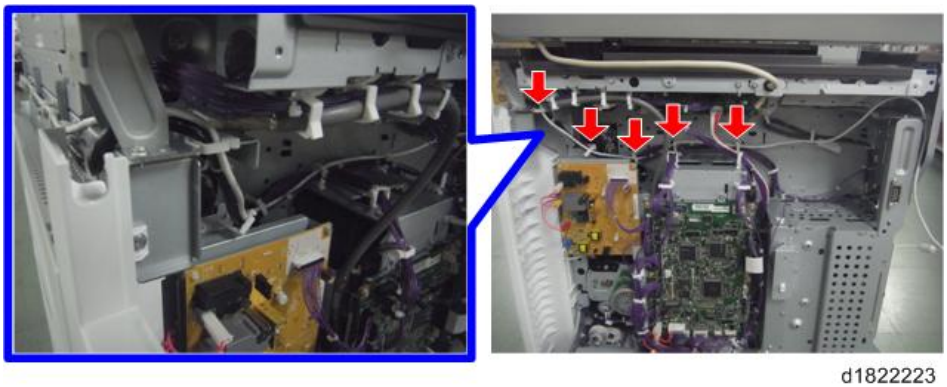
d1822504

11. Route the USB cable through the right side of the main machine (x7).



d1822222

12. Route the USB cable inside the main machine as shown below.



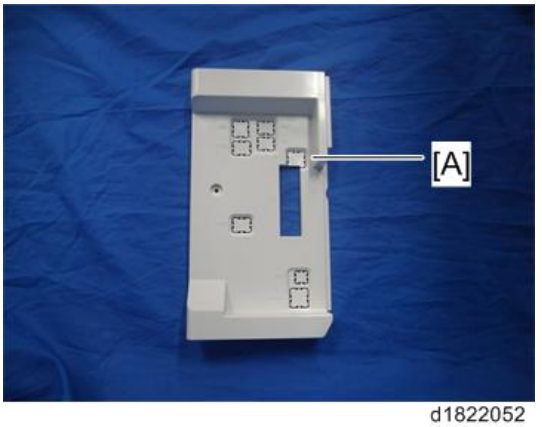
d1822223

13. Remove a part from the left cover to make a cable hole, and then pass the USB cable through it.



d1822224

14. Attach the left cover.
15. Remove the knockout [A] (USB) from the controller cover.



d1822052

16. Connect the USB cable to the USB connector.
17. Attach the right cover, scanner right cover, scanner front cover, upper rear cover.
18. Attach the IC card reader cover (hooks x4).

    The scanner front cover cannot be attached if you attach the IC card reader cover first.



d1822225

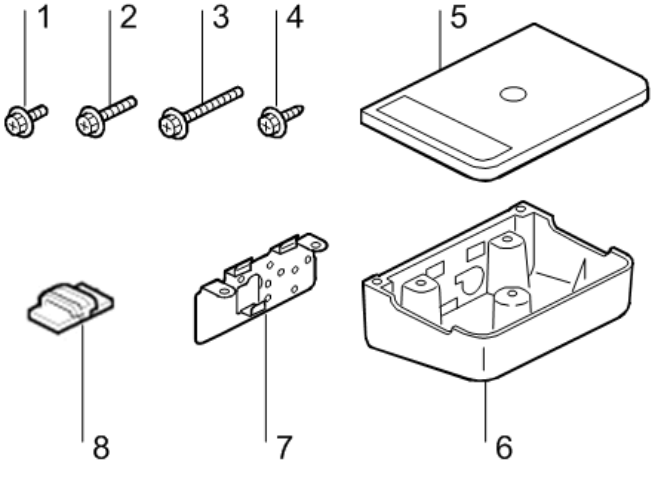
19. Attach the right front cover.
20. Close the duplex unit.

Card Reader Bracket Type 3352 (D593)

Component Check

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

No.	Description	Q'ty	For This Model
1	Screw: M3 x 8	2	Yes
2	Screw: M3 x 14	1	Not used
3	Screw: M4 x 25	1	Yes
4	Tapping Screw: M3 x 10	3	Yes
5	Upper Tray	1	Yes
6	Lower Tray	1	Yes
7	Tray Bracket	1	Yes
8	Clamp	5	Yes



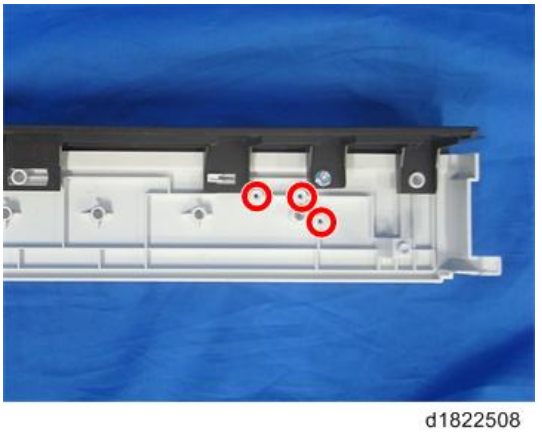
Installation Procedure

1. Remove the scanner right cover. (page 236 "Scanner Right Cover")

2. Make 3 screw holes in the removed scanner right cover with a screwdriver or drill.

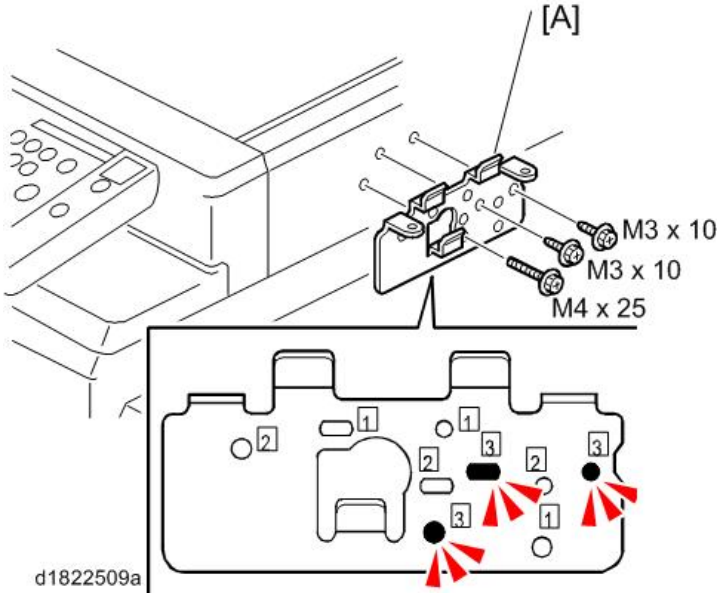
Important

- **Make the screw hole to be smaller than the screw size.**

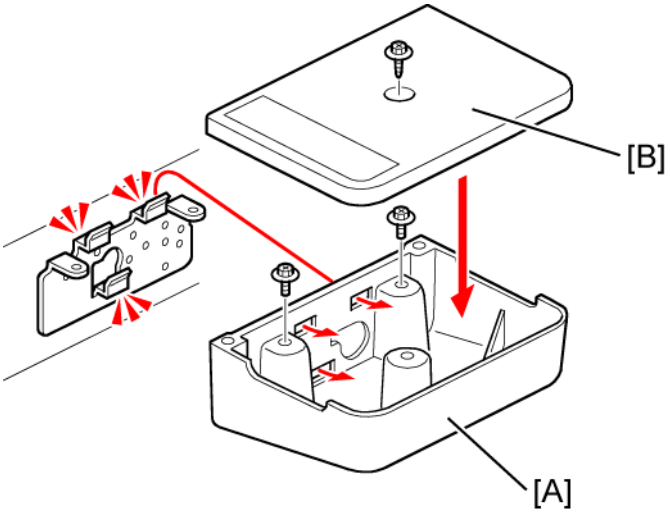


d1822508

3. Reattach the scanner right cover (x2).
4. Attach the tray bracket [A] to the upper right cover (x2: M3x10 tapping screw, x1: M4 x 25).
   - For this model, use the screw holes marked "3" on the table bracket.



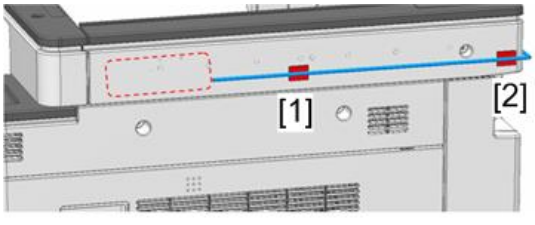
5. Attach the lower tray [A] to the tray bracket (x2: M3 x 8).
6. Attach the upper tray [B] to the tray bracket (x1: M3 x 10).



d120i577

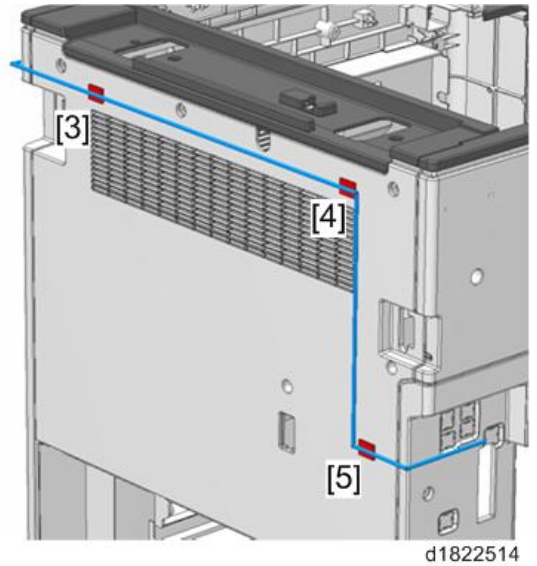
7. Attach the clamps ([1] to [5]) and route the harness around the machine as shown.

Scanner Right Cover



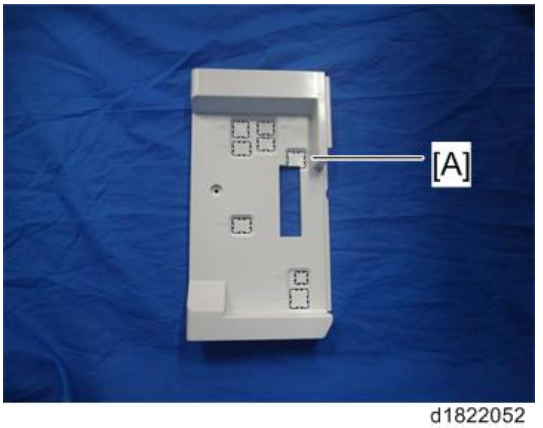
d1822513

Upper Rear Cover



d1822514

8. Remove the controller cover. (page 227 "Controller Cover")
9. Remove the knockout [A] (USB) from the controller cover.



d1822052

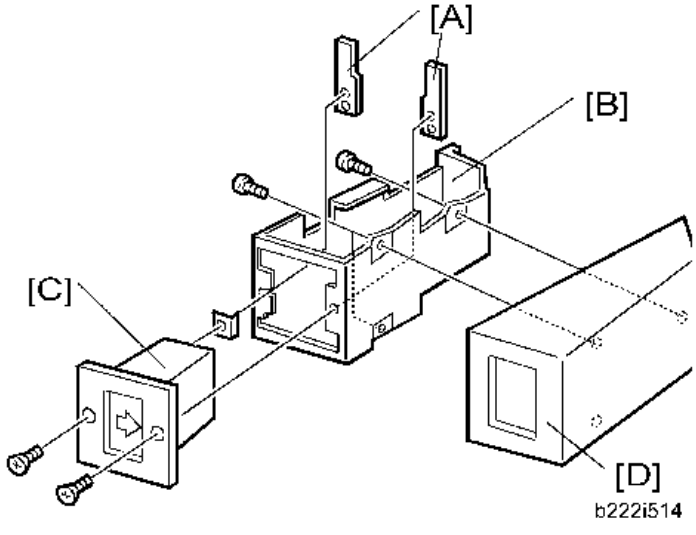
10. Reattach the controller cover.
11. Clamp the USB cable and connect it to the USB connector.

Key Counter Bracket Type H (A674)

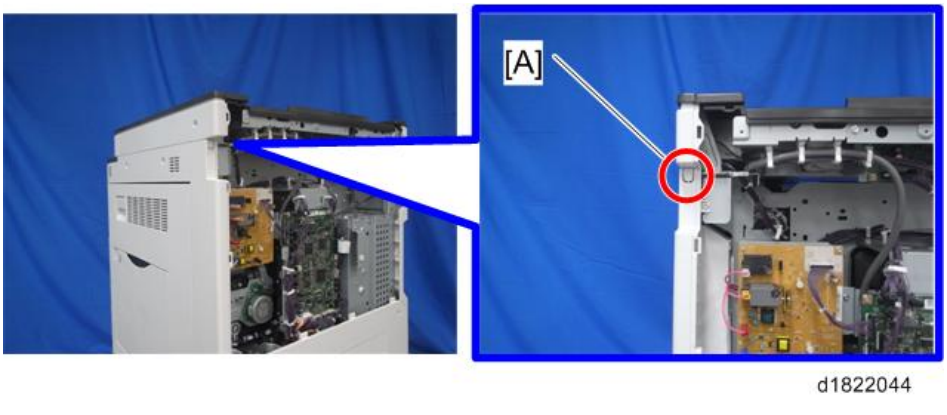
Installation Procedure

Preparing before installing the key counter bracket

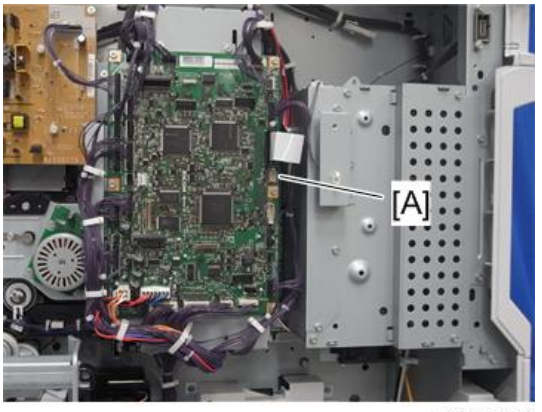
1. Hold the key counter plate nuts [A] on the inside of the key counter bracket [B] and insert the key counter holder [C].
2. Secure the key counter holder to the bracket (x2).
3. Install the key counter cover [D] (x2).



4. Remove the upper rear cover. (page 225 "Upper Rear Cover")
5. Cut off the part [A] of the right rear cover.



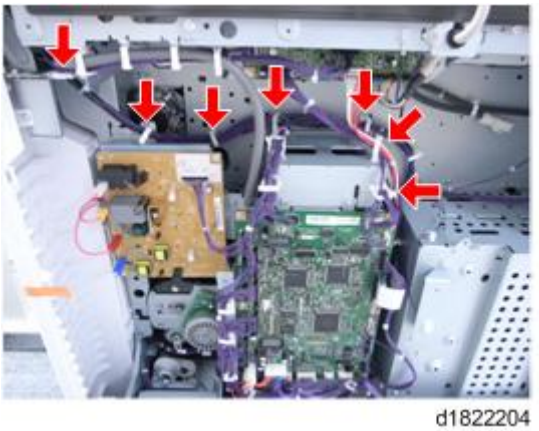
6. Connect the key counter harness to the connector CN343 [A] on the BCU.



d1822203

7. Route the harness as shown.

   Secure the harness with 7 clamps.



d1822204

   Pass the harness from the key counter through the cut off part of the right rear cover.

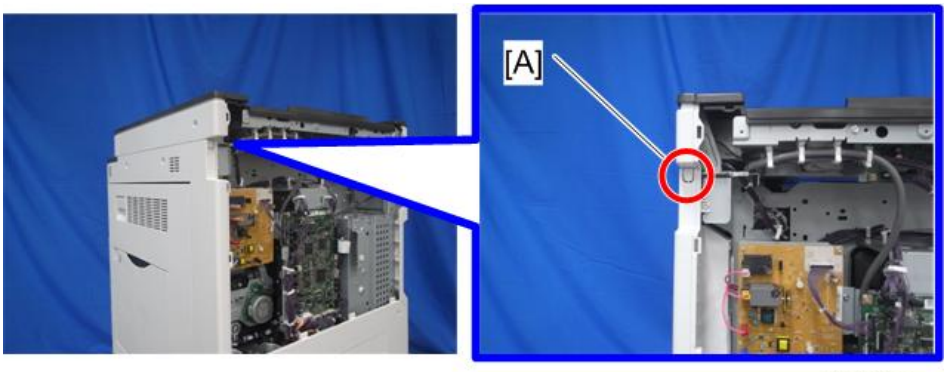
   Coil the rest of the harness and put it on the space above the BCU bracket.

8. Peel off double sided tape on the key counter bracket and attach the key counter to the scanner right cover.
9. Reassemble the machine.

Optional Counter Interface Unit Type A (B870)

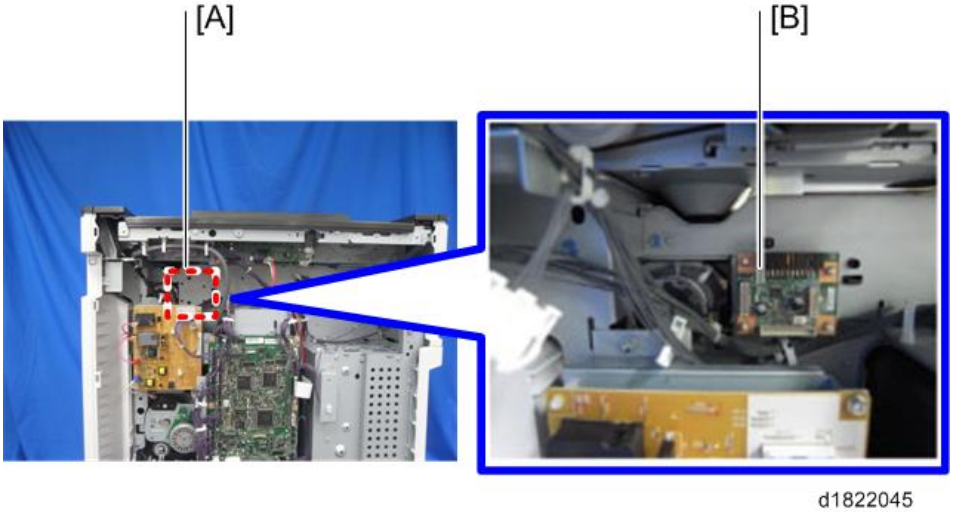
Installation Procedure

1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Remove the Lower rear cover. (page 227 "Lower Rear Cover")
3. Cut off the part [A] of the right rear cover.



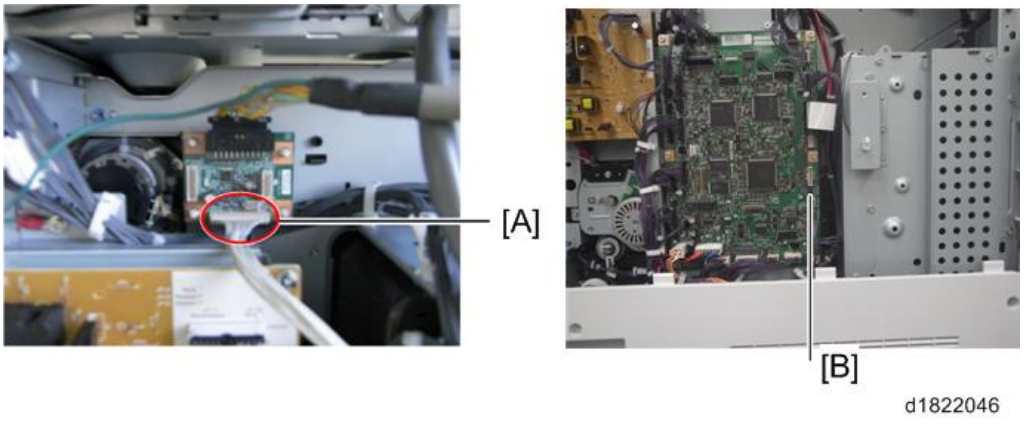
d1822044

4. Install the four stud stays in the location [A].
5. Install the optional counter interface board [B] on the four stud stays.

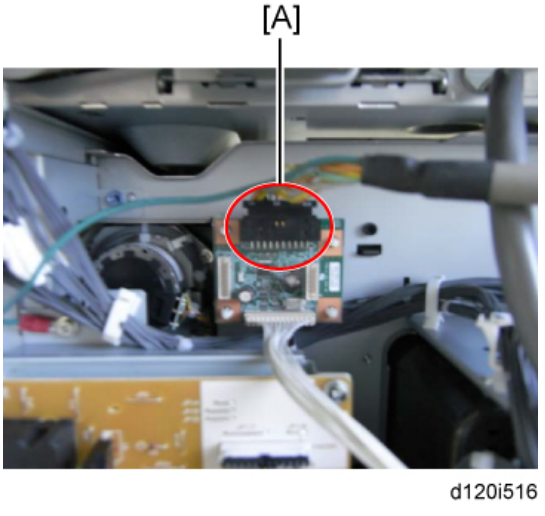


d1822045

6. Connect the supplied harness to CN003 [A] on the optional counter interface board and CN345 [A] on the BCU.



7. Connect the harness from the optional counter device to "CN4" [A] on the optional counter interface board.



8. Route the harness and clamp it with four clamps as shown (x 4).

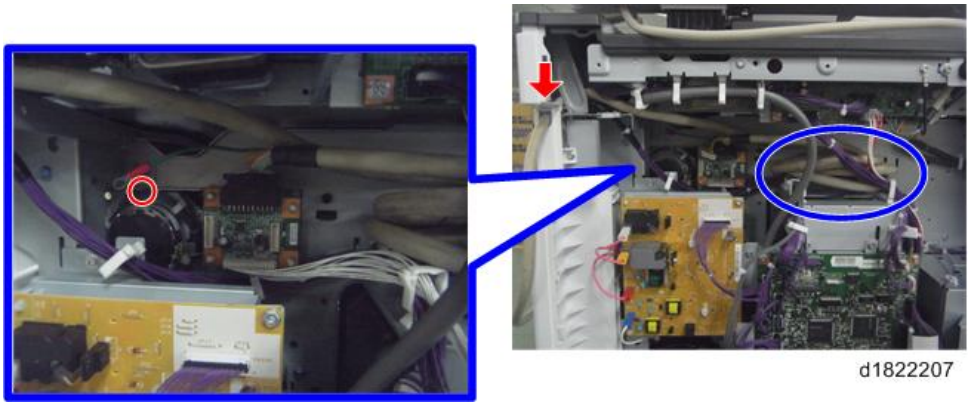
   To prevent the harness from being damaged by the screw used to attach the upper rear cover, put the harness behind the FFC [A].



d1822205

9. Pass the harness from the optional counter device through the cut off part of the right rear cover. Coil the rest of the harness and put it on the space above the BCU bracket.

   Connect the ground terminal of the optional counter device to the part indicated by a red circle in the picture below.

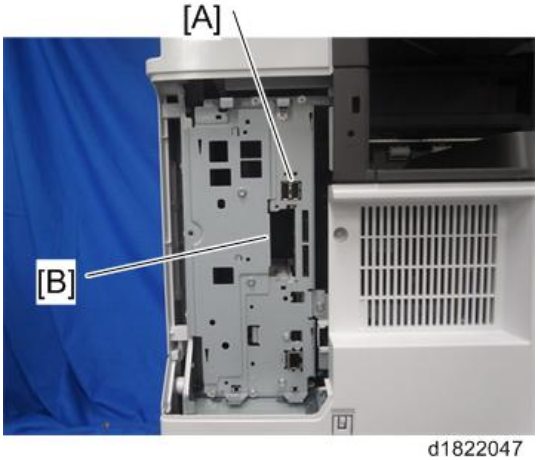


d1822207

10. Reassemble the machine.

Internal Options

List of Slots



Slot		Option
[A]	USB port*1	Bluetooth Interface Unit Type D
		Smart Card Reader Built-in Unit Type M7
[A]	I/F slot A	IEEE 1284 Interface Board Type A
		IEEE 802.11a/g/n Interface Unit Type M2
		File Format Converter Type E
		Remote communication Gate

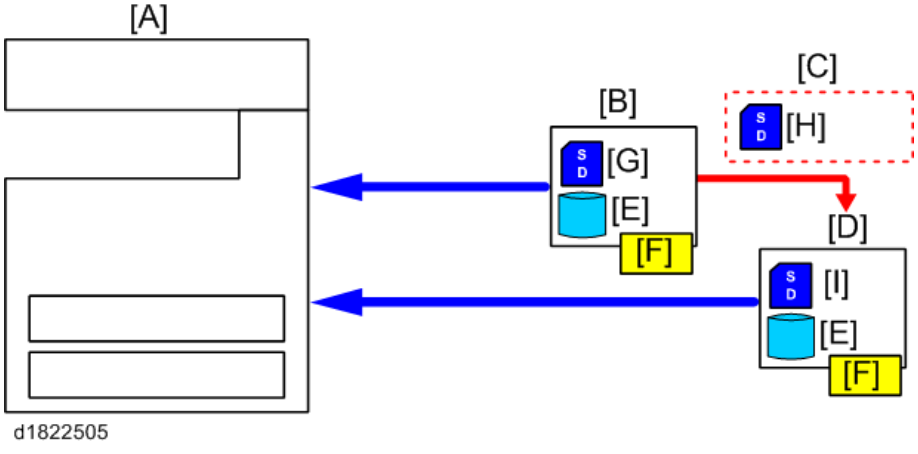
*1 There is no difference between the left and right USB ports.

Printer and Printer/Scanner Options

Overview

This section describes the installation of the following items (these procedures apply to the Basic models only, not the SP models):

- Printer Unit
- Printer/Scanner Unit
- HDD
- 1.5 GB Memory. Optional memory is required for each unit.
- Scanner Enhance Option



[A]: Main Machine

[B]: Printer Unit (D757)

[C]: Scanner Enhance Option (D757)

[D]: Printer/Scanner Unit (D757)

[E]: HDD

[F]: 1.5GB Memory

[G]: PCL, PDF

[H]: Scanner

[I]: PCL, PDF, Scanner

Main Units

The two main units are:

- **Printer Unit Type M7.** For customers who do not require the extended scanning features but need more printing capability (PCL printer language is provided). The 1.5 GB memory is required.
- **Printer/Scanner Unit Type M7.** For customers who require the full range of DS features (advanced scanning and printing features such as "scan-to" solutions, virtual mailboxes, PCL, etc.). The 1.5 GB memory unit is required.

Separate Options

There are three separate options: HDD, 1.5 GB memory and PS3.

- **HDD.** Provided with the Printer Unit and Printer/Scanner Unit. Refer to the illustration above. If an HDD has already been installed as a separate item, the HDD unit in the machine does not need to be replaced with the HDD from the kit.
- **1.5 GB memory.** Not provided with any option. However, the Printer Unit and Printer/Scanner Unit require installation of the 1.5 GB memory.
- **PostScript 3 Unit.** The PS3 option can be used with the Printer Unit or the Printer/Scanner Unit.

Enhance Option

The Scanner Enhance Option Type M7 updates the Printer Unit by adding the advanced scanning features.

Kit Contents

Check the accessories and their quantities against the list below. This is a common list for all the kits.

Common Accessory Table

This common accessory table lists all the items of the following units and options.

- PU: Printer Unit
- P/S: Printer/Scanner Unit
- SEO: Scanner Enhance Option

	Description	Qty	Kit Contents		
			PU	P/S	SEO
1.	1.5 GB Memory*1	1	No	No	No
2.	HDD*2	1	Yes	Yes	No

	Description	Qty	Kit Contents		
			PU	P/S	SEO
3.	Screws	3	Yes	Yes	No
4.	SD Card	1	Yes	Yes	Yes
5.	Application Sheet Set*3	1	Yes	Yes	Yes
6.	Ferrite Core	1	Yes	Yes	Yes

*1: The 1.5 GB Memory is a separate option and it is not provided in the kits. However, one memory unit is required for the installation of every print unit.

*2: The HDD can be installed anytime as a separate option. If an HDD unit has already been installed, it does not need to be replaced with the HDD unit from the Printer Unit or Printer/Scanner Unit kit.

*3: The number of sheets provided varies:

Kit	Sheets		
	Document Server	Printer	Scanner
Printer Unit	1	1	-
Printer/Scanner Unit	1	1	1
Scanner Enhance Option	-	-	1

Printer, Printer/Scanner Unit Installation (For Basic Models)

1. Attach the memory unit. (page 200 "Memory Unit Type M1 1.5GB (D701)")
2. Plug the power cord and turn on the main power switch.
3. Enable the on-board NIC and USB in the SP mode.
   - SP5-985-001 (On-board NIC): 1 (Enabled)
   - SP5-985-002 (On-board USB): 1 (Enabled)

   You must turn the machine off/on because the setting only takes effect after the machine is restarted.

Note

- When adding the Printer Unit or Printer/Scanner Unit and HDD to a Basic Model copier on which the User Code function is being used: Do SP5-846-041 to let the user get access to the address book.

4. Turn off the main power after the power indicator turns off.
5. Insert the SD card in SD card Slot 1 (upper) [A].

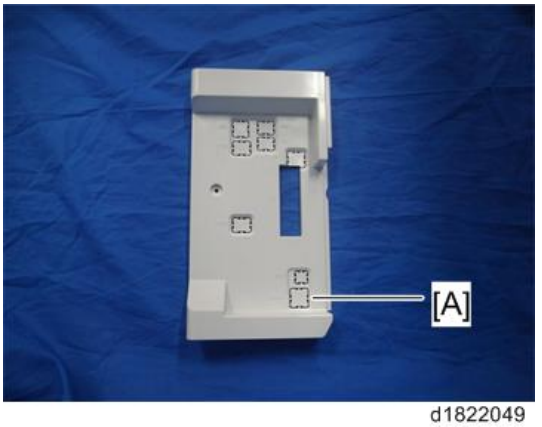
Note

- Be sure that you have set the On-board Device settings (SP5-985-001 and -002, as explained above) before inserting the SD card..



d1822048

6. Do SP5-853-001 to copy the preset stamp data from the firmware to the hard disk.
7. Remove the knockout [A] (Ethernet) from the controller cover.



d1822049

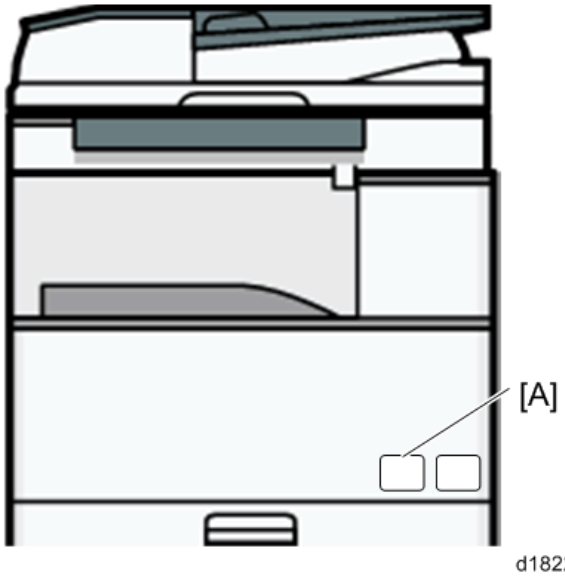
8. Reattach the controller cover (x1).
9. Connect the Ethernet cable to the Ethernet interface [A].



d1822050

10. Attach the PDF decal [A] to the bottom right of the front door.

    If there is another decal already attached, attach the PDF decal to the left of the decal.



d1822507

Note

- When adding the Printer Unit or Printer/Scanner Unit to a machine with the Fax Unit installed, additional procedures are required.
    1. Turn on the main power switch.
    2. Do SP5-846-040 to copy the address book to the hard disk from the controller board.
    3. Turn off the main power after the power indicator is unlit.

Scanner Enhance Option (For Basic Models)

Accessory Check

Refer to the "Common Accessory Table"

Installation

The installation of the printer enhance option and scanner enhance option is done with SP5-873-001 (Application Move).

1. Turn off the main power switch.
2. Remove the cover (x1).
3. Confirm that the Printer Unit SD card is in SD Card Slot 1.
4. Put the option SD Card (Scanner Enhance Option) in SD Card Slot 2.
5. Turn on the main power switch.
6. Go into the SP mode and select SP5-873-1.
7. Touch "Execute".
8. Obey the instructions on the display and touch "Execute" to start.
9. When the display tells you copying is completed, touch "Exit", then turn off the main power switch.
10. Remove the option SD card from SD Card Slot 2.
11. Turn on the main power switch.
12. Go into the User Tools mode and confirm that update was successful.

    User Tools> System Settings> Administrator Tools> Firmware Version> Next
13. Turn off the main power switch and reattach the SD card slot cover.
14. Return the copied SD card to the customer for safekeeping, or tape it to the faceplate of the controller.

To undo an option update

1. Turn off the main power switch.
2. Confirm that the Printer Unit SD card is in SD Card Slot 1.
3. Put the empty SD card (Scanner Enhance Option D757) in SD Card Slot 2.
4. Turn on the main power switch.
5. Go into the SP mode and do SP5-873-2 (Undo Exec).
6. Obey messages on the operation panel to complete the procedure.
7. Turn off the main power switch.
8. Remove the restored SD card from SD Card Slot 2.

9. Turn on the main power switch.
10. Go into the User Tools mode and confirm that undo was successful.

    User Tools> System Settings> Administrator Tools> Firmware Version> Next
11. Turn off he main power switch again, then reattach the cover.

Important Notes About SD Cards

Here are some basic rules about moving an application to another SD card.

- The authentication data is moved with the application program to the target SD card.
- Once an application has been moved from the original SD card, the original SD card cannot be used unless the application is restored to the SD card with SP5-873-2 (Undo Execute).
- SD cards must be stored in a safe location at the customer site. The empty SD card serves as proof of purchase and is the only evidence that the customer is licensed to use the application program.
- Before storing the card from which an application has been copied, label it carefully so that you can identify it easily if you need to do the undo procedure later.

If more than one application is required...

Move all applications which the customer wants onto one SD card. The destination card should have the largest amount of space available so it can hold as many other applications as possible.

SD Card Options	SD Card Size	Module Size
Printer Unit Type M7	128 MB	17.6 MB
Printer/Scanner Unit Type M7	128 MB	18.6 MB
Scanner Enhance Option Type M7	128 MB	6.6 MB
PostScript3 Unit Type M7	128 MB	5.7 MB
IPDS Unit Type M7	128 MB	12 MB
Browser Unit Type M7	128 MB	23.5 MB
SD card for NetWare printing Type M7	128 MB	6.1 MB
OCR Unit Type M2	128 MB	28.3 MB

Adding Icons to the [Home] Screen

1. Press the [User Tools/Counter] key.
2. Press [Edit Home].

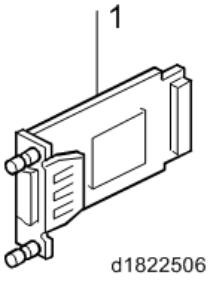
3. Press [Add Icon].
4. Select the application you want to add.
5. Specify the position where [Blank] is displayed
6. Press [OK].
7. Make sure that the icon has been added to the home screen.

IEEE 1284 Interface Board Type A (B679)

Accessories

Check the accessories and their quantities against the following list:

No.	Description	Quantity
1	IEEE 1284 Interface Board	1

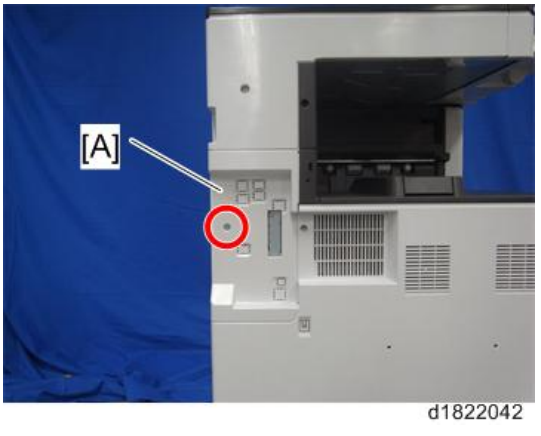


Installation

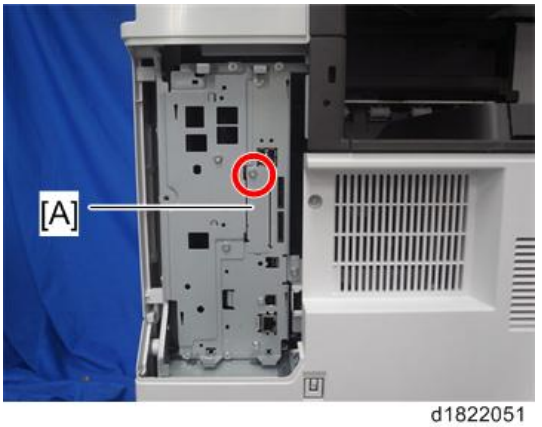
⚠CAUTION

- Turn off the main power switch and disconnect the power supply cord.

1. Remove the controller cover [A] (x1).

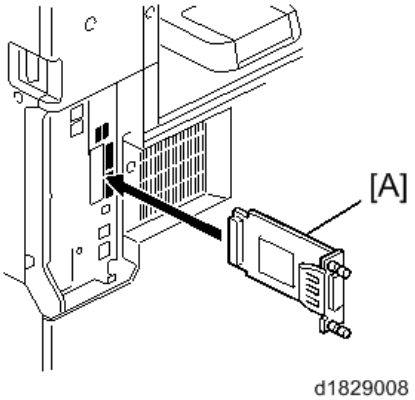


2. Remove the cover [A] of the board slot (x1).



d1822051

3. Reattach the controller cover (x1).
4. Install the interface board [A] (x2 knob screws).



d1829008

Note

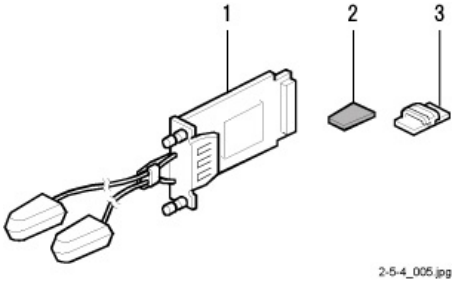
- Use a screwdriver to tighten the knob-screws. Do not tighten manually, because this can disconnect the board.

IEEE 802.11a/g/n Interface Unit Type M2 (D164)

Accessories

Check the accessories and their quantities against the following list:

No.	Description	Q'ty
1	IEEE 802.11a/g/n Interface Board	1
2	Velcro Fasteners	2
3	Antenna Clamps	8

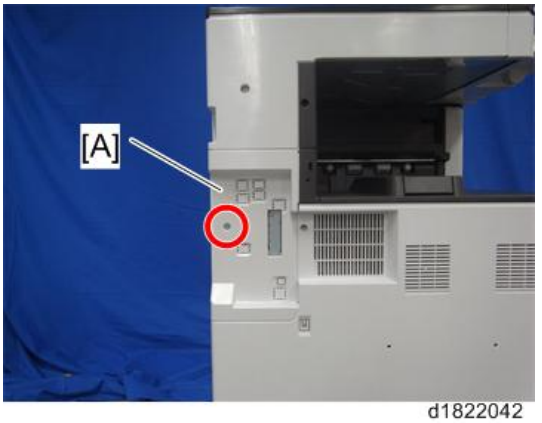


Installation

⚠CAUTION

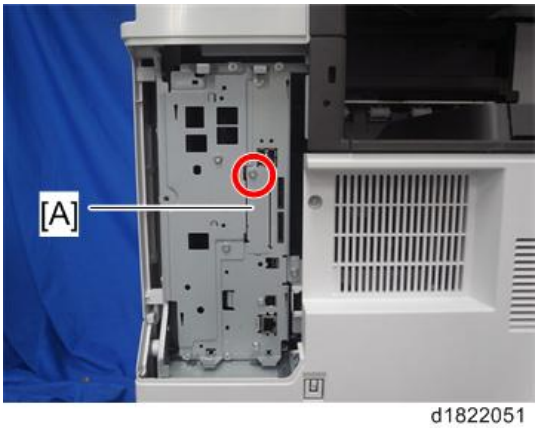
- Turn off the main power switch and disconnect the power supply cord.

1. Remove the controller cover [A] (x1).



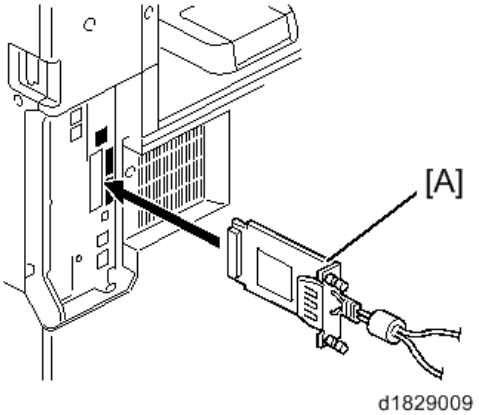
d1822042

2. Remove the cover [A] of the board slot (x1).



d1822051

3. Reattach the controller cover (x1).
4. Install the interface board [A] (x2 knob screws).

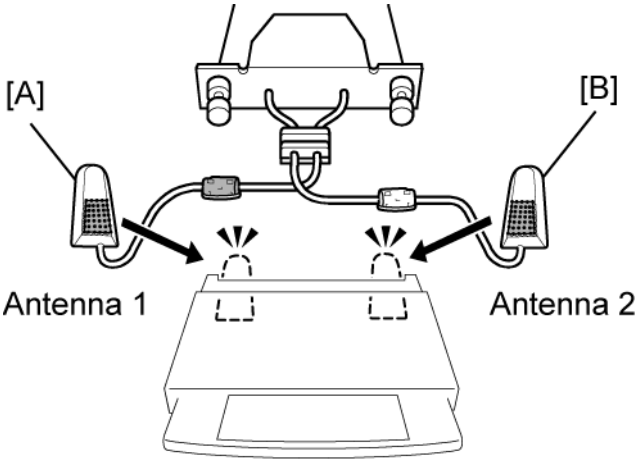


d1829009

Note

- Use a screwdriver to tighten the knob-screws. Do not tighten manually, because this can disconnect the board.

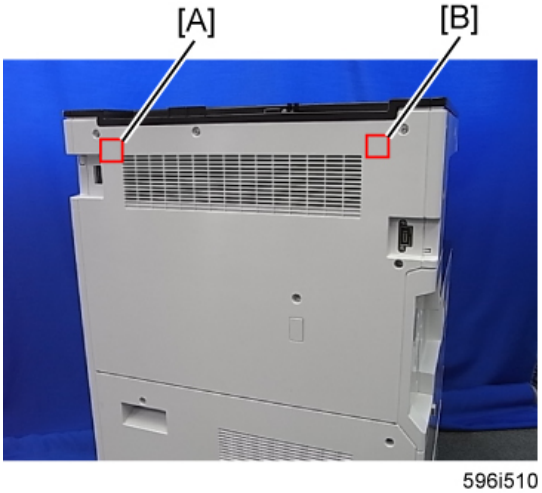
5. Look at the markings on the antenna bracket.
6. Look at the ferrite core of the antenna cable.



d596i509

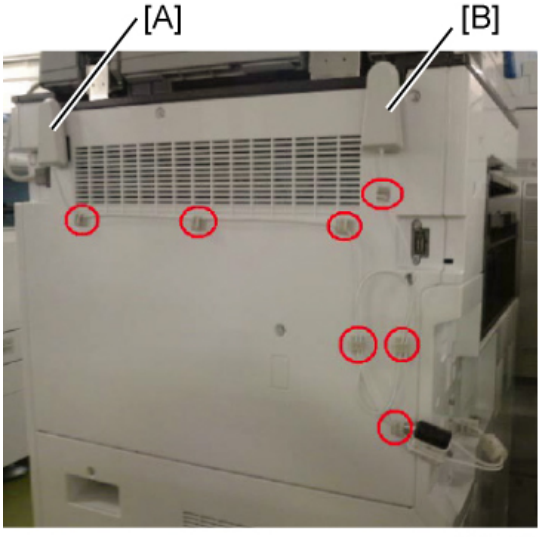
- ANT1. Antenna 1 [A] transmits and receives. It must be installed on the left rear corner of the main machine. (The core on the Antenna 1 cable is black.)
- ANT2. Antenna 2 [B] only receives. It is installed on the right rear corner of the machine. (The core on the Antenna 2 cable is white.)

7. Peel off the double-sided tapes on the Velcro fasteners, and then attach them to the right rear [A] and left rear [B] of the machine.



596i510

8. Attach Antenna 1 [B] to the left rear of the machine. (The core on the Antenna 1 cable is black.)
9. Attach Antenna 2 [A] to the right rear of the machine. (The core on the Antenna 2 cable is white.)
10. Attach the clamps as shown below.



d596i511

11. Set the cables of Antenna 1 and Antenna 2 in the clamps and close them.

User Tool Settings for IEEE 802.11a/g

Go into the User Tools mode and do the procedure below. These settings take effect every time the machine is powered on.

Note

- You cannot use IEEE 802.11a/g if you use Ethernet.

1. Press the "User Tools" key.
2. On the touch panel, touch "System Settings".

   Note

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

- Region A (mainly Europe and Asia)

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

Note

- In some countries, only the following channels are available:
- Range: 1-11 channels (default: 11)
- Region B (mainly North America)

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

7. Set the “Security Method” to specify the encryption of the Wireless LAN.
   - The “WEP” (Wired Equivalent Privacy) setting is designed to protect wireless data transmission. The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.

   Range of Allowed Settings:

   64 bit: 10 characters

   128 bit: 26 characters

   - Specify “WPA” when “Communication Mode” is set to “Infrastructure Mode”. Set the “WPA Encryption Method” and “WPA Authent. Method”.
     - WPA Encryption Method:

     Select either "TKIP" or "CCMP (AES)".

     - WPA Authent. Method:

     Select either “WPA-PSK”, “WPA”, “WPA2-PSK", or “WPA2”.

     If you select “WPA-PSK” or “WPA2-PSK”, enter the pre-shared key (PSK) of 8 - 63 characters in ASCII code.

     When “WPA” or “WPA2” are selected, authentication settings and certificate installation settings are required.
8. Press “Wireless LAN Signal” to check the machine's radio wave status using the operation panel.
9. Press “Restore Factory Defaults” to initialize the wireless LAN settings. Press “Yes” to initialize the following settings:
   - Transmission mode
   - Channel
   - Transmission Speed
   - WEP
   - SSID
   - WEP Key

SP Mode Settings for IEEE 802.11 Wireless LAN

The following SP commands and UP modes can be set for IEEE 802.11

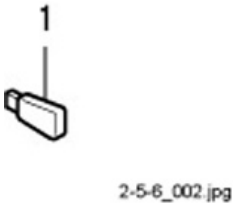
SP No.	Name	Function
SP5-840-006	Channel MAX	Sets the maximum range of the channel settings for the country.
SP5-840-007	Channel MIN	Sets the minimum range of the channels settings allowed for your country.
SP5-840-008	Transmission Speed	Sets the transmission speed. Auto, 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto).
SP5-840-011	WEP Key Select	Used to select the WEP key (Default: 00).
UP mode	Name	Function
	SSID	Used to confirm the current SSID setting.
	WEP Key	Used to confirm the current WEP key setting.
	WEP Mode	Used to show the maximum length of the string that can be used for the WEP Key entry.
	WPA Encryption Method	Used to confirm the current WPA encryption setting.
	WPA Authent. Method	Used to confirm the current WPA authentication setting and pre-shared key.

Bluetooth Interface Unit Type D (D566)

Accessories

Check the accessories and their quantities against the following list:

No.	Description	Q'ty
1	Bluetooth Interface Unit	1

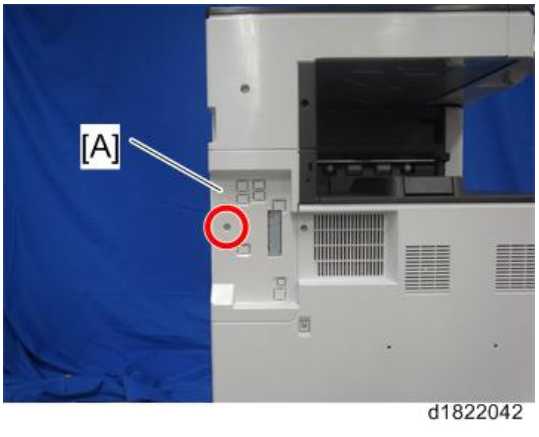


Installation

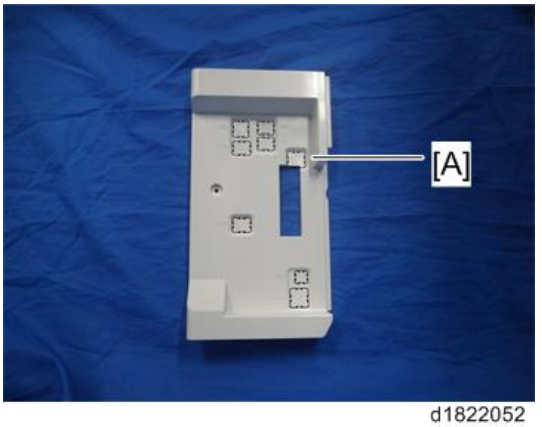
⚠CAUTION

- Turn off the main power switch and disconnect the power supply cord.

1. Remove the controller cover [A] (x1).

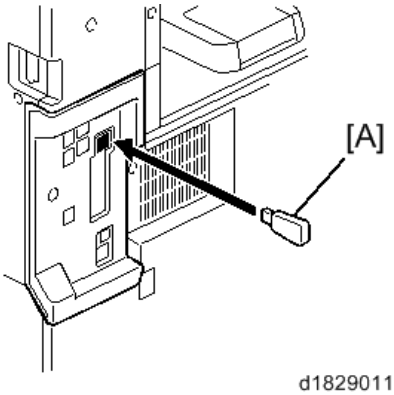


2. Remove the knockout [A] (USB) from the controller cover.



d1822052

3. Reattach the controller cover (x1).
4. Insert the Bluetooth unit [A] into one of the USB slots.



d1829011

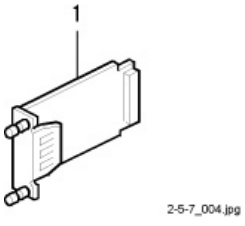
5. Make sure that the machine can recognize the option.(page 202 "Check All Connections")

File Format Converter Type E (D377)

Accessory Check

Check the accessories and their quantities against this list:

No.	Description	Q'ty
1	File Format Converter (MLB: Media Link Board)	1

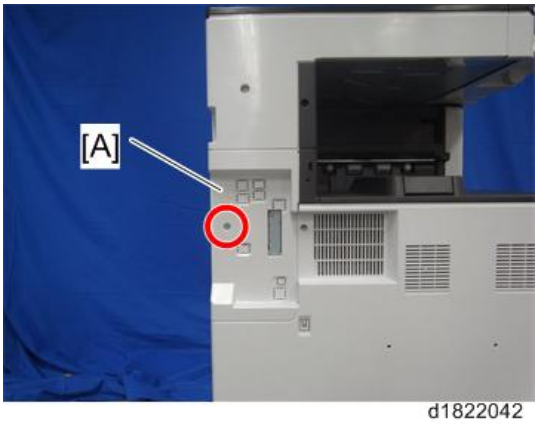


Installation

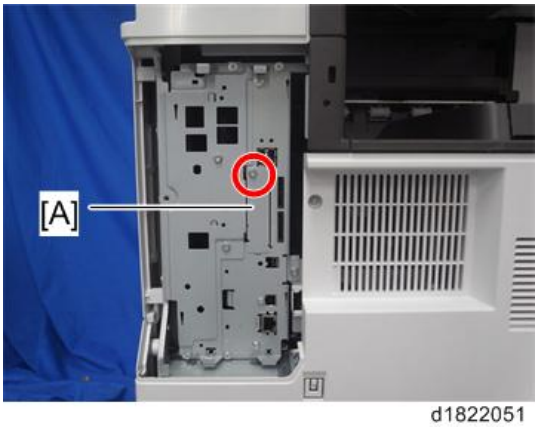
⚠CAUTION

- Turn off the main power switch and disconnect the power supply cord.

1. Remove the controller cover [A] (x1).

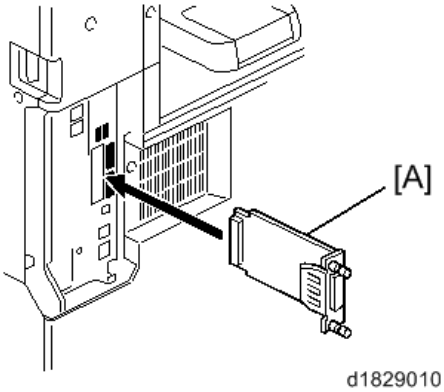


2. Remove the cover [A] of the board slot (x1).



d1822051

3. Reattach the controller cover (x1).
4. Install the interface board [A] (x2 knob screws).



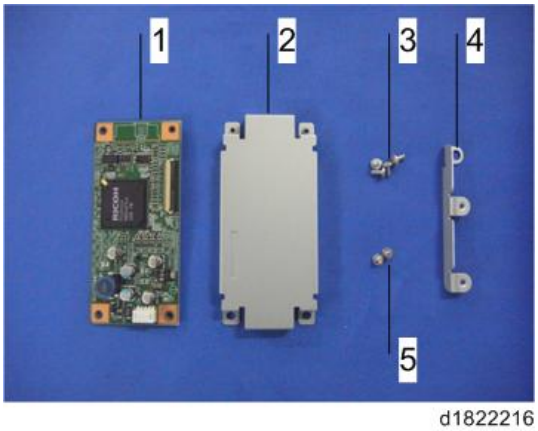
d1829010

5. Turn on the main power switch.
6. Enter the SP mode and do SP5-990 to print an SMC Report.
7. Read the report and confirm that the interface board is installed correctly.

Copy Data Security Unit Type G (D640)

Component Check

No.	Description	Q'ty	For this model
1	ICIB-3	1	Yes
2	Bracket	1	Yes
3	Screws: M3x6	4	Yes
4	Small bracket	1	Not used
5	Screws: M3x4	2	Yes
-	Screws: M3x8	2	



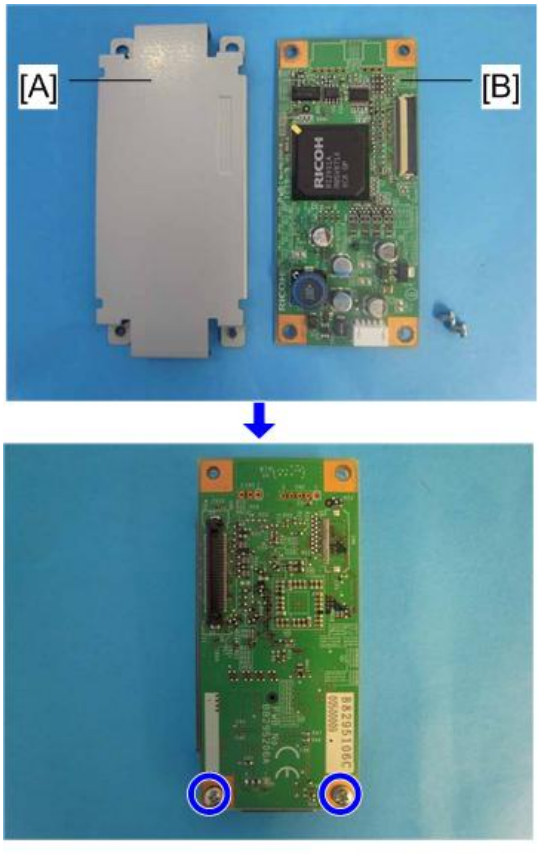
d1822216

Installation

⚠CAUTION

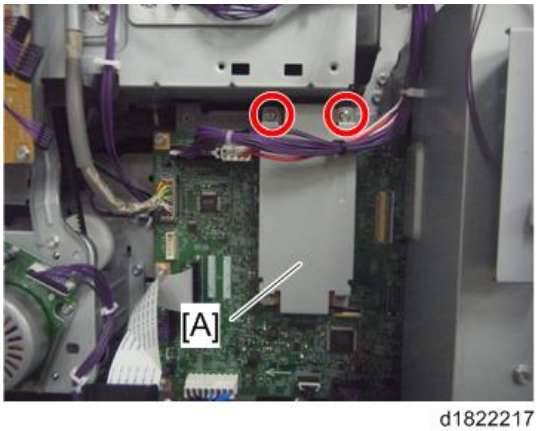
- Unplug the main machine power cord before you do the following procedure.

1. Attach the bracket [A] to the ICIB-3 [B] (x2 (M3 x 4)).



d129i303

2. Tilt the BCU bracket [A] to the front and remove the harness guide. (page 327 "IPU")
3. Attach the ICIB-3 with small bracket [A] to the IPU (x2 (M3 x 6)).



d1822217

4. Reassemble the machine.

User Tool Setting

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

Note

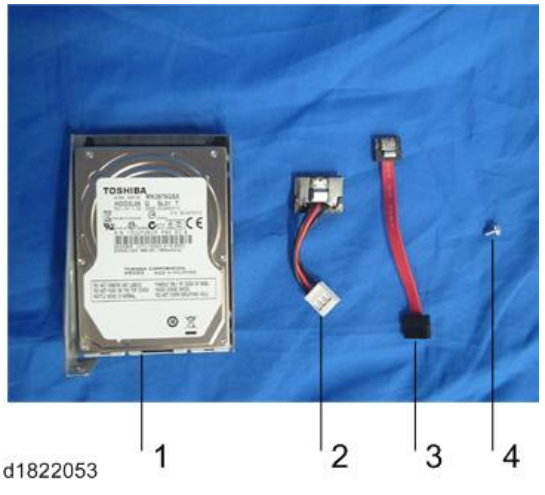
- The machine will issue an SC165 error if the machine is powered on with the ICIB-3 removed and the “Data Security for Copying“ feature set to “ON”.
- The machine will issue an uncertain SC165 error if ICIB-3 is defective when the machine is powered on and the “Data Security for Copying“ feature is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

5. Make sure that the machine can recognize the option.(page 202 "Check All Connections")

Hard Disk Drive Option Type M7 (D758)

Accessory Check

No.	Description	Q'ty
1	HDD Unit	1
2	Cable	1
3	Cable	1
4	Screw	3
-	Sheet: Application: Document Server: NA	1
-	Sheet: Application: Document Server: EU	1



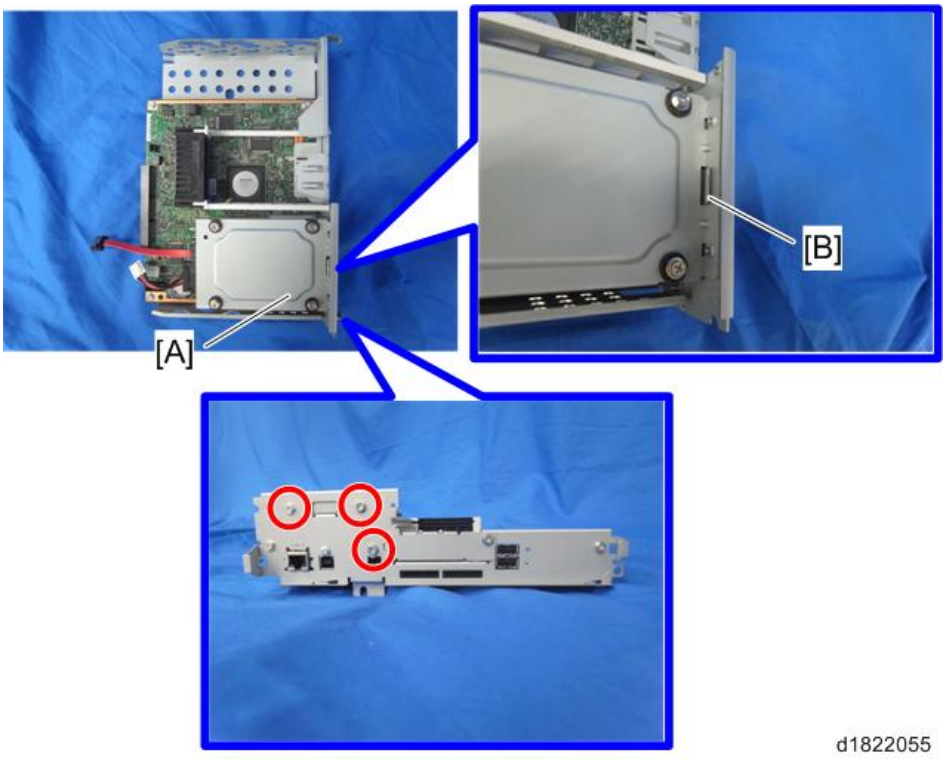
Installation

1. Remove the controller board unit. (page 227 "Controller Cover")
2. Connect the cables [A] [B] to the HDD.



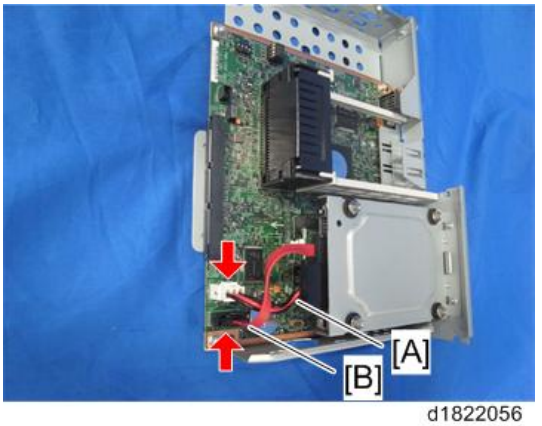
d1822054

3. Hang the HDD [A] on the hook [B] of the controller box and secure it (x3).



d1822055

4. Connect the cables [A] [B] to the controller board.



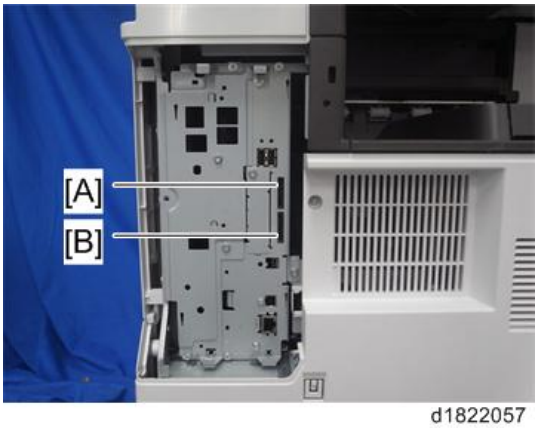
5. Reinstall the controller board with the HDD.

After Installing the HDD

1. Do **SP5-832-001** to format the hard disk.
2. Do **SP5-853-001** to copy the preset stamp data from the firmware to the hard disk.
3. Do **SP5-846-040** to copy the address book to the hard disk from the controller board.
4. Do **SP5-846-041** to let the user get access to the address book.
5. Turn the main power switch off and on.

SD Card Option

SD Card Slots



[A]: SD card slot 1 (option slot)

[B]: SD card slot 2 (service slot)

List of Slots Used

Optional SD cards can be set in either slot 1 or slot 2. But slot 2 is the service slot, so we recommend that you use slot 1 to install the SD card options.

Note

- In this machine, it is possible to transfer data from a "Postscript3 Unit" SD card, unlike in earlier models, due to a change in the software licensing (the part of the Postscript software that requires licensing is now built into the controller, so the portion on the SD card can be moved to another SD card).

SD Card Appli Move

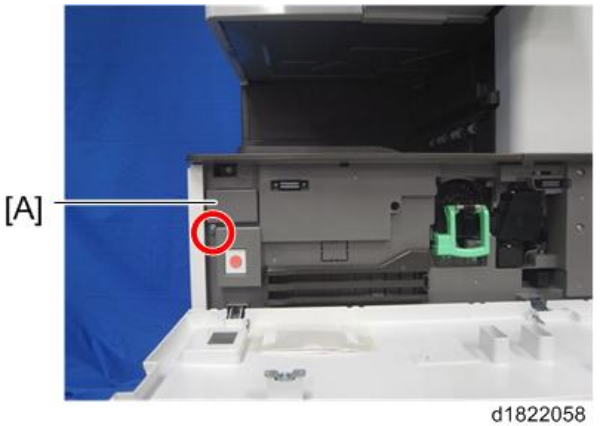
Overview

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

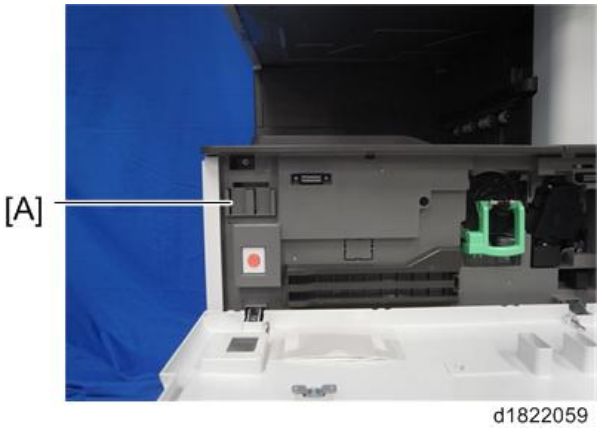
If more than one application is required, the applications must be moved to one SD card with SP5873-1 (PostScript 3, IPDS unit, etc.).

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

- The data necessary for authentication is transferred with the application program from an SD card to another SD card. Authentication fails if you try to use the SD card after you move the application program from one card to another card.
- Do not use the SD card if it has been used before for other purposes. Normal operation is not guaranteed when such an SD card is used.
- Open the front cover, and then remove the bracket [A].



Keep the SD cards here [A] 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.**
- **If the printer/scanner unit or the printer unit has been installed, the destination card should be those SD cards.**

1. Turn off the main power switch.
2. Make sure that a target SD card is in SD Card Slot 1. The application program is moved to this SD card.
3. Insert the source SD card with the application program in SD Card Slot 2.The application program is copied from this source SD card.
4. Turn on the main power switch.
5. Start the SP mode.
6. Select SP5-873-001 "Move Exec".
7. Follow the messages shown on the operation panel.
8. Turn off the main switch.
9. Remove the source SD card from SD Card Slot 2.

10. Turn the main switch on.
11. Check that the application programs run normally.

Undo Exec

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

Important

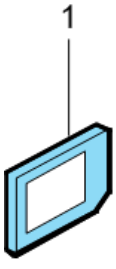
- **Do not turn ON the write protect switch of the system SD card or application SD card on the machine. If the write protect switch is ON, a download error (e.g. Error Code 44) occurs during a firmware upgrade or application merge.**

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

Browser Unit Type M7 (D758)

Accessory Check

No.	Description	Q'ty
1	SD Card	1



d595i900b

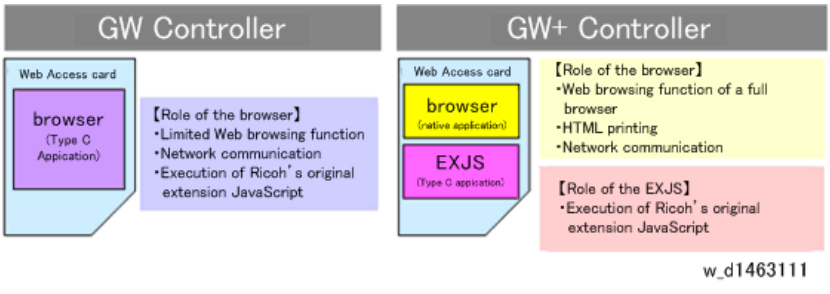
Installation procedure

The browser unit uses a native application such as a full browser in order to improve web browsing.

Also, to provide a solution utilizing the web as in previous machines, Extended JavaScript is also provided as an SDK application.

Due to the above, the browser unit for this model has two firmware modules, native application firmware, and Type-C application EXJS firmware.

The browser for these models is not installed in the SD card HDD, but in order to start up using the data on the SD card, it must be operated with the SD card inserted.



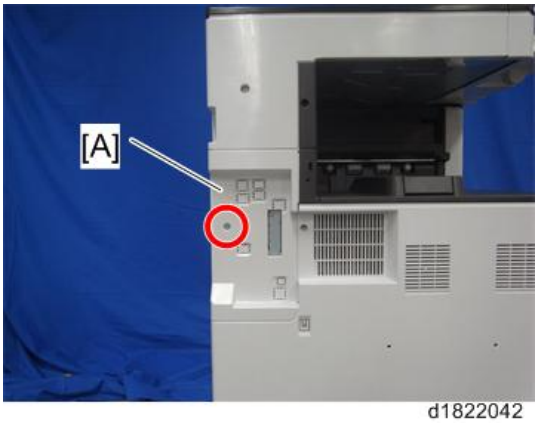
w_d1463111

Note

- In addition to link-up with the conventional Scan Router and MFP, the browser unit has the following functions.

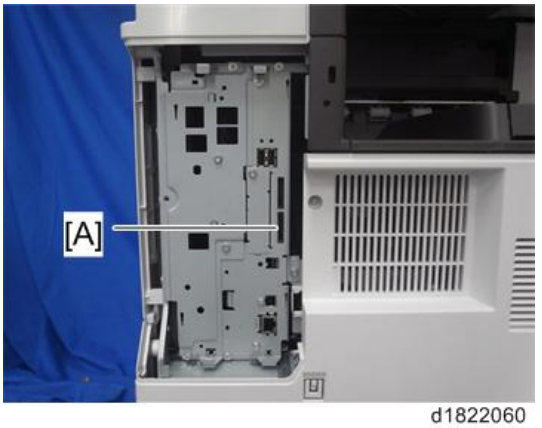
- For scanning, arbitrary distribution types and preset values are selected/set and delivered.
- Mail is delivered (login transmission) to an address previously set in the profile of the user who logged in.

1. Switch the power OFF.
2. Remove the controller cover (×1)



d1822042

3. Insert the browser unit SD card in SD card slot 2 [A].



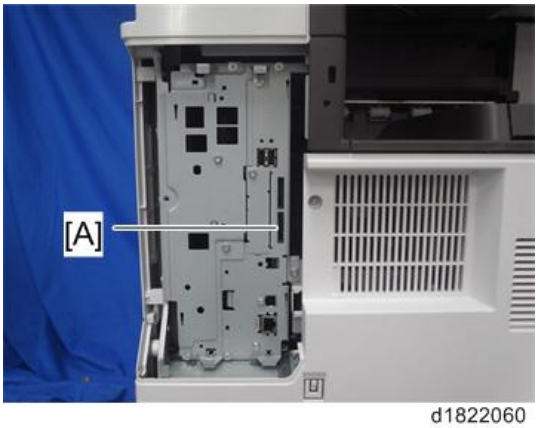
d1822060

4. Switch the power ON.
5. Press the [Default setting/Counter] key.
6. Press the [Extension function default setting] button.
7. Press the [Extension function default setting] button on the [Extension function default menu setting] screen.
8. On the [Startup setting] tab, check that "Extended JS" was installed automatically and has started.
9. Switch the power OFF/ON.
10. Perform the merge operation. (page 180 "SD Card Appli Move")
11. Switch the power OFF.

12. Remove the empty SD card from SD card slot 2.
13. Reattach the cover and turn on the main power switch.
14. Press the [Default setting/Counter] key.
15. Press the [Home editing] button.
16. Press the [Add icon] button.
17. Press the [Browser] button displayed on the “Application” tab.
18. Select the position at which [Blank] is displayed, and press the [OK] button.
19. Check that the [Browser] icon has been added to the Home screen.

To update EXJS

1. Put the SD card containing the firmware to update with in SD card slot 2 [A], and switch on the power.



2. Wait until the update screen starts.
3. When the update screen is displayed, select [Browser], and press the [Update (#)] button.
4. When "Update done." is displayed, switch the power OFF, and remove the SD card from SD card slot 2.
5. When updating Extension JavaScript, add the following steps.
6. Switch the power ON.
7. Press the [Default setting/counter] key.
8. Press the [Extension function default setting] button.
9. Press the [Extension function default setting] button on the [Extension function default menu setting] screen.
10. Stop "Extended JS" on the “Startup setting” condition with a tab.
11. Switch the power OFF.

12. Insert the Extended JavaScript upgrade SD card in SD card slot 2.
13. Switch the power ON.
14. Press the [Default setting/counter] key.
15. Press the [Extension function default setting] button.
16. Press the [Extension function default setting] button on the [Extension function default menu setting] screen.
17. Press the [Install] tab.
18. Press [SD card], and select "Extended JS" from the list of extension functions.
19. Select [MFP hard disk] as the installation location, and press [Next].
20. After checking extension function information on the “Installation preparation complete” screen, press the [Enter] button.
21. "The following extension functions are already installed. The message “Overwrite extension function?” is displayed. Press the [Continue] button.
22. When installation is complete, the message “Extension function has been installed" is displayed. Press the [OK] button.
23. On the “Startup settings” tab, set [Extended JS] to the startup standby state, and switch the power OFF.
24. Remove the SD card from SD card slot 2, and return the controller cover.
25. Switch the power ON.
26. Press the [Default setting/counter] key.
27. Press the [Extension function default setting] button.
28. Press the [Extension function default setting] button on the [Extension function default menu setting] screen.
29. Check the version of [Extended JS] on the “Startup settings tab” is the latest version.

Note

- If the power is ON before starting Step 1, switch the power OFF after first performing Steps 5-9, and perform Step 1 and subsequent steps. In that case, skip Steps 5-10. (This saves time.)
- If you do not plan to update Extension JavaScript, return the controller cover to the original position after performing Step 5.

When checking the version of EXJS

1. Switch the power ON.
2. Press the [Default setting/counter] key.
3. Press the [Extension function default setting] button.

4. Press the [Extension function default setting] button on the [Extension function default menu setting] screen.
5. Check the version of [Extended JS] on the “Startup settings tab” is the latest version.

Note

- If checked apart from the above procedure (firmware version displayed in system default settings), a different version from the actual version may be displayed.

Browser unit uninstallation procedure

EXJS uninstallation procedure

1. Switch the power ON.
2. Press the [Default settings/counter] key.
3. Press the [Login/Logout] key, and log in with an administrator account (login user name, login password).
4. Press [Extension function default setting], and when the screen changes, press [Extension function default setting] again.
5. Press [Uninstall]
6. When “Browser” is pressed, a message screen is displayed, press “Yes”.
7. When a message reconfirming uninstallation is displayed, press [Yes].
8. When uninstall starts, the message "Uninstalling the extended feature ... Please wait." is displayed on the screen. When "Completed" is displayed after a while, press [End], and the display returns to the setting screen.
9. Close [Default settings/counter] settings, and switch OFF the power.

Note

- Uninstall is completed only by removing the SD card.

Settings

Browser default setting

Register the browser default settings. For details, refer to the following.

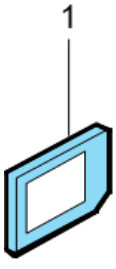
1. Switch ON the power.
2. Press the [Default settings/counter] key.
3. Press the [Browser default settings] button.
4. Press the [Home screen] button on the “Browser Settings” tab.

5. Press the [URL input] button.
6. Input the URL, and press the [OK] button.
7. Press the [Settings] button.
8. Press the [End] button twice, and finish.

SD card for NetWare printing Type M7 (D758)

Accessory Check

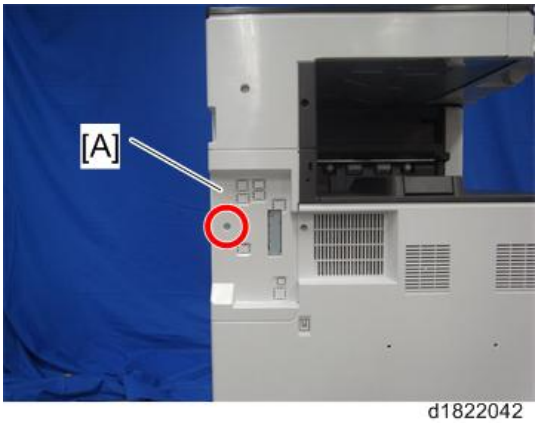
No.	Description	Q'ty
1	SD Card	1



d595i900b

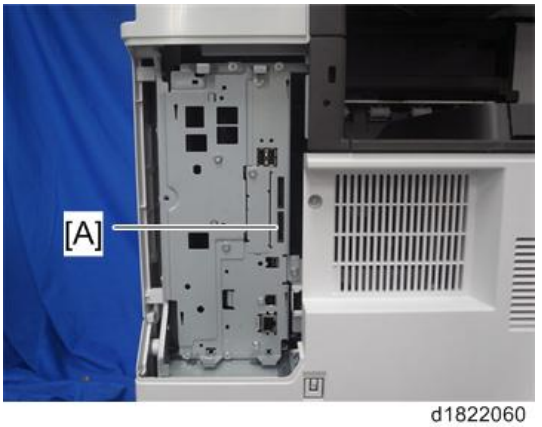
Installation procedure

1. Remove the controller cover (×1)



d1822042

2. Insert the browser unit SD card in SD card slot 2 [A].



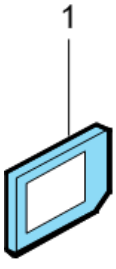
d1822060

3. Switch the power ON.
4. Perform the merge operation. (page 180 "SD Card Appli Move")
5. Switch the power OFF.
6. Remove the empty SD card from SD card slot 2.
7. Reattach the cover and turn on the main power switch.
8. Make sure that the machine can recognize the option.(page 202 "Check All Connections"

PostScript3 Unit Type M7 (D757)

Accessory Check

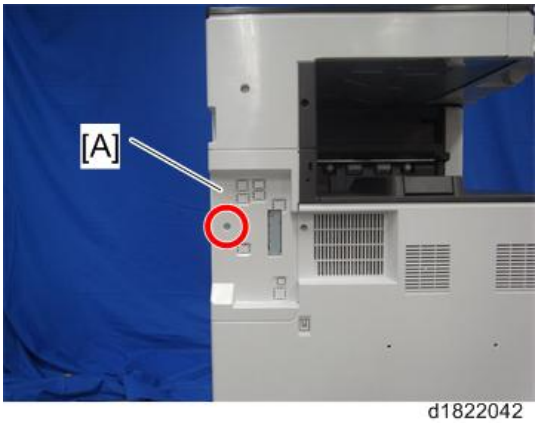
No.	Description	Q'ty
1	SD Card	1



d595i900b

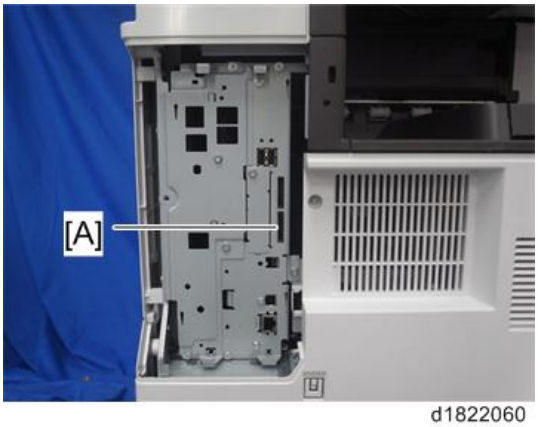
Installation procedure

1. Remove the controller cover (×1)



d1822042

2. Insert the PS3 SD card in SD card slot 2 [A].



d1822060

Note

- When installing more than one SD card, perform the merge operation.

3. Switch the power ON.
4. Perform the merge operation. (page 180 "SD Card Appli Move")
5. Switch the power OFF.
6. Remove the empty SD card from SD card slot 2.
7. Reattach the cover and turn on the main power switch.
8. Stick the "Adobe PostScript3" decal on the front face of the MFP.
9. Make sure that the machine can recognize the option.(page 202 "Check All Connections")

Note

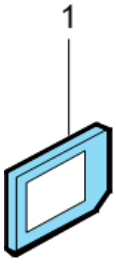
- The PDF firmware installed as standard contains a program required to print PS3 data as default. However, this PS3 program is normally disabled.
- The PS3 firmware is a dongle (key) which enables PS3 data printing functions. When the PS3 firmware is installed, the PS3 program in the PDF firmware is enabled. Due to this specification, the self-diagnosis result report shows the ROM part number/software version of the PDF firmware contained in the PS3 program.

IPDS Unit Type M7 (D757)

Accessories

Check the accessories and their quantities against the table below.

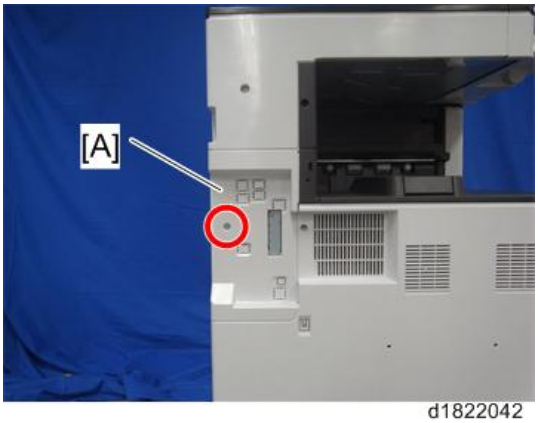
No.	Description	Q'ty
1	IPDS Emulation SD Card	1
-	Decal	1



d595i900b

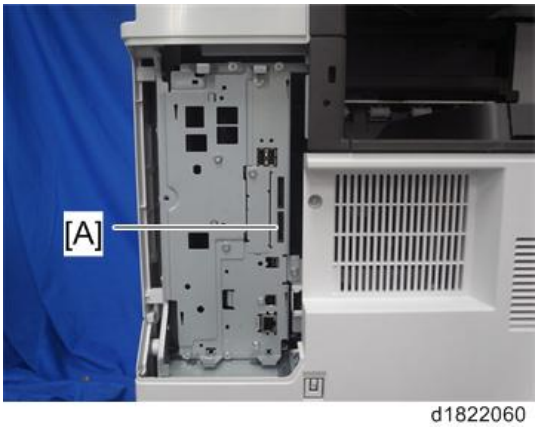
Installation

1. Switch the power OFF.
2. Remove the controller cover (×1)



d1822042

3. Insert the IPDS SD card in SD card slot 2 [A].



4. Switch the power ON.
5. Perform the merge operation. (page 180 "SD Card Appli Move")
6. Switch the power OFF.
7. Remove the empty SD card from SD card slot 2.
8. Reattach the cover and turn on the main power switch.
9. Do one of the following ("A" or "B") to enable the IPDS function.

   A. [Enable the IPDS function via telnet]

   1. Connect the machine via telnet.
   2. Execute the following commands:

   msh> **set ipds up**

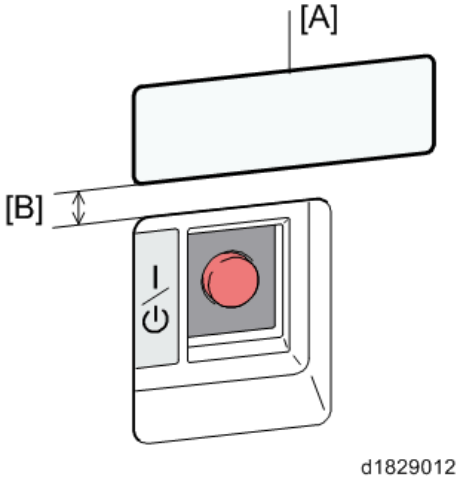
   ***If you want to stop the function.

   msh> **set ipds down**

   B. [Enable the IPDS option via WebImageMonitor]

   1. Log in to WebImageMonitor.
   2. Change the setting to enable IPDS.

10. Attach the decal [A] as shown below.
    - Line up the left side of the decal with the left edge of the main power switch. ([B]: 10 mm or more)

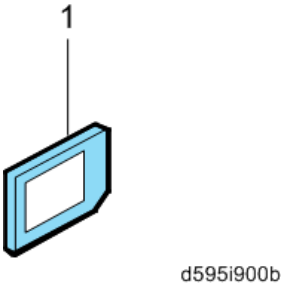

[A]
[B]
d1829012

OCR Unit Type M2 (D166)

This option adds a searchable PDF function to the scanning function.

Accessory Check

No.	Description	Q'ty
1	SD Card	1



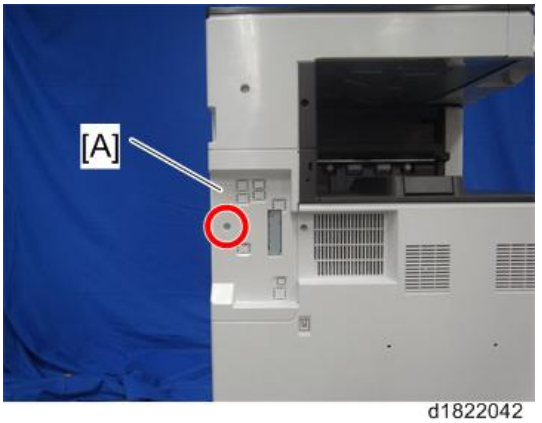
d595i900b

Installation Procedure

⚠CAUTION

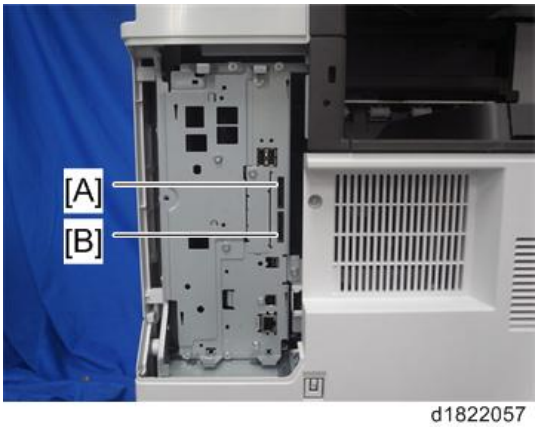
- Switch the MFP's power supply OFF, and unplug the power plug from the mains outlet.
- If the battery is replaced by the wrong type, there is a danger of explosion. Dispose of used batteries according to the instructions.

1. Remove the controller cover (×1)



d1822042

2. Insert the OCR module SD card in SD card slot 1 [A] or slot 2 [B].



d1822057

3. Switch the power supply ON.
4. Press “Enter” in SP5-878-004 (Option Setup: OCR Dictionary).

   The SD card ID is saved in the NVRAM, and the ID of the MFP is saved on the SD card. The MFP and SD card are thereby linked.
5. When “operation complete” is displayed, press "Close”.

Note

- If installation fails, "Failed" is displayed.
- If installation fails, perform the following steps.

1. Check whether it is a used SD card.
2. Switch the power OFF, and repeat steps 1-5.

6. Switch the power OFF/ON.
7. Press “Enter” in SP5-878-004 (Option Setup: OCR Dictionary).

   Dictionary data is copied to the HDD.

Note

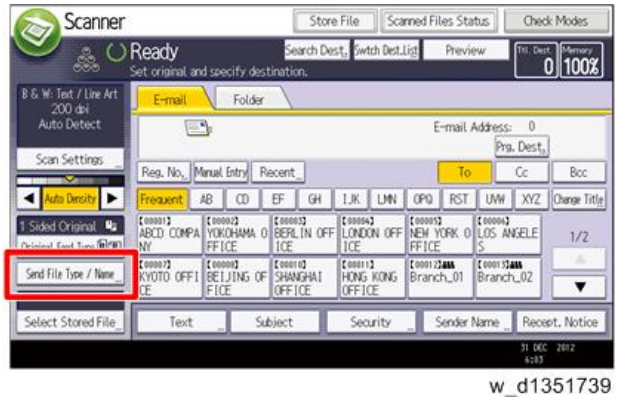
- On the first run, SP5-878-004 links the SD card, and on the second run, copies dictionary data.

8. Switch the power OFF, and remove the SD card from the SD card slot.

Note

- Keep the SD card in the SD card storage location of the MFP. The original SD card is needed in the event of a HDD malfunction.

9. Return the SD card slot cover to the original position.
10. Switch the power ON.
11. Press [Send File Type / Name] on the [Scanner] screen.



w_d1351739

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



w_d1351740

Note

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

Recovery Procedure

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

When storing the original SD card

- When only the HDD is replaced

  Reinstall using the original SD card.

- When only the NVRAM is replaced

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

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

- When the HDD and NVRAM are replaced simultaneously

  Reinstall using the original SD card.

If the original SD card is lost

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

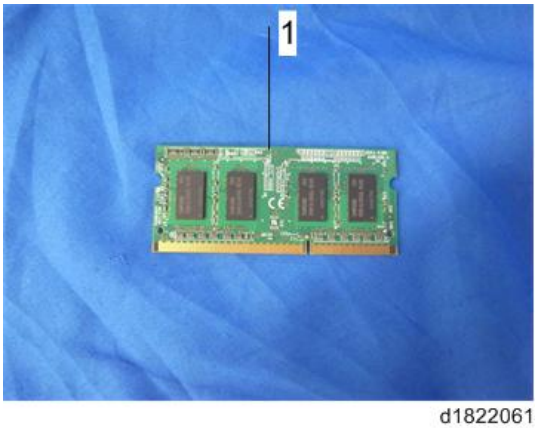
Note

- Perform reinstallation in the same way as installation.

Memory Unit Type M1 1.5GB (D701)

Accessories

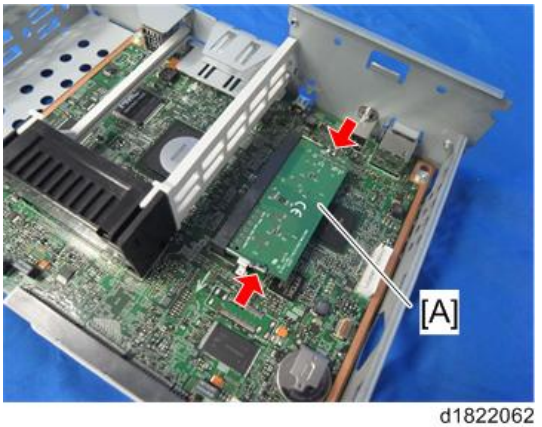
No.	Description	Q'ty
1	Memory unit	1



d1822061

Installation procedure

1. Remove the controller board unit. (Controller Board)
2. Remove the HDD if it is installed. (HDD)
3. Release the hooks that hold the standard memory board [A]. The memory board will be lifted.



d1822062

4. Remove the memory board [A].



d1822063

5. Align the position of the cutout and insert the memory unit into the memory board slot at a slant.



d1822064

6. Press the memory unit against the controller board until the hooks lock.



d1822065

7. Reattach the HDD if it has been removed.
8. Reassemble the machine.

Check All Connections

Make sure that the machine can recognize the option.

1. Plug in the power cord.
2. Turn on the main switch.
3. Enter the printer user mode. Then print the configuration page.
   User Tools > Printer Features > List Test Print > Configuration Page
4. All installed options are shown in the "System Reference" column.

Security Setting

Security Function Installation

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

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

Note

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

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

Important

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

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

Note

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

The machine cannot be operated while data is being encrypted.

Once the encryption process begins, it cannot be stopped.

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

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

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

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

Note

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

Please use the following procedure when the Data Overwrite Security and HDD Encryption are reinstalled.

Data Overwrite Security

Before You Begin the Procedure

1. Make sure that the following settings (1) to (3) are not at their factory default values.

   (1) Supervisor login password

   (2) Administrator login name

   (3) Administrator login password

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

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

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

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

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

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

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

Installation Procedure

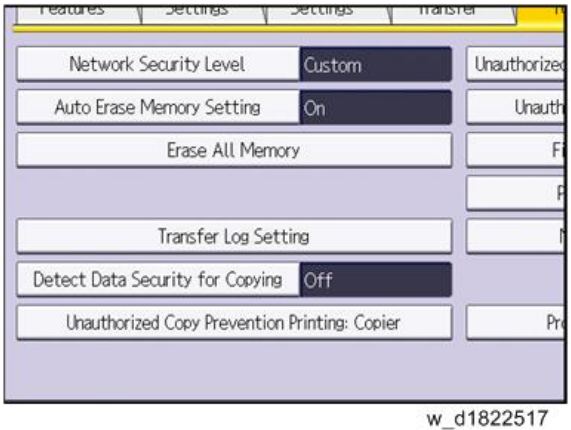
1. Connect the network cable if it needs to be connected.
2. Turn on the main power switch.
3. Go into the SP mode and push "EXECUTE" in SP5-878-001.
4. Exit the SP mode and turn off the operation switch. Then turn off the main power switch.
5. Turn on the machine power.
6. Do SP5-990-005 (SP print mode Diagnostic Report).
7. Go into the User Tools mode, and select [System Settings] - [Administrator Tools] - [Auto Erase Memory Setting] - [On].
8. Exit the User Tools mode.

Using Auto Erase Memory

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

1. Log in as the machine administrator from the control panel.

2. Press [System Settings].
3. Press [Administrator Tools].
4. Press [Next] three times.
5. Press [Auto Erase Memory Setting].



w_d1822517

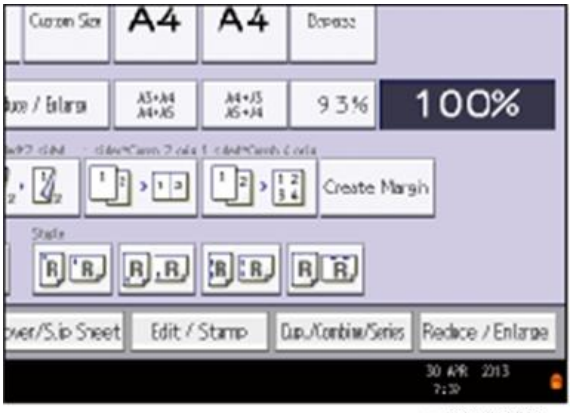
6. Press [On].
7. Select the method of overwriting.

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

   If you select [Random Numbers], proceed to step 8.
8. Press [Change].
9. Enter the number of times that you want to overwrite using the number keys, and then press [#].
10. Press [OK]. Auto Erase Memory is set.
11. Log out.
12. Check the display and make sure that the overwrite erase icon appears.
13. Check the overwrite erase icon.

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

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



w_d1822516

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

HDD Encryption

Before You Begin the Procedure:

1. Make sure that the following settings (1) to (3) are not at the factory default settings.

   (1) Supervisor login password

   (2) Administrator login name

   (3) Administrator login password

   These settings must be set up by the customer before the HDD Encryption unit can be installed.

2. Confirm that "Admin. Authentication" is on: [User tools/Counter] key - [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Admin. Authentication] - [On]

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

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

   [User tools/Counter] key - [System Settings] - [Administrator Tools] - [Administrator Authentication Management] - [Available Settings]

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

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

Installation Procedure

1. Turn on the main power switch, and then enter the SP mode.
2. Select SP5878-002, and then press "Execute" on the LCD.
3. Exit the SP mode after "Completed" is displayed on the LCD.
4. Turn off the main power switch.

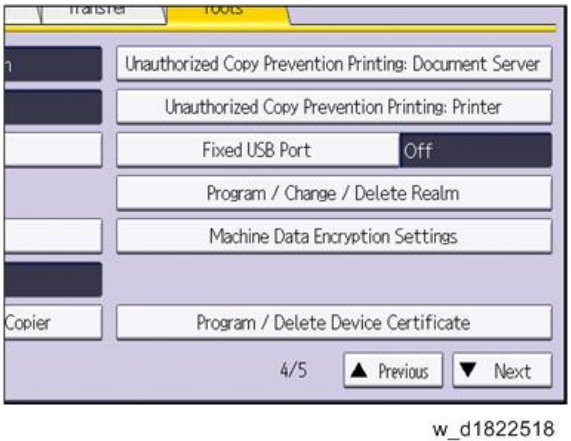
Enable Encryption Setting

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

Important

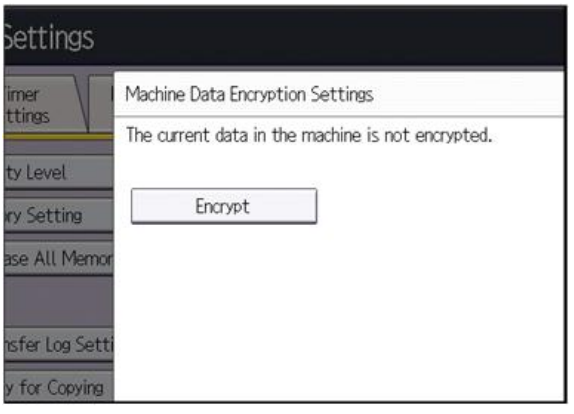
- **When setting up encryption, specify whether to start encryption after deleting data (initialize) or encrypt and retain existing data. If data is retained, it may take some time to encrypt it.**

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



w_d1822518

6. Press [Encrypt].



w_d1822519

7. Select the data to be carried over to the hard disk and not be reset.

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

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

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

8. Select the backup method.

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

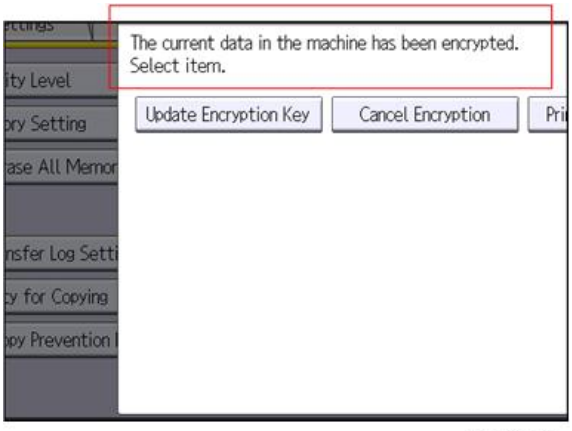
   If you have selected [Print on Paper], press the [Start] key. Print out the machine's data encryption key.

9. Press [OK].
10. Press [Exit].
11. Press [Exit]
12. Log out.
13. Turn off the main power switch, and then turn the main power switch back on.

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

Check the Encryption Settings

1. Press the [User tools/Counter] key.
2. Press [System Settings].
3. Press [Administrator Tools].
4. Press [Machine Data Encryption Settings].
5. Confirm whether the encryption has been completed or not on this display.



w_d1822520

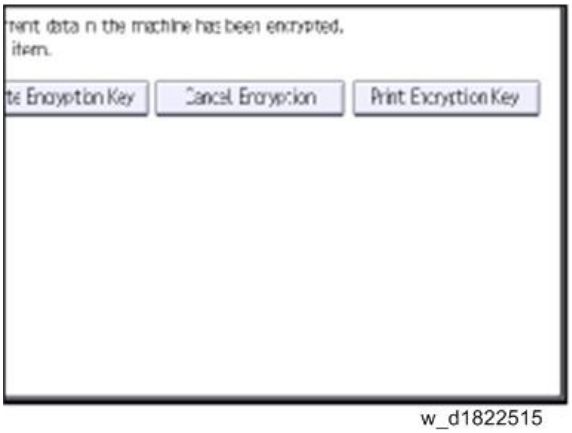
Backing Up the Encryption Key

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

Important

- **The encryption key is required for data recovery if the machine malfunctions. Be sure to store the encryption key safely for retrieving backup data.**

1. Log in as the machine administrator from the control panel.
2. Press [System Settings].
3. Press [Administrator Tools].
4. Press [Next] three times.
5. Press [Machine Data Encryption Settings].
6. Press [Print Encryption Key].



w_d1822515

7. Select the backup method.

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

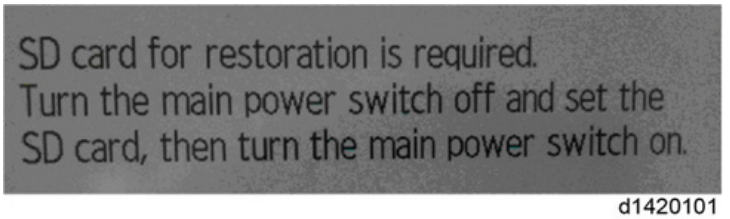
If you have selected [Print on Paper], press the [Start] key. Print out the machine's data encryption key.

8. Press [Exit].
9. Log out.

Encryption Key Restoration

How to restore the old encryption key to the machine

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



d1420101

To do this, follow the procedure below.

1. Prepare an SD card that has been initialized in FAT16 format.
2. Using a PC, create a folder in the SD card and name it "restore_key".
3. Create a folder in the “restore_key” folder and name it the same as machine’s serial number, “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.

@Remote Settings

Note

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

Check points before making @Remote settings

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

Execute the @Remote Settings

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

Value	Meaning	Solution/ Workaround
0	Succeeded	-
1	Request number error	Check the request number again.
3	Communication error (proxy enabled)	Check the network condition.
4	Communication error (proxy disabled)	Check the network condition.

Value	Meaning	Solution/ Workaround
5	Proxy error (Illegal user name or password)	Check Proxy user name and password.
6	Communication error	Check the network condition.
8	Other error	See "SP5816-208 Error Codes" below this.
9	Request number confirmation executing	Processing... Please wait.

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

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

8. Exit the SP mode.

SP5816-208 Error Codes

Caused by Operation Error, Incorrect Setting

Code	Meaning	Solution/ Workaround
-12002	Inquiry, registration attempted without acquiring Request No.	Obtain a Request Number before attempting the Inquiry or Registration.
-12003	Attempted registration without execution of a confirmation and no previous registration.	Perform Confirmation before attempting the Registration.
-12004	Attempted setting with illegal entries for certification and ID2.	Check ID2 of the mainframe.
-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.	Make sure that "Remote Service" in User Tools is set to "Do not prohibit".
-12006	A confirmation request was made after the confirmation had been already completed.	Execute registration.
-12007	The request number used at registration was different from the one used at confirmation.	Check Request No.
-12008	Update certification failed because mainframe was in use.	Check the mainframe condition. If the mainframe is in use, try again later.
-12009	The ID2 in the NVRAM does not match the ID2 in the individual certification.	Check ID2 of the mainframe.
-12010	The certification area is not initialized.	Initialize the certification area.

Error Caused by Response from GW URL

Code	Meaning	Solution/ Workaround
-2385	Other error	
-2387	Not supported at the Service Center	
-2389	Database out of service	
-2390	Program out of service	
-2391	Two registrations for the same mainframe	Check the registration condition of the mainframe
-2392	Parameter error	
-2393	External RCG not managed	

Code	Meaning	Solution/ Workaround
-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.

Operation Guidance for Users

Function/Operation	Instruction to provide
Basic machine functions, operations	• How to load the toner bottle • How to load paper and other consumables/supplies • How to turn the main power switch ON/OFF • How to clear paper jams • How to program, modify, and delete Address Book entries • How to customize the UI and home screen • Overview of machine options/peripherals • How to take the proper action for SC errors (clearing the error, contacting service and support, etc.), how to interpret @Remote notifications • Important notes to keep in mind whenever moving the machine • Product limitations
Copier	• Basic Copier operations • How to load an original in the ARDF or place it on the exposure glass for scanning • How to use thick paper and other specialized paper/media • How to configure the Copier main screen (duplex/simplex, auto color selection, User Codes, etc.) • Basic Document Server operations
Fax (when installed)	• How to send a fax (Memory Transmission, Direct Transmission)
Printer (when installed)	• How to install printer drivers (using the recommended method) • How to connect to a PC (performing the port settings) • How to print out a test page • Overview of various settings inside each tab in the printer driver (e.g. duplex printing)
Scanner (when installed)	• How to install printer drivers (using the recommended method) • How to connect to a PC and perform a test scan

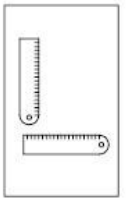
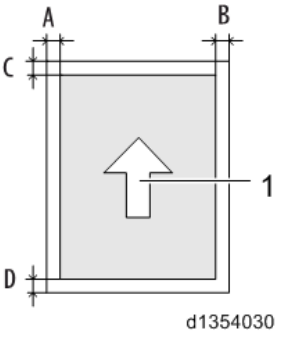
3. Preventive Maintenance

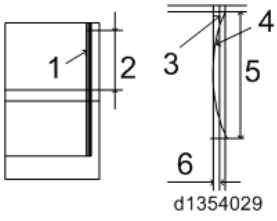
Preventive Maintenance Tables

See "Appendices" for the following information:

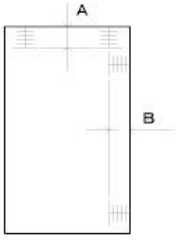
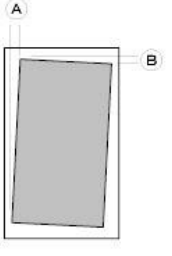
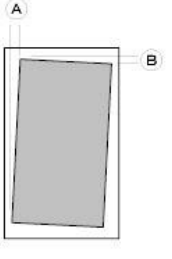
- Preventive Maintenance Tables

Image Quality Standards

Item	Specification	Measuring tool	Measuring method
Resolution	Copy (100% / Enlargement / Reduction): 4.0 lines/mm or more	Test Chart - S5S <Mode> • Black and White (1C) • Text/Photo • ADS on • Image Density / 5notches	Copy onto plain paper using Auto Image Density/5 notches and then determine resolution.
Magnification ratio error margin	Copy (100% / Reduction) Main Scan/Sub Scan: ±1.0 or less	150 mm scale <Mode> • Black and White (1C) • Text • ADS on • Image Density / 5notches	Copy the scale and compare it with the scale at 100 mm to see if it is within specification. Leave the sheet for 3 minutes or more after it has been output before measuring. 
Missing Image Area	Left [A]: 2.0±1.5mm Right [B]: 2.0+2.5 /-1.5mm Front [C]: 3.0±2.0mm (Plain / Thin) Rear [D]: 0.5mm or more	150 mm scale <Mode> • Black and White (1C) • Text • ADS on • Image Density / 5notches	Since there is a variability of about 1 mm in the sizes of sheets of paper, correct the size of the sheet before measuring.  1. Paper feed direction

Item	Specification	Measuring tool	Measuring method
Linearity	±0.5mm/100mm or less	150 mm scale <Mode> • Black and White (1C) • Text • ADS on • Image Density / 5notches	Measure with the full length and width of the image.  1. Inner line 2. 100mm 3. Base line 4. Copy 5. 100mm 6. 0.5mm

Paper Transfer Quality Standards

Item	Specification	Measuring tool	Measuring method
Registration (Exposure glass)	Simplex (1st print side), 100% or reduction: 0±2mm (Vertically and horizontally) Simplex (1st print side), enlargement: 0±2mm x M (Vertically and horizontally) Duplex (2nd print side), 100% or reduction: 0±4mm (Vertically and horizontally) Duplex (2nd print side), enlargement: 0± (2 x M +2) mm (Vertically and horizontally) M: Magnification ratio	Test Chart - S5S 150 mm scale <Mode> • Black and White (1C) • Text • ADS on • Image Density / 5notches	Measure the registration (leading edge, left and right A-5=0±2mm B-4=0±2mm 
Skew (Exposure glass)	Simplex, B5 SEF or smaller: 0±1.0mm/100mm or less Simplex, B5 SEF or larger: 0±1.2mm/200mm or less 2nd side, B5 SEF or smaller: 0±1.5mm/100mm or less 2nd side, A4 SEF or larger: 0±1.0mm/100mm or less	<Mode> • Black and White (1C) • Text • Image Density / 5notches	Measure the A and B. 
Skew (DF)	Simplex (Main Scan), A3 to A5 SEF , 52g/m^2 to 128g/m^2: 0±1.5mm/200mm or less Simplex (Sub Scan), A5 SEF, 52g/m^2 to 128g/m^2: 0±1mm/200mm or less 2nd side (Main Scan/Sub Scan), A3 to A5, 52g/m^2 to 128g/m^2: 0±2mm/200mm or less	<Mode> • Black and White (1C) • Text • ADS on • Image Density / 5notches	Measure the A and B. 

4. Replacement and Adjustment

Notes on the Main Power Switch

Push Switch

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

Characteristics of the Push Switch (DC Switch)

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

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

So, when performing maintenance work such as replacing parts, in addition to turning off the main power with the push switch, always unplug the AC power cord.

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

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

- How to remove the residual charge inside the machine

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

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

In order to remove the residual charge, push the main power switch while you disconnect the AC power cord. At that time, the power ON flag inside the machine is set. Therefore, after you finish work on the machine and reconnect the power cord to the AC, even if you do not press the main power switch, the machine will start automatically and the moving parts will begin to move. **When working on moving parts, be careful that fingers or clothes do not get caught.**

Note

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

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

Shutdown Method

1. Press the main power switch [A] on the left side of the machine.
2. Take out the power cord
3. Wait 3 minutes (this is the time required if you will remove the rear cover and access the interior of the machine, to take out the controller board for example).

Note: If some LEDs on any of the boards are blinking or lit, current is still flowing.

After the shutdown process, the main power is turned off automatically.



d1822066

When the shutdown is complete

Main power LED: Off

Operation panel LED: Off

Note

- How to start from shutdown
- To start the machine, press the main power switch. However, if you press the main power switch between the beginning and the end of a shutdown, the machine will not start.

Forced Shutdown

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

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

In general, do not use the forced shutdown.

Important

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

Special Tools and Lubricants

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

Unique or Common:

U: Unique for this model

C: Common with listed model

Special Tools

No.	Part No.	Description	Q'ty	Unique or Common
1	A1849501	Scanner Positioning Pin (2pcs/set)	1	C (General)
2	A2309003	Adjustment Cam - Laser Unit	1	C (General)
3	A2679002	Positioning Pin - Laser Unit	1	C (General)
4	B6455020	SD Card	1	C (General)
5	A2929500	Test Chart - S5S (10pcs/set)	1	C (General)

Lubricants

No.	Part No.	Description	Q'ty	Unique or Common
1	A2579300	Grease Barrierta - S552R	1	C (General)

Note

- A PC (Personal Computer) is required for creating the Encryption key file to an SD card when replacing the controller board for a model in which HDD encryption has been enabled.

Exterior Covers

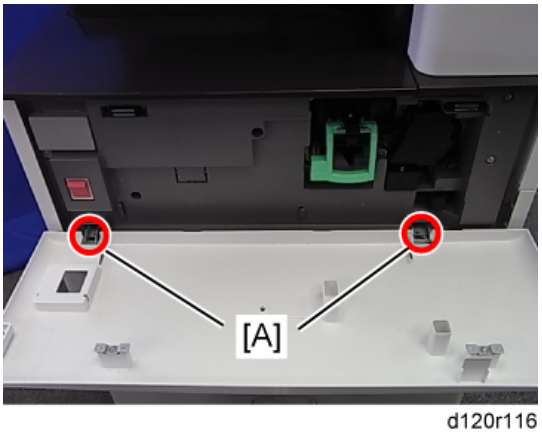
Front Door

1. Open the front door [A].



d120r115

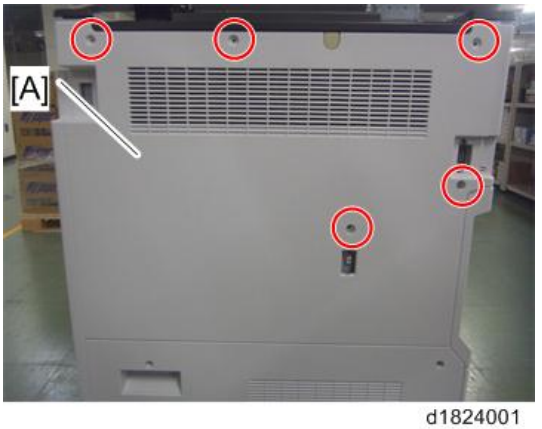
2. Remove the two pins [A], and then remove the front cover.



d120r116

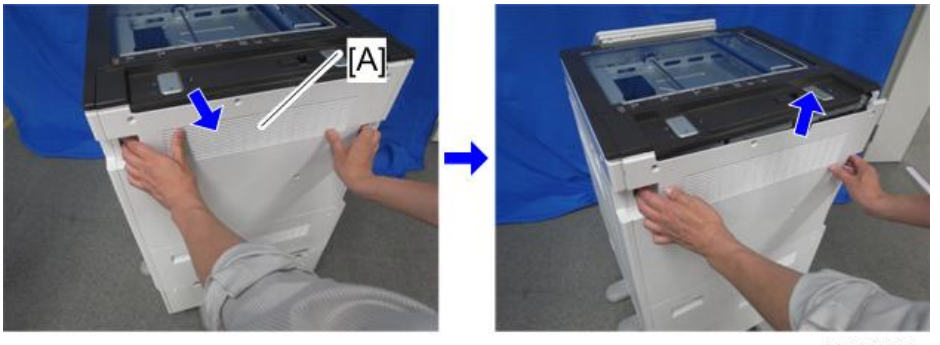
Upper Rear Cover

1. Remove the fixing screws of the upper rear cover [A] (x5).



d1824001

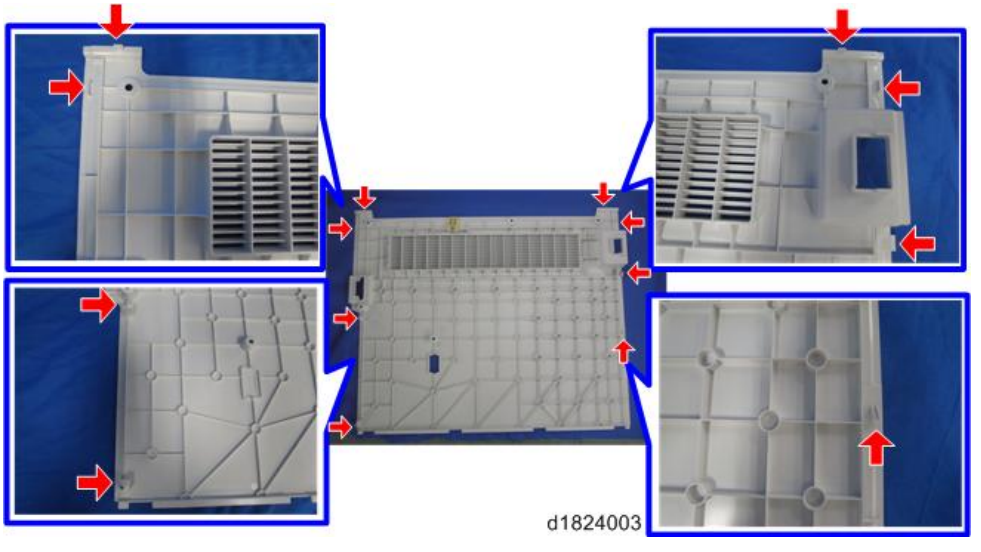
2. Pull and remove the upper rear cover [A] in the upper right direction.



d1824002

Note

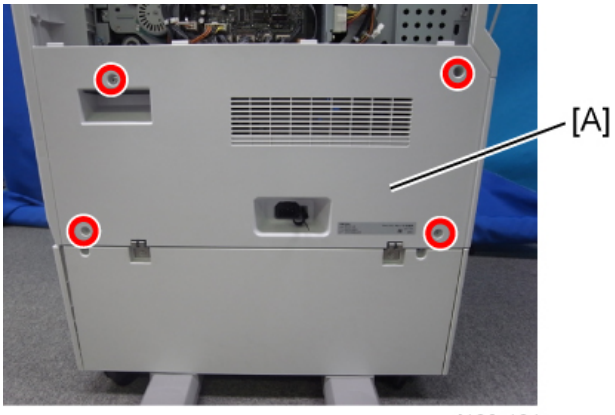
- Check the position of the hooks in the photo below before removing.



d1824003

Lower Rear Cover

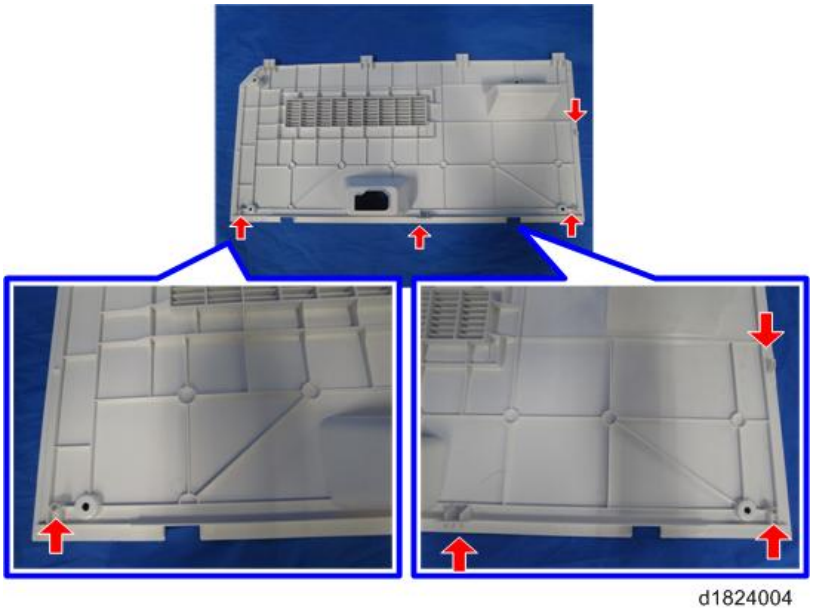
1. Remove the upper rear cover. (page 225 "Upper Rear Cover".)
2. Remove the lower rear cover [A] (x4).



d120r121

Note

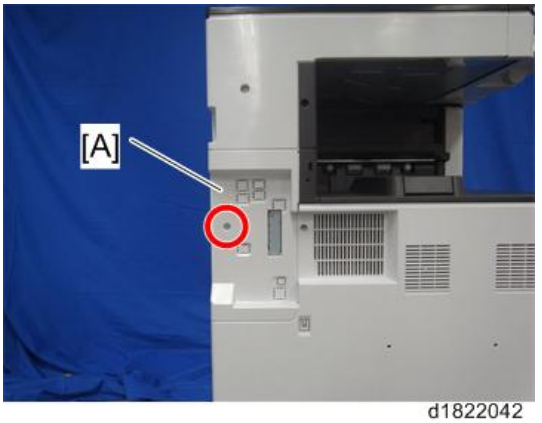
- Check the position of the hooks in the photo below before removing.



d1824004

Controller Cover

1. Remove the controller cover [A] (x1).

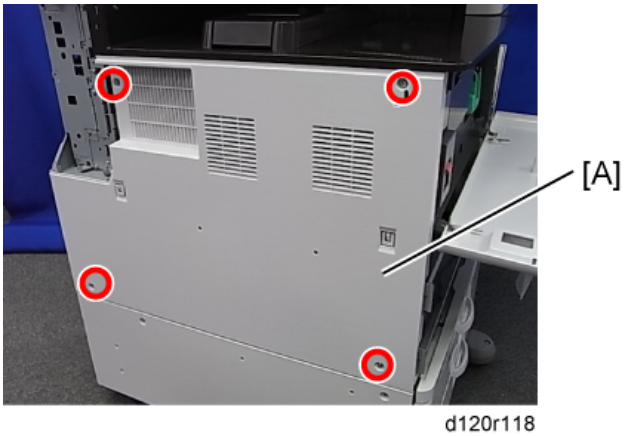


d1822042

4

Left Cover

1. Remove the controller cover. (page 227 "Controller Cover".)
2. Remove the fixing screws of the left cover [A] (x4).



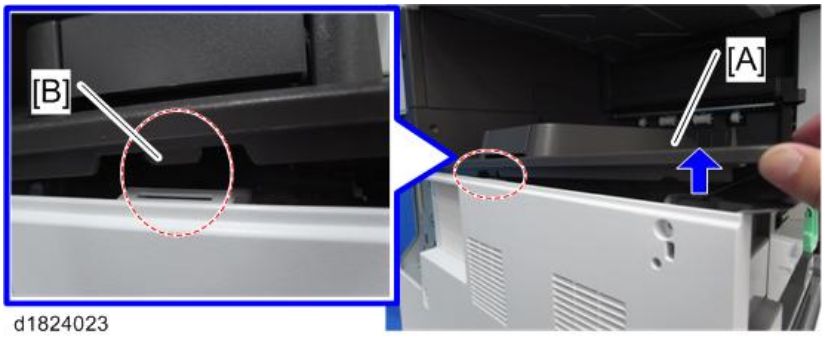
d120r118

3. Remove the fixing screws of the output tray [A] (x1).



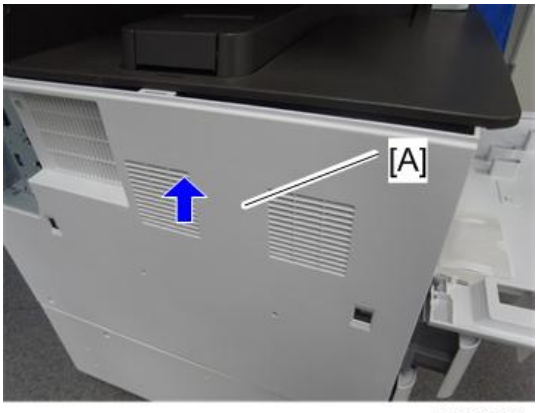
d1824022

4. Lift up the output tray [A] by disconnecting the hook [B].



d1824023

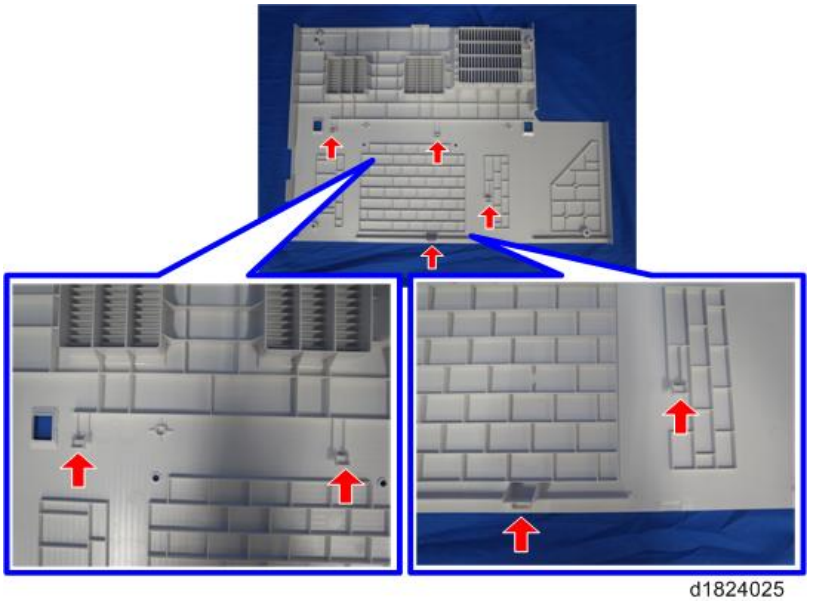
5. Remove the left cover [A] upward.



d1824024

Note

- Check the position of the hooks in the photo below before removing.



d1824025

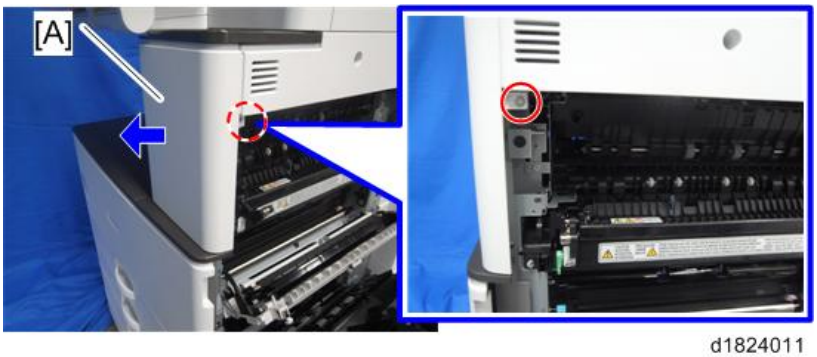
Right Front Cover

1. Open the duplex unit [A].



d1824010

2. Remove the right front cover [A] (x1).



d1824011

Note

- Check the position of the hooks in the photo below before removing.



d1824012

Right Cover

1. Remove the fixing screws of the right cover [A] (x2).



d1824005

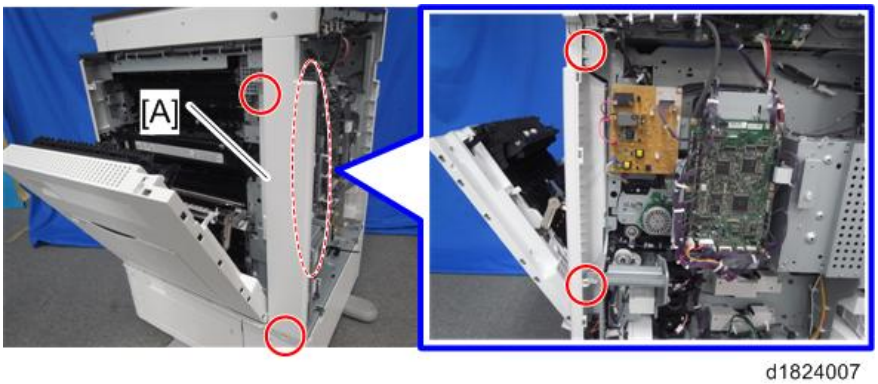
2. Open the duplex unit [A] and remove the right cover [B].



d1824006

Right Rear Cover

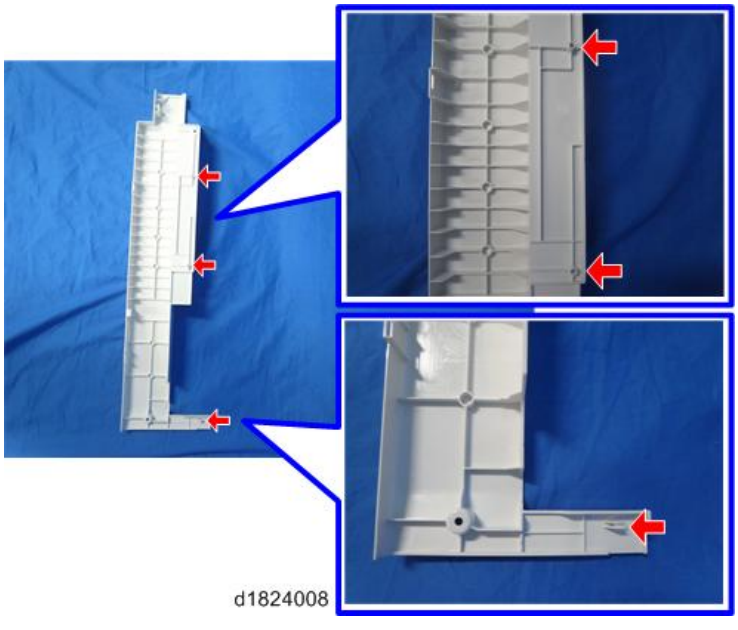
1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Remove the lower rear cover. (page 227 "Lower Rear Cover")
3. Remove the right cover. (page 231 "Right Cover")
4. Remove the right rear cover [A] (x4).



d1824007

Note

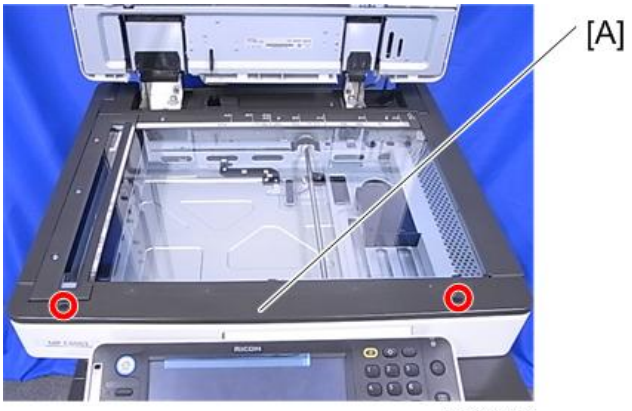
- Check the position of the hooks in the photo below before removing.



d1824008

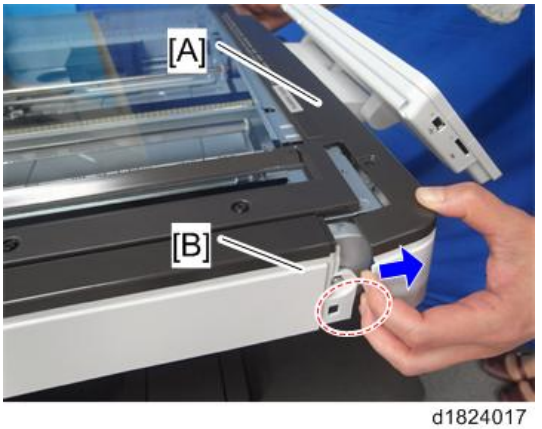
Scanner Front Cover

1. Remove the fixing screws of the scanner front cover [A] (x2).



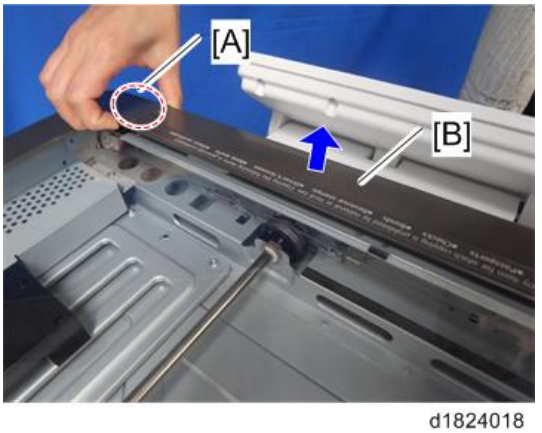
d1462302

2. Remove the left hook [B] of the scanner front cover [A].



d1824017

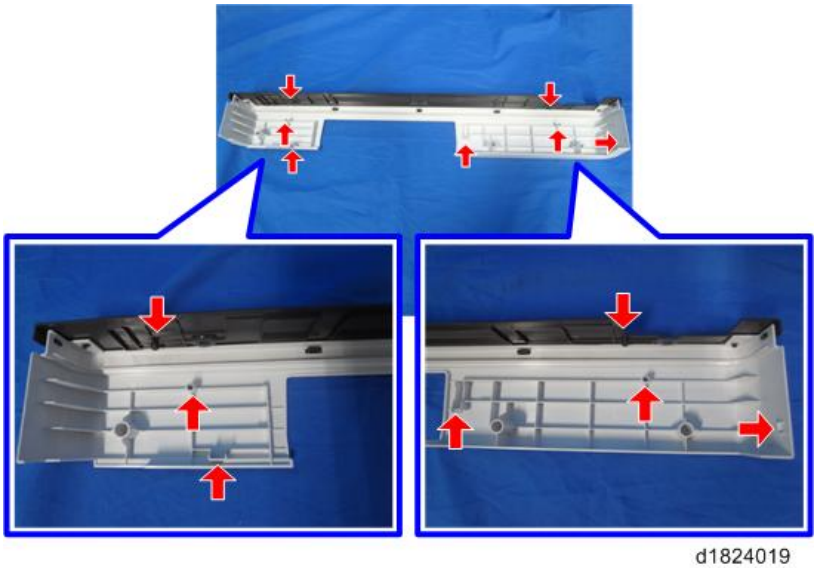
3. Disconnect the hook at the back [A] in the figure below, and remove the scanner front cover [B] upward.



d1824018

Note

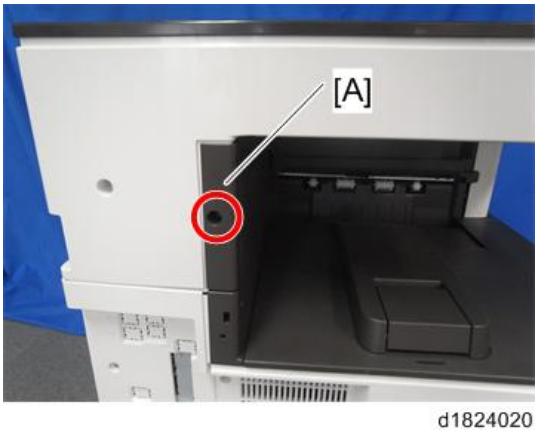
- Check the position of the hooks in the photo below before removing.



d1824019

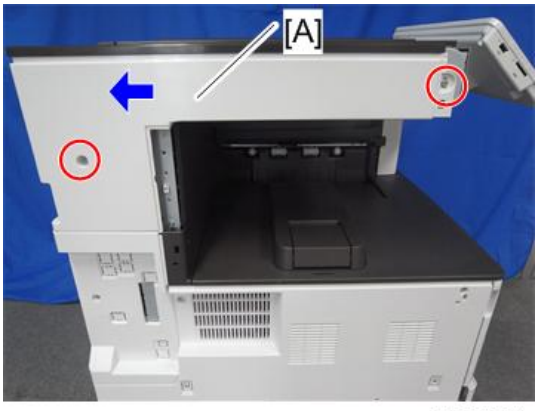
Scanner Left Cover

1. Remove the scanner front cover. (page 233 "Scanner Front Cover")
2. Remove the left frame cover [A] (x1).



d1824020

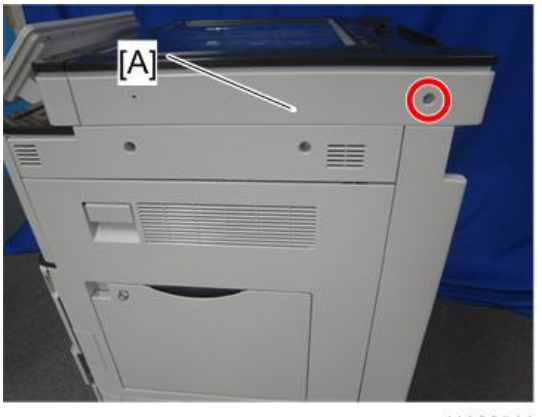
3. Remove the scanner left cover [A] (x2).



d1824021

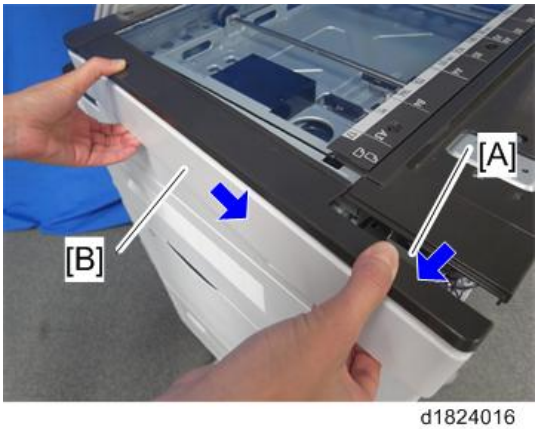
Scanner Right Cover

1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Remove the fixing screws of the scanner right cover [A] (x1).



d1822068

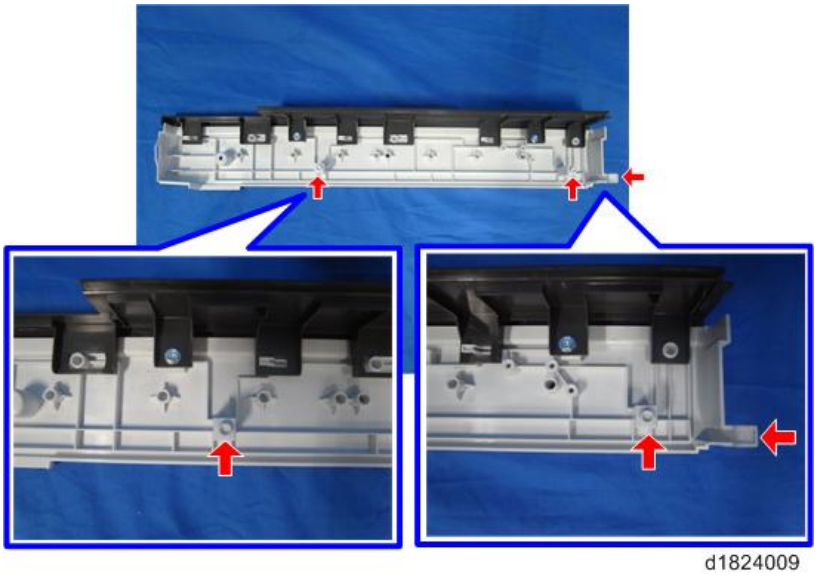
3. Remove the right side [A] first and remove the scanner right cover [B] towards the rear.



d1824016

Note

- Check the position of the hooks in the photo below before removing.



d1824009

Scanner Upper Cover

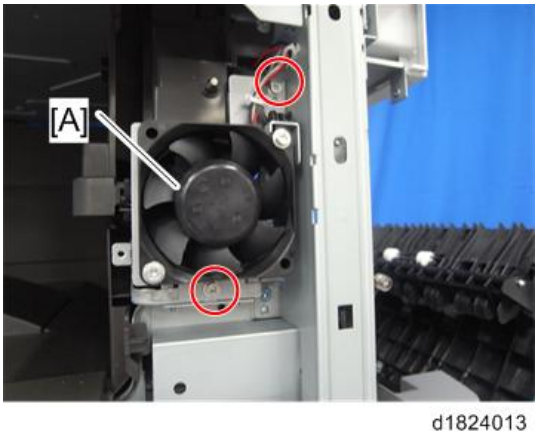
1. Remove the platen cover or ADF.
2. Remove the upper rear cover. (page 225 "Upper Rear Cover")
3. Remove the scanner upper cover [A] (x2).



d1822078

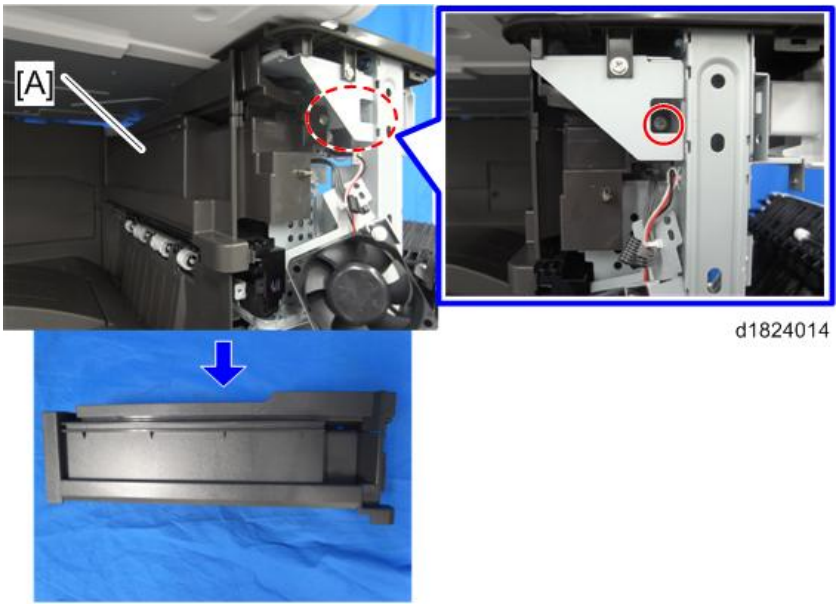
Paper Exit Cover

1. Remove the right front cover. (page 230 "Right Front Cover")
2. Remove the fusing fan with bracket [A] (x2).



d1824013

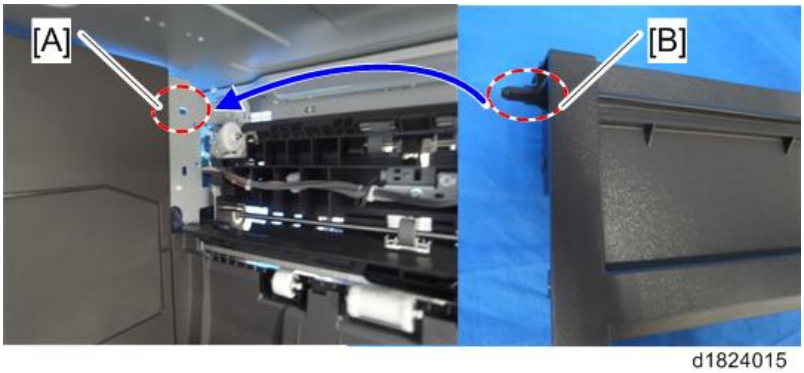
3. Remove the paper exit cover [A] (x1).



d1824014

Note

- Check the position of the hooks in the photo below before removing.



d1824015

Output Tray

1. Open the front door [A].



d120r115

2. Remove the output tray [A] (x1).

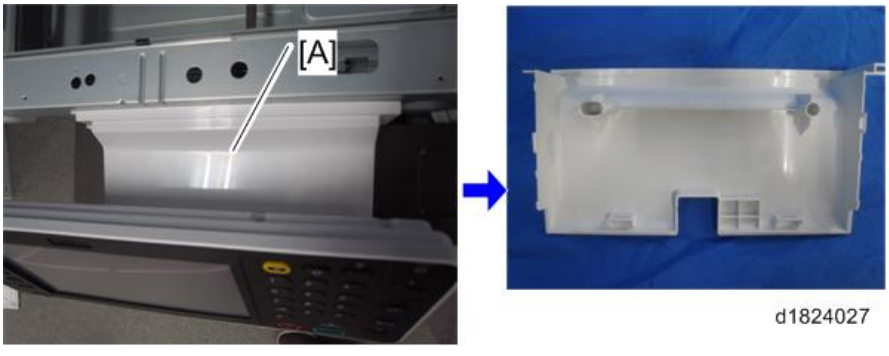


d1824022

Operation Panel

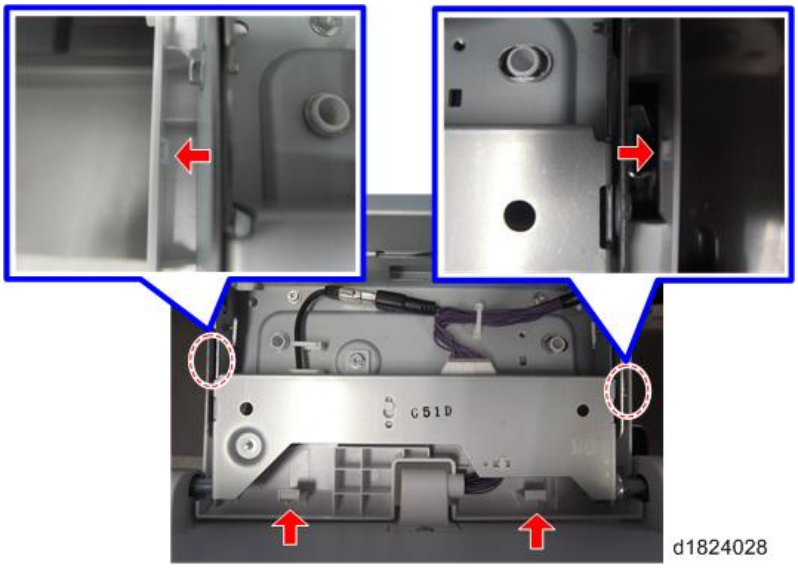
Operation Panel

1. Remove the scanner front cover. (page 233 "Scanner Front Cover")
2. Remove the operation panel upper cover [A].

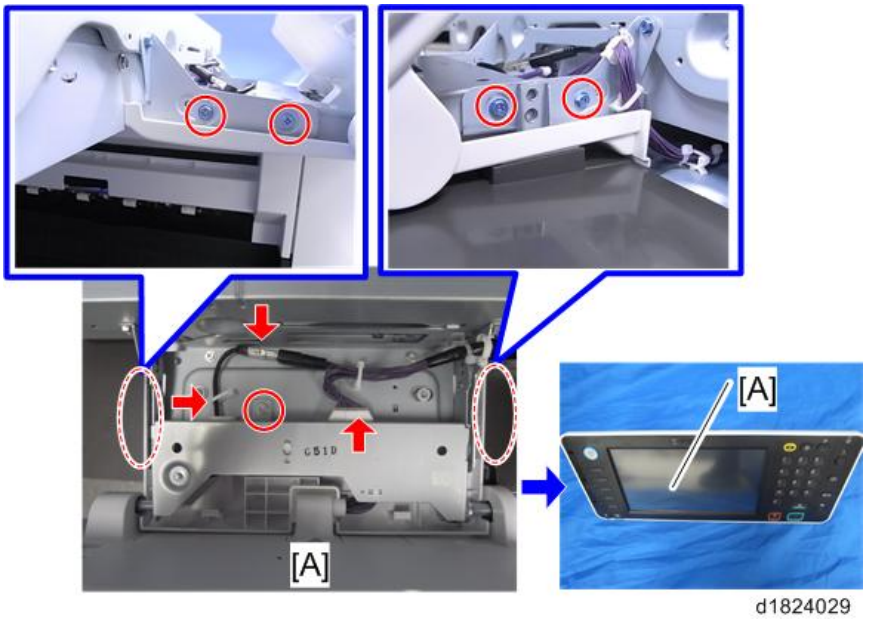


Note

- Check the position of the hooks in the photo below before removing.



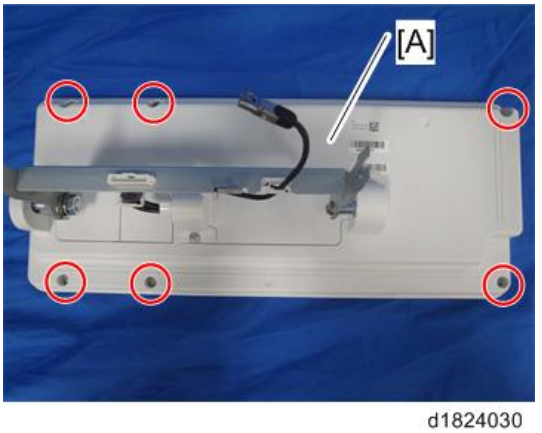
3. Remove the operation panel [A] (x5, x1, USB x1, x1).



d1824029

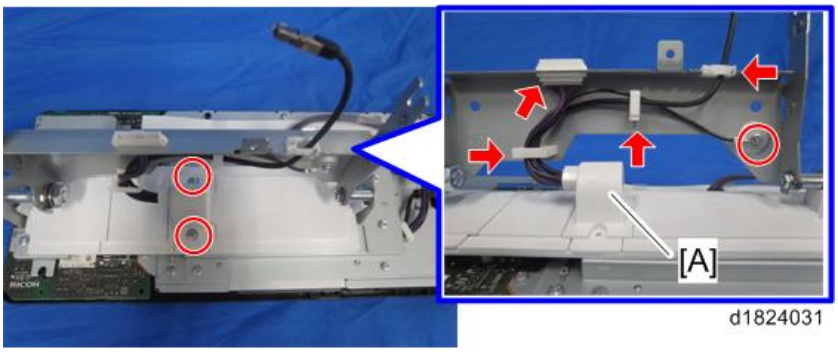
LCD Panel

1. Remove the operation panel. (page 241 "Operation Panel")
2. Remove the operation panel lower cover [A] (x6).

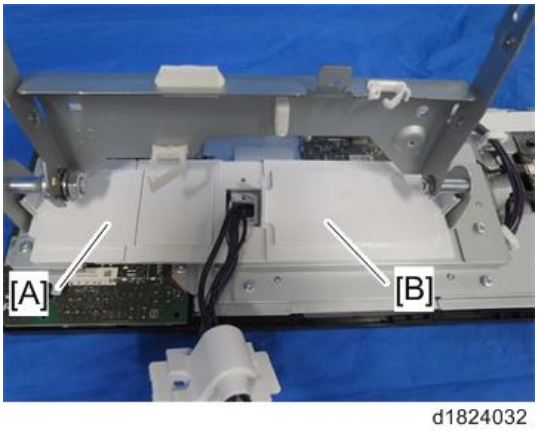


d1824030

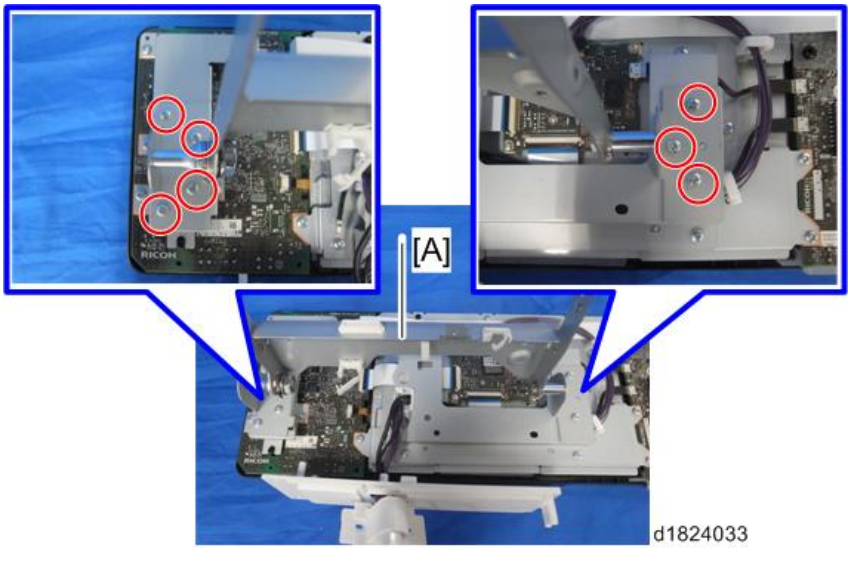
3. Remove the harness guide [A] (x3, x1, x3).



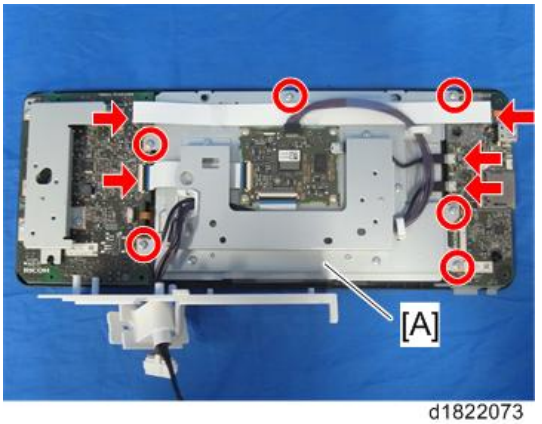
4. Remove the bracket covers [A] and [B].



5. Remove the operation panel arm bracket [A] (x7).

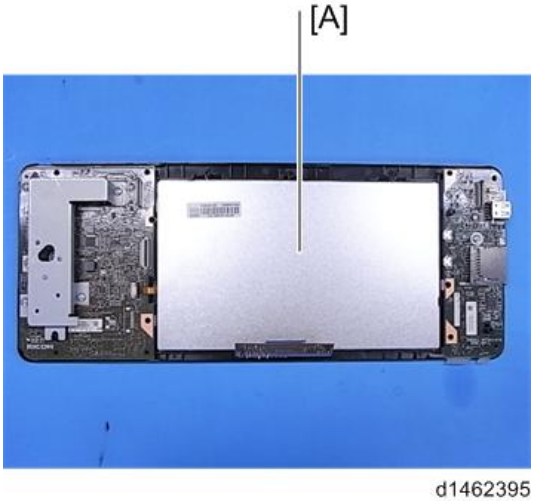


6. Remove the bracket [A] (x6, x3, USB x2).



d1822073

7. Remove the LCD panel [A].

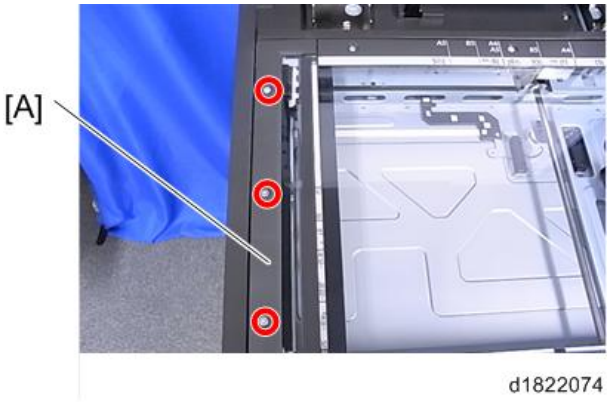


d1462395

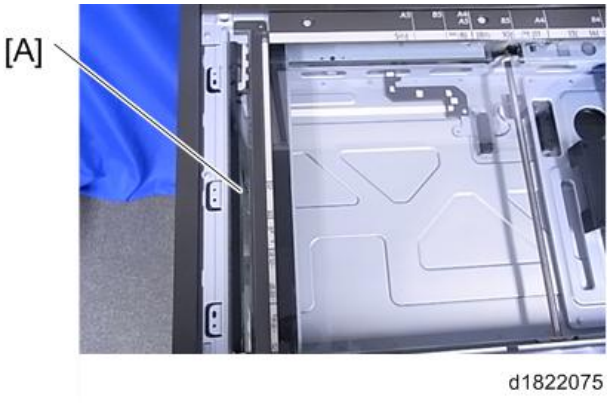
Scanner Unit

Exposure Glass

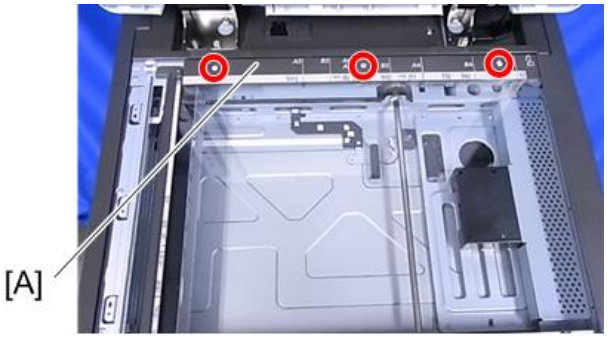
1. Open the platen cover or ADF.
2. Remove the glass cover [A]. (x3).



3. Remove the ADF exposure glass [A].

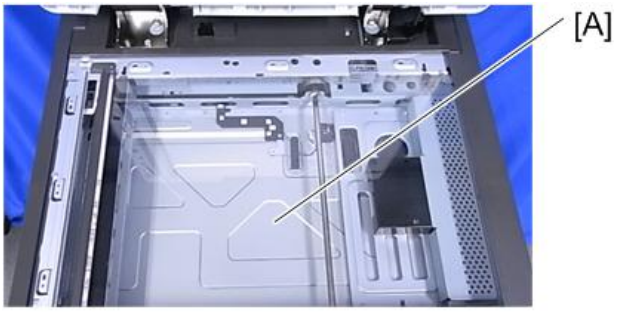


4. Remove the rear scale [A] (x3).



d1822076

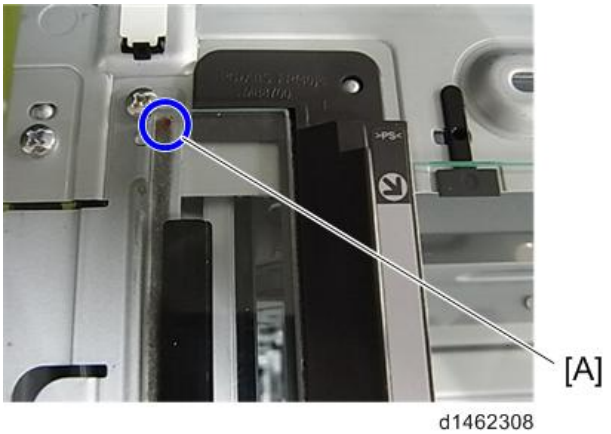
5. Remove the exposure glass [A] and the left scale.
   (The exposure glass and the left scale are attached with double-sided tape.)



d1822077

Note

- When installing, please follow the points below:
- Set the ADF exposure glass so that the blue mark [A] is on the left at the rear of the operation panel.

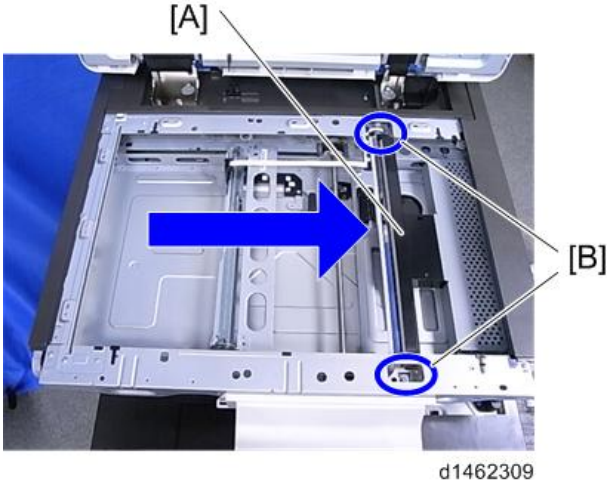


d1462308

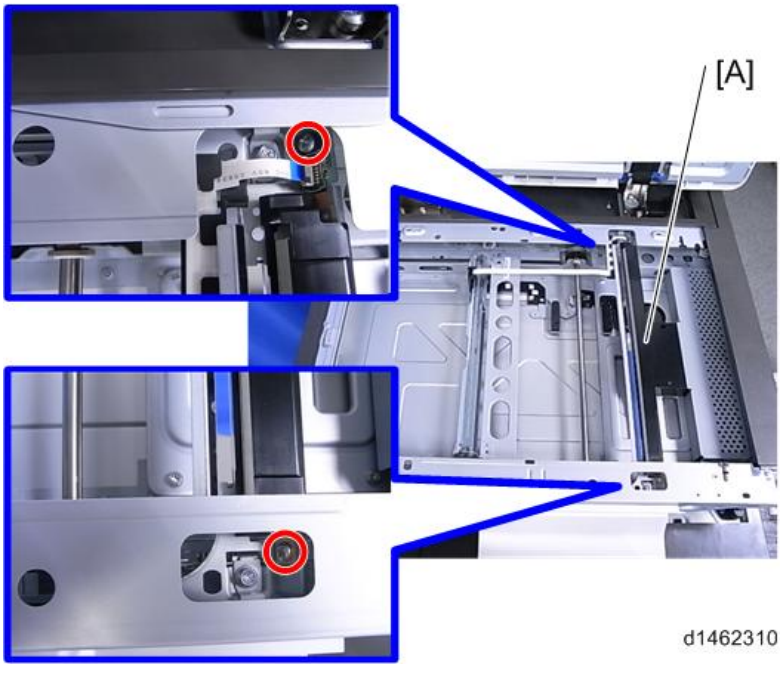
- Set so that the locating hole of the left scale fits over the locating boss of the front/rear frame.

Exposure Lamp (LED)

1. Remove the exposure glass (page 245 "Exposure Glass")
2. Move the exposure lamp (1st scanner carriage) [A] to position [B].

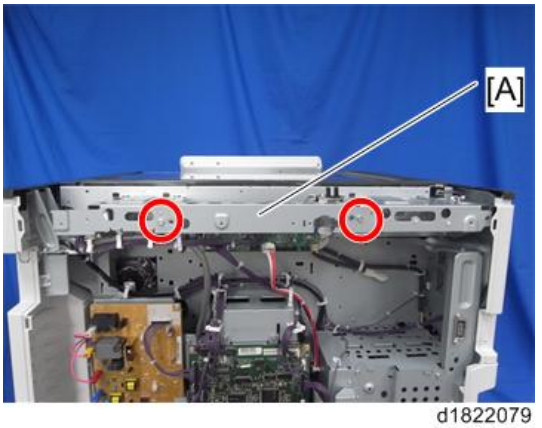


3. Remove the exposure lamp [A] (x2, x1).



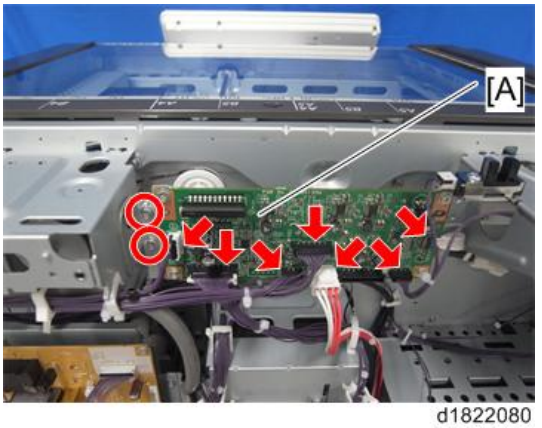
Scanner Motor

1. Remove the scanner upper cover. (page 237 "Scanner Upper Cover")
2. Remove the bracket [A] (x2).



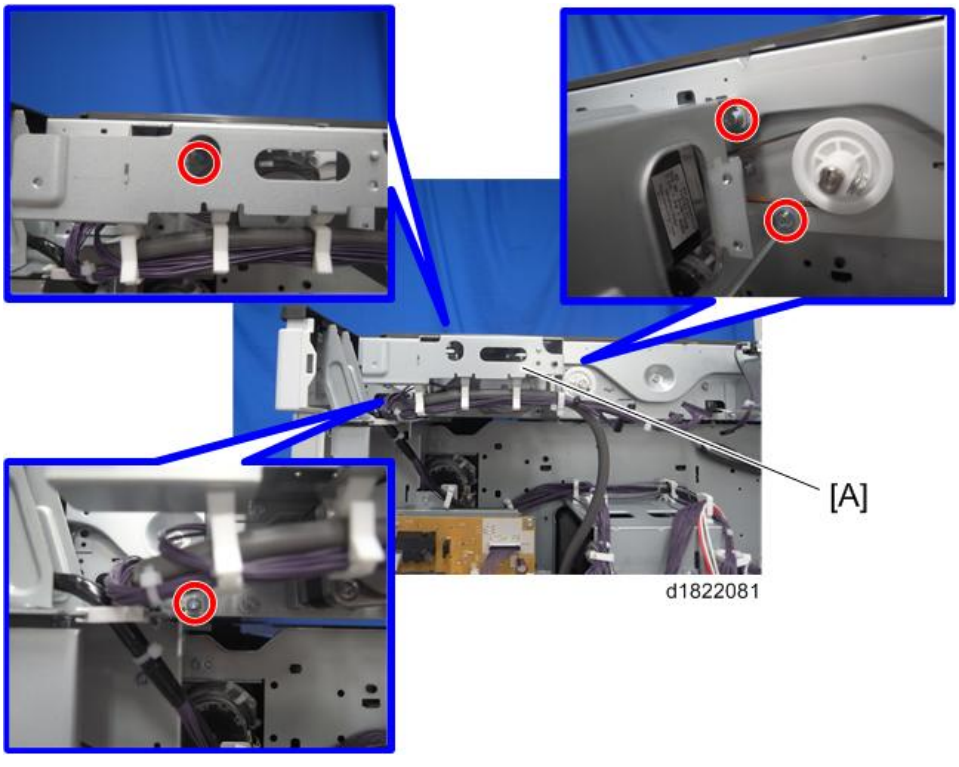
d1822079

3. Remove the SIO unit [A] (x2, x7).

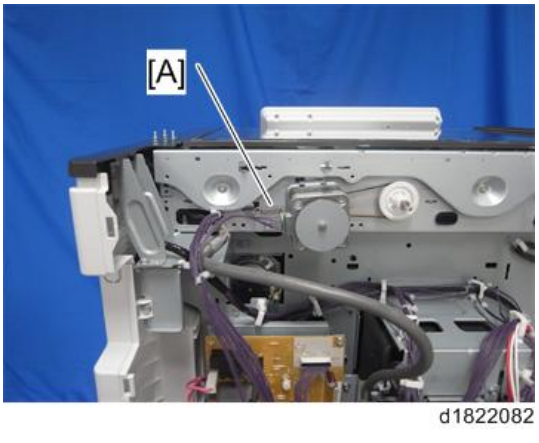


d1822080

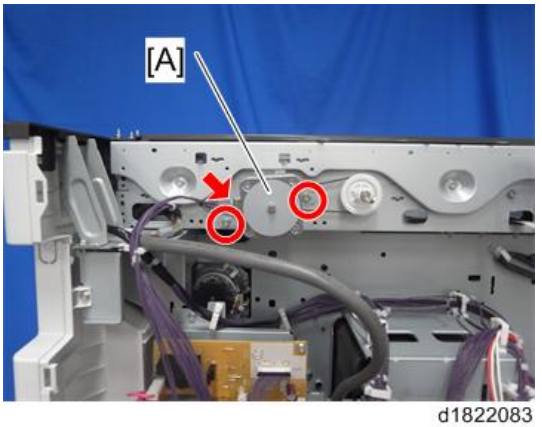
4. Remove the bracket [A] (x4, x3).



5. Remove the spring [A].

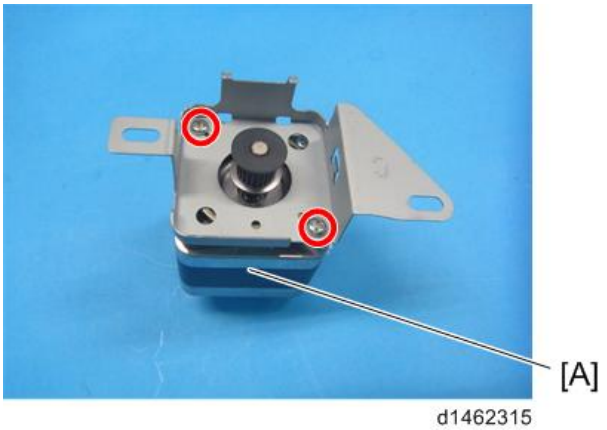


6. Remove the scanner motor unit [A] (x2, x1).



d1822083

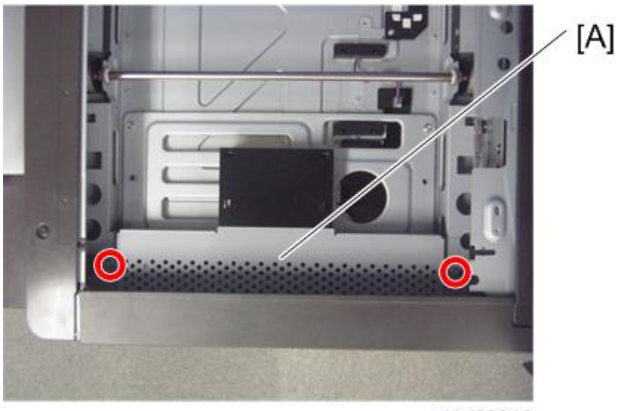
7. Remove the scanner motor [A] (x2).



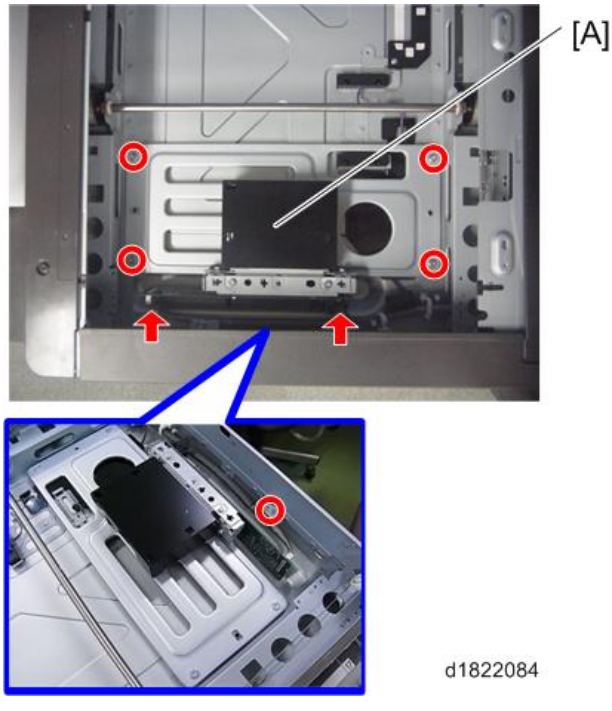
d1462315

Lens Block

1. Remove the exposure glass. (page 245 "Exposure Glass")
2. Remove the lens block cover [A] (x2).



3. Remove the lens block [A] (x5, x2).

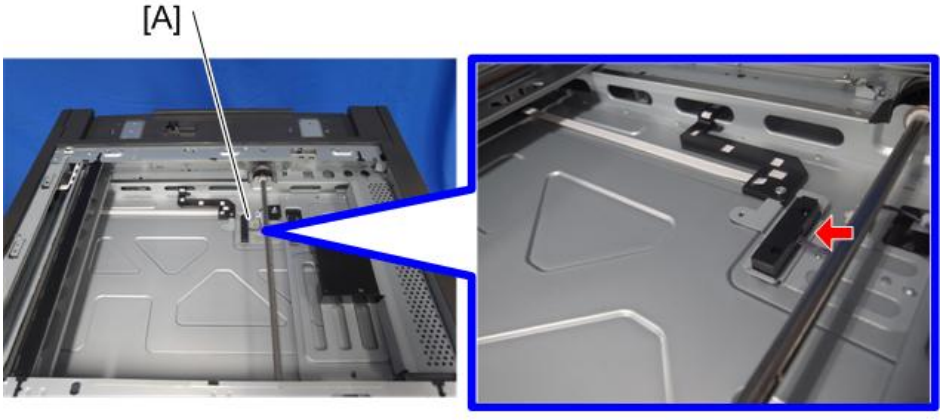


Original Size Sensor

1. Remove the exposure glass. (page 245 "Exposure Glass")
2. Remove the original size sensor [A] (x1).

Note

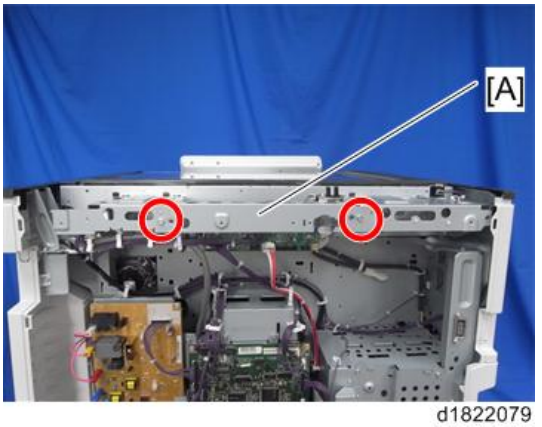
- When a screw driver is inserted, the tab can be removed smoothly.



d1822085

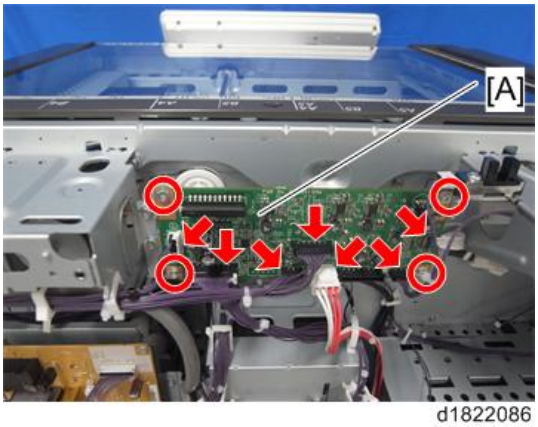
SIO

1. Remove the scanner upper cover. (page 237 "Scanner Upper Cover")
2. Remove the Bracket [A] (x1)



d1822079

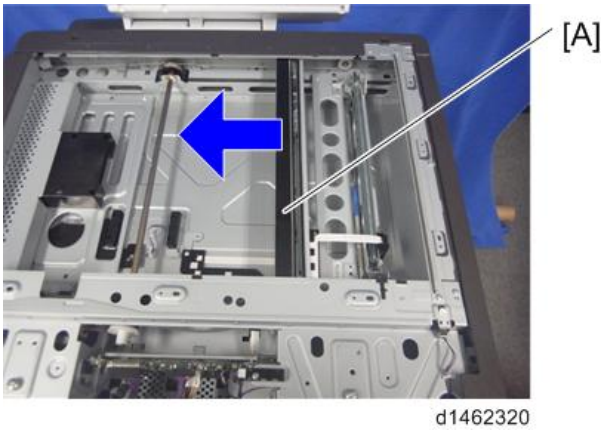
3. Remove the SIO [A] (x4, x7).



d1822086

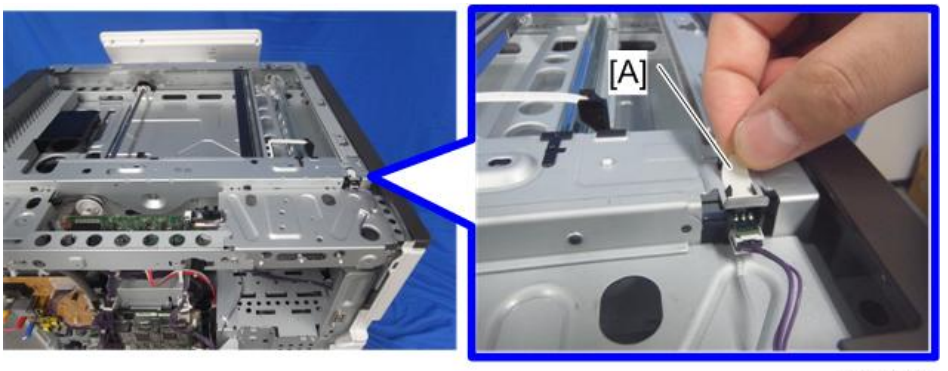
Scanner HP Sensor

1. Remove the scanner upper cover. (page 237 "Scanner Upper Cover")
2. Remove the exposure glass. (page 245 "Exposure Glass")
3. Slide the exposure lamp (1st scanner carriage) [A] in the direction of the arrow a little.



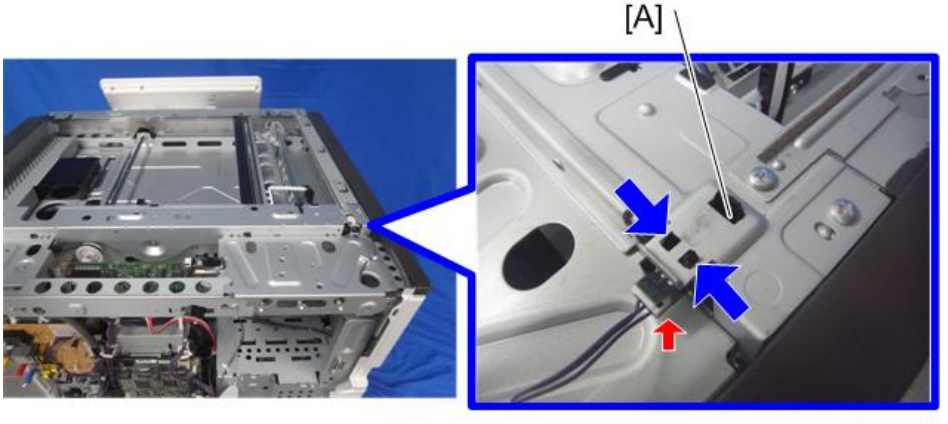
d1462320

4. Peel off the sensor stopper [A].



d1822087

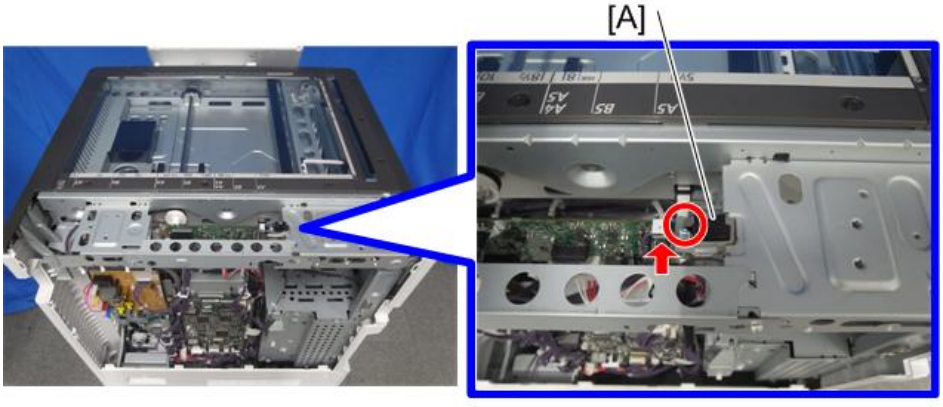
5. Remove the scanner HP sensor [A] (x1).



d1822088

DF Position Sensor

1. Remove the scanner upper cover. (page 237 "Scanner Upper Cover")
2. Remove the DF position sensor [A] (x1, x1).

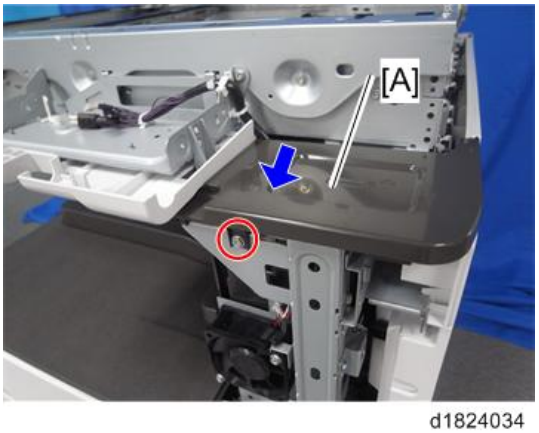


d1822089

Adjusting the Scanner Wire

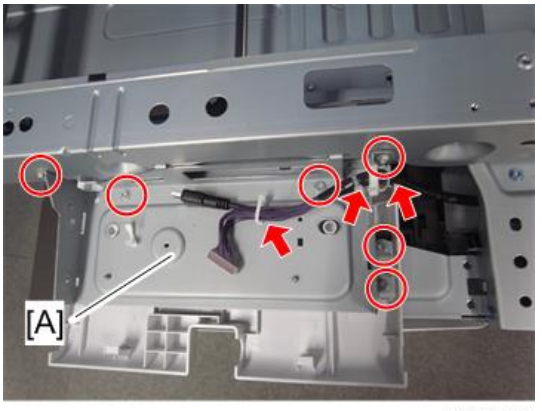
Scanner Wire (Front)

1. Remove the right front cover. (page 230 "Right Front Cover")
2. Remove the scanner right cover. (page 236 "Scanner Right Cover")
3. Remove the exposure glass. (page 245 "Exposure Glass")
4. Remove the operation panel. (page 241 "Operation Panel")
5. Remove the cover [A] by sliding it forward (x1).



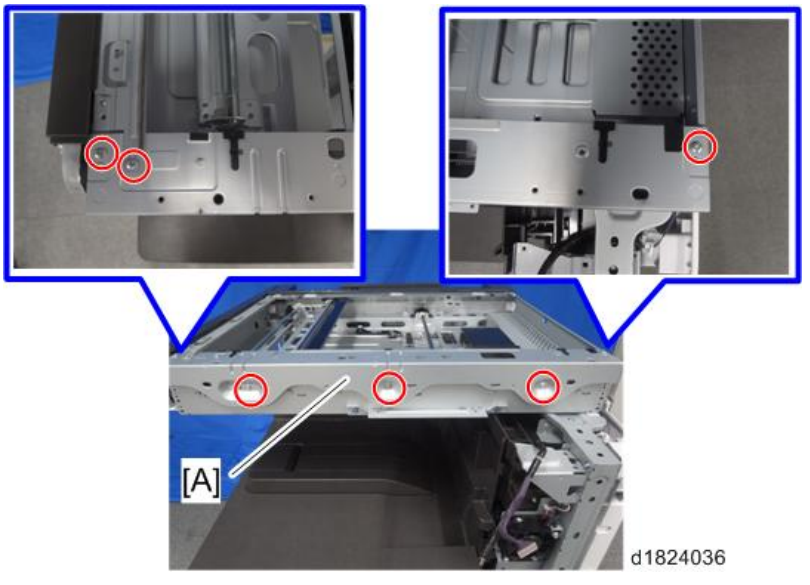
d1824034

6. Remove the operation panel lower bracket [A] (x6, x3).



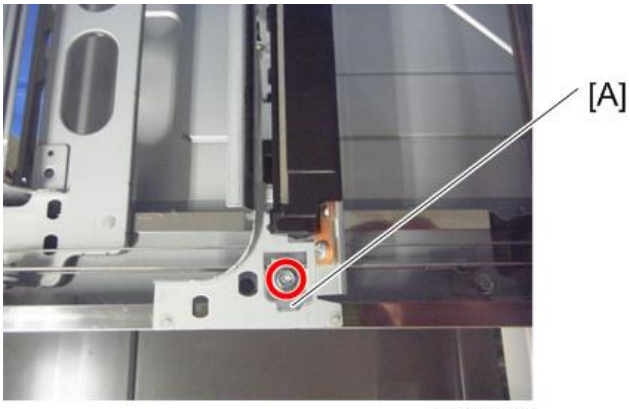
d1824035

7. Remove the scanner front frame [A] (x6).



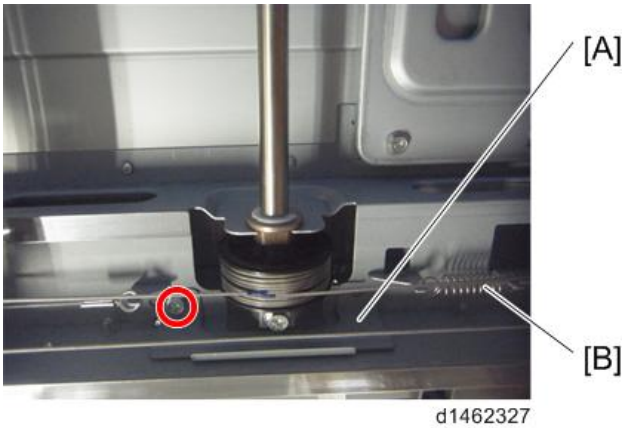
d1824036

8. Move the 1st scanner carriage to the set position of the scanner fixing pin.
9. Remove the wire clamp [A] (x1).



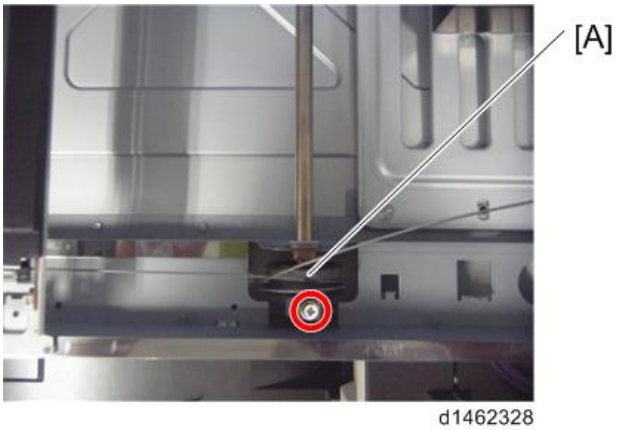
d1462326

10. Remove the wire fixing bracket [A] and the spring [B] (x1).



d1462327

11. Remove the wire pulley [A] (x1, x1).



d1462328

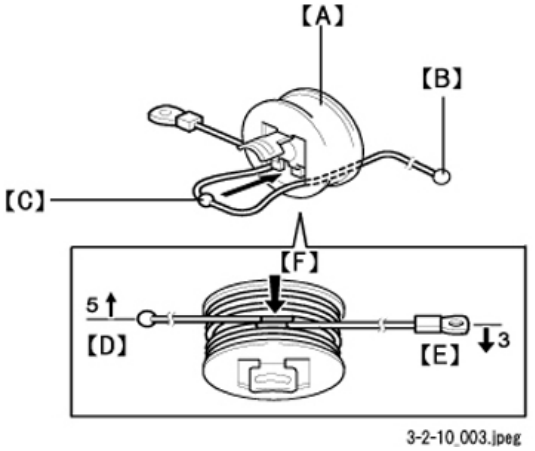
Note

- Do not touch the mirror and the lamp.

- When you move the carriage, hold the central part and move it gently.

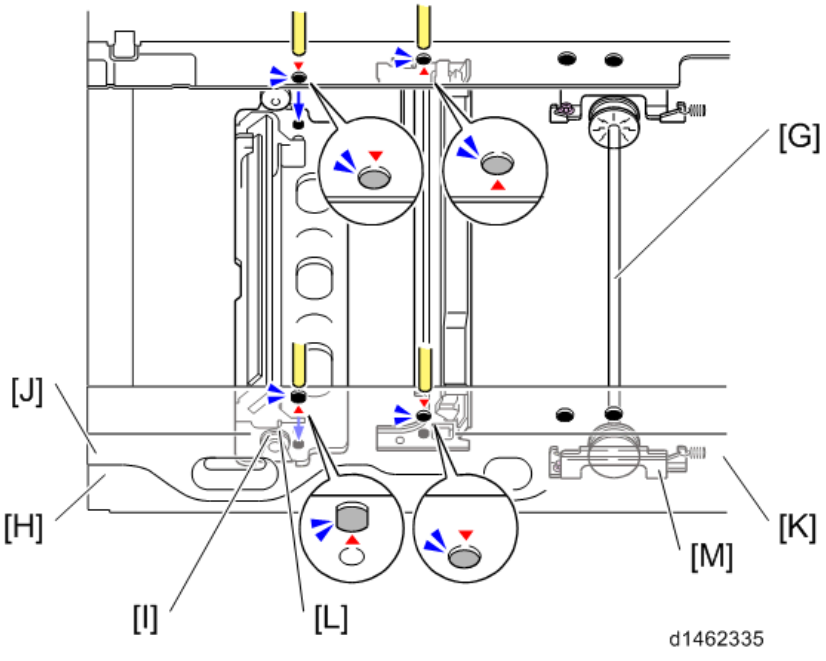
Scanner wire assembly (front side)

1. Pull the scanner wire ball end [B] to the pulley [A] from the left side of the pulley as shown in the diagram.
2. Set the ball [C] in the center part of the wire on the pulley.
3. Turn the ball end [D] 5 times counterclockwise along the edge on the rear side of the pulley.
4. Turn the ring end [E] 3.5 times clockwise along the edge at the front side of pulley.
5. Check that the blue marks [F] of the wire overlap, and secure it temporarily with Teflon tape, etc.



6. Set the pulley on the drive shaft [G] (tighten the screw temporarily).
7. Set the ball end of the wire in the following order.
   - Left frame pulley (outside) [H]
   - 2nd scanner carriage (outside) [I]
   - Left frame slit [J]
8. Set the ring end of the wire in the following order.
   - Right frame pulley (outside) [K]
   - 2nd scanner carriage (inside) [L]
   - Scanner retaining bracket [M]

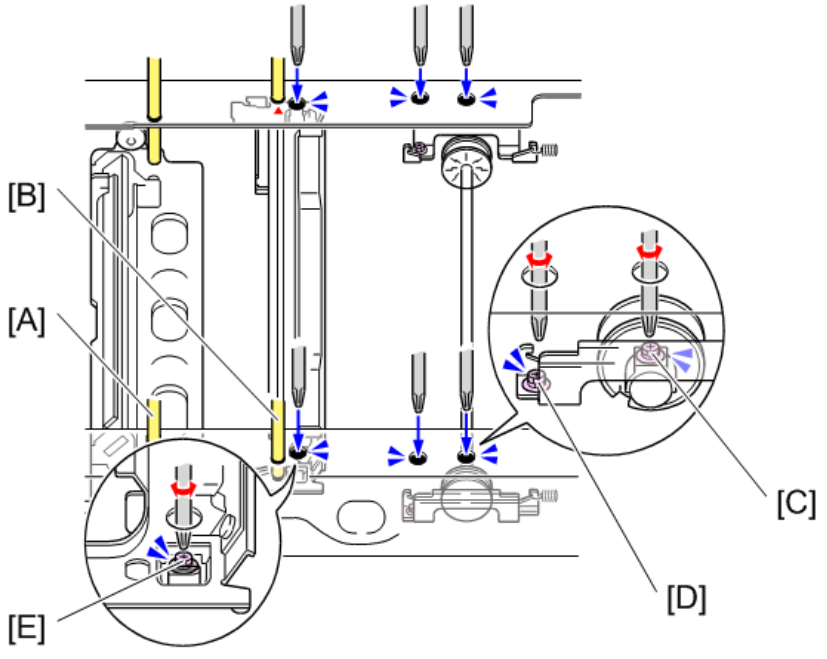
     (Tighten the screw of the scanner retaining bracket temporarily)



9. Remove the tape which temporarily held the wire in Step 5.
10. Attach the spring.

Scanner position adjustment

1. Set the scanner positioning pins (4).
    - 2nd scanner carriage and frame hole [A]
    - 1st scanner carriage and frame hole [B]
    - Same position as [A] on the rear side
    - Same position as [B] on the rear side
2. Tighten the screw [C] of the pulley which was temporarily tightened.
3. Tighten the screw [D] of the scanner retaining bracket which was temporarily tightened.
4. Attach the wire clamp [E].



5. Pull out the scanner positioning pins.
6. Holding the center part of the 1st scanner carriage, move it to the left and right to ensure it moves smoothly.

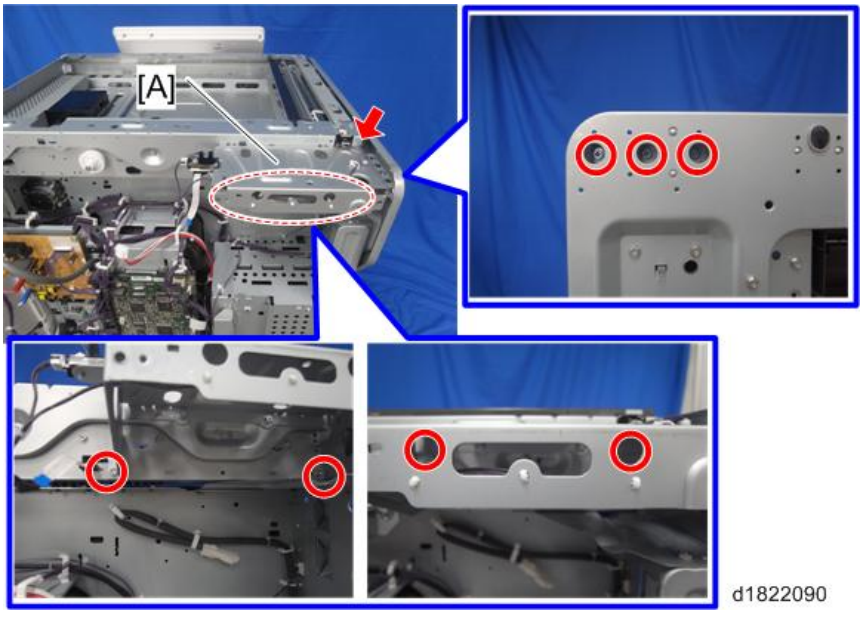
   If it does not move smoothly, loosen the scanner wire, and perform the scanner position adjustment procedure again.

Note

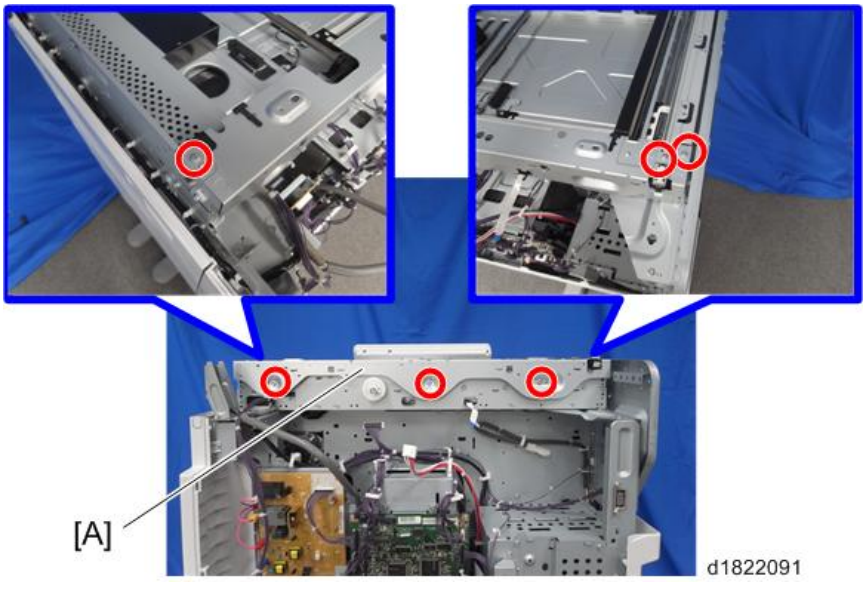
- After replacing the wire, make a test copy, and check skew, magnification, and whether there is a registration gap. If there is a gap, adjust the scanner wire position again, or perform Scan Registration Adjustment (SP4010-SP4011).

Scanner Wire (Rear)

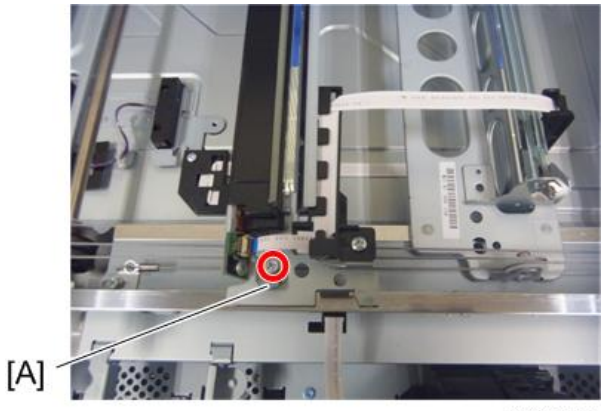
1. Remove the scanner right cover. (page 236 "Scanner Right Cover")
2. Remove the scanner left cover. (page 235 "Scanner Left Cover")
3. Remove the exposure glass. (page 245 "Exposure Glass")
4. Remove the scanner motor. (page 248 "Scanner Motor")
5. Remove the bracket [A] (x7, x1).



6. Remove the rear frame [A] (x 6)

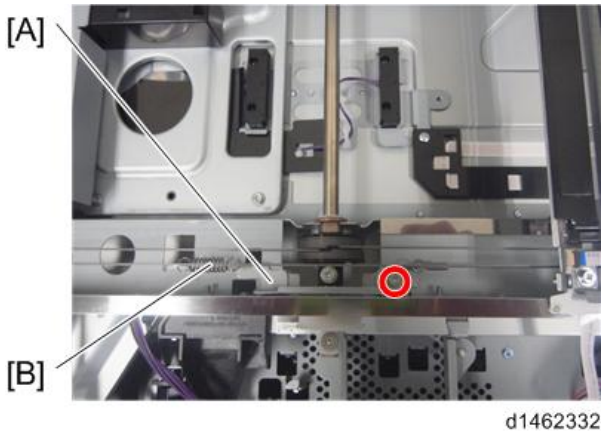


7. Move to the set position of the fixing pin for the first carriage.
8. Remove the wire clamp [A] (x1).



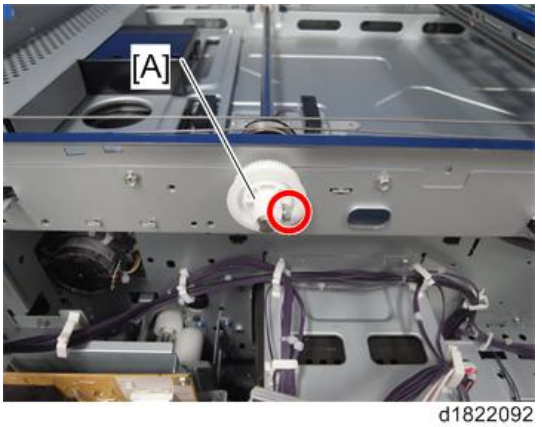
d1462331

9. Remove the wire fixing bracket [A] and the spring [B] (x1).



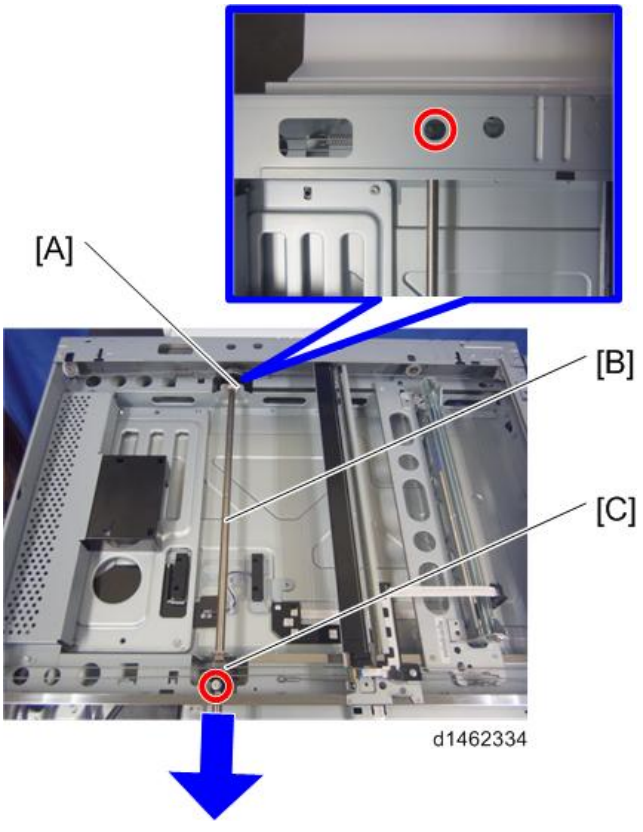
d1462332

10. Remove the scanner drive gear [A] (x1).



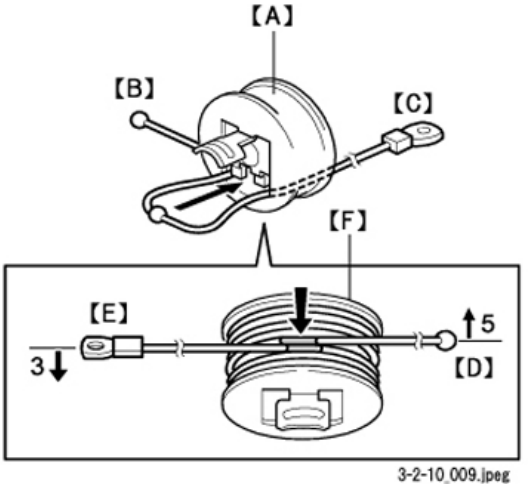
d1822092

11. Remove the screw and the clip ring of the wire pulley (front) [A] and wire pulley (rear) [C], draw out the scanner drive shaft [B] in the direction of the arrow, and remove the wire pulley (rear) [C] (x 1, x2).



Scanner Wire Assembly (rear side)

1. Pull the scanner wire ball end [B] to the pulley [A] from the right side of the pulley as shown in the diagram.
2. Set the ball [C] in the center part of the wire on the pulley.
3. Turn the ball end [D] 4.5 times clockwise along the edge on the rear side of the pulley.
4. Turn the ring end [E] 3.5 times counterclockwise along the edge at the front side of the pulley.
5. Check that the blue marks [F] of the wire overlap, and secure it temporarily with Teflon tape, etc.



6. Set the pulley on the drive shaft, and attach the scanner drive gear.
7. Attach the scanner wire on the rear side as in Step 7, attaching the scanner wire (front side).

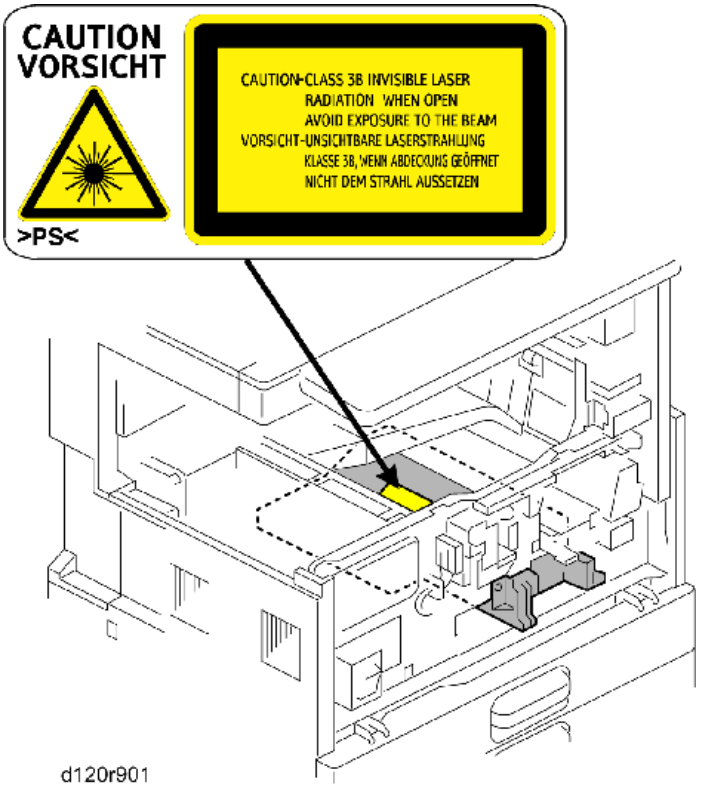
Laser Unit

⚠WARNING

- Turn off the main power switch and disconnect the power cord before you start any of the procedures in this section. Laser beams can seriously damage your eyes.

Caution Decal Locations

The caution decal is located in the laser section as shown below.



Laser Unit

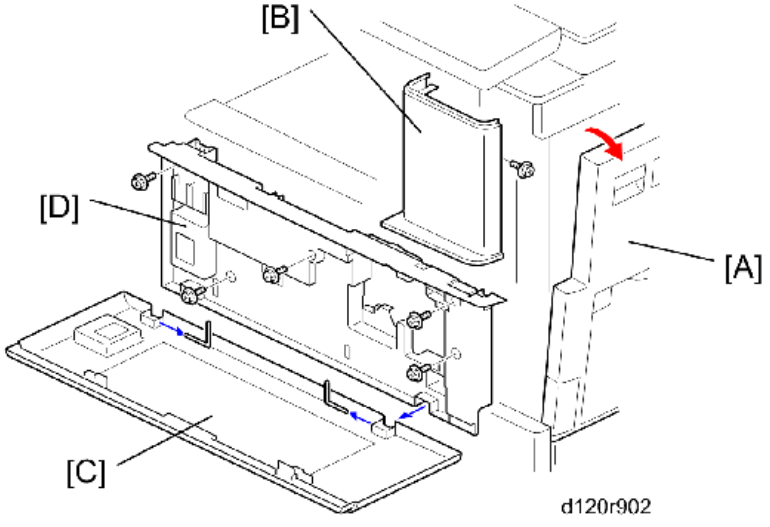
⚠WARNING

- Turn off the main power switch and disconnect the power cord before you start this procedure in this section. Laser beams can seriously damage your eyes.

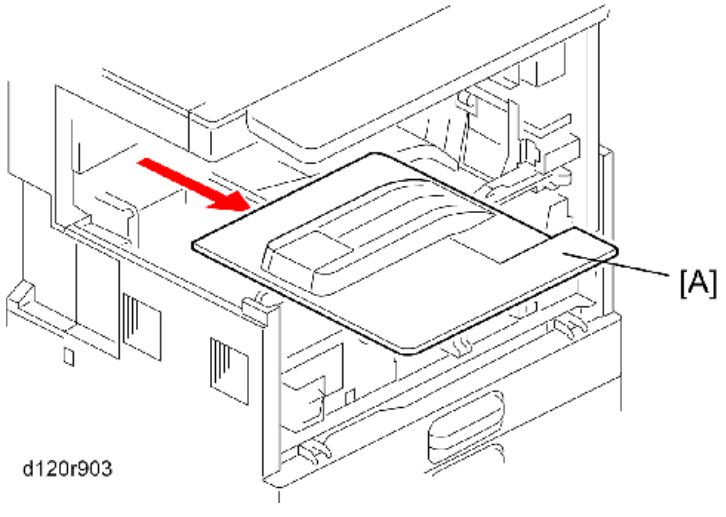
1. Remove the following options if these have been installed.
    - Finisher

- Bridge unit
- Optional shift tray

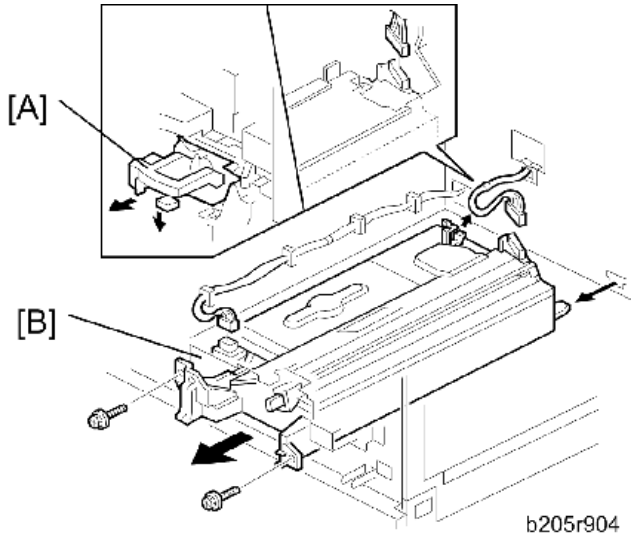
2. Open the duplex unit [A].
3. Remove the right front cover [B] (x1, Hook x1).
4. Remove the front cover [C] (Pins x2).
5. Remove the front inner cover [D] (x5).



6. Remove the output tray [A] (Hook x1).



7. Remove the toner supply unit [A].
8. Remove the laser unit [B] (x2, x2, x1).

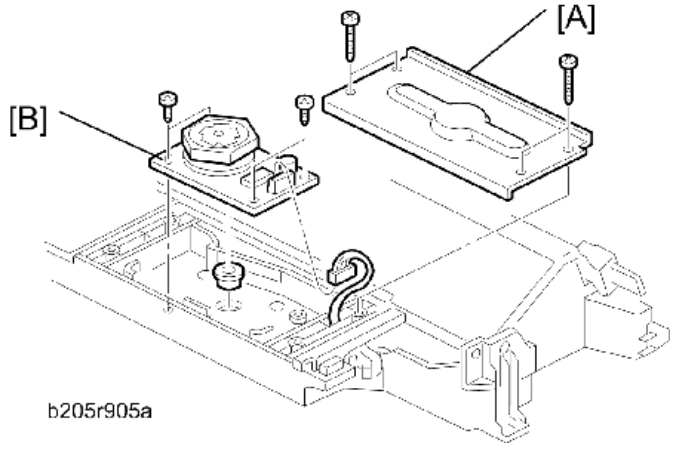


Polygon Mirror Motor

1. Remove the laser unit. (page 265 "Laser Unit")
2. Remove the heat sink [A] (x4).
3. Replace the polygon mirror motor [B] (x4, x1).

Note

- When you install the new polygon mirror motor, do not touch the surface of the mirror with bare hands.

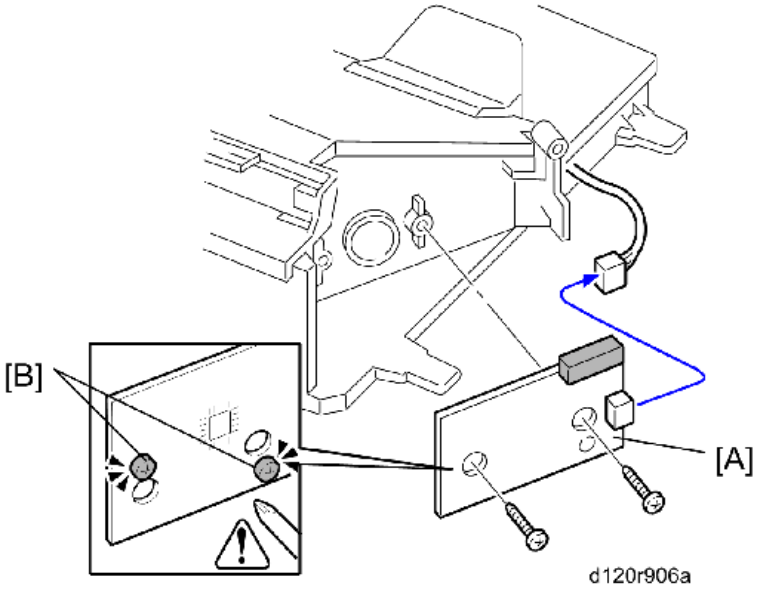


LD Unit

1. Remove the laser unit. (page 265 "Laser Unit")
2. Replace the LD unit [A] (x2, x1).

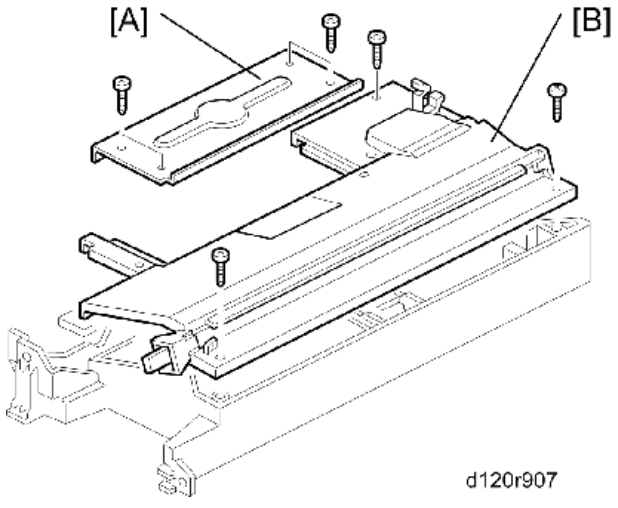
Note

- Do not touch any variable resistors on the LD unit.
- Do not loose the screws [B].

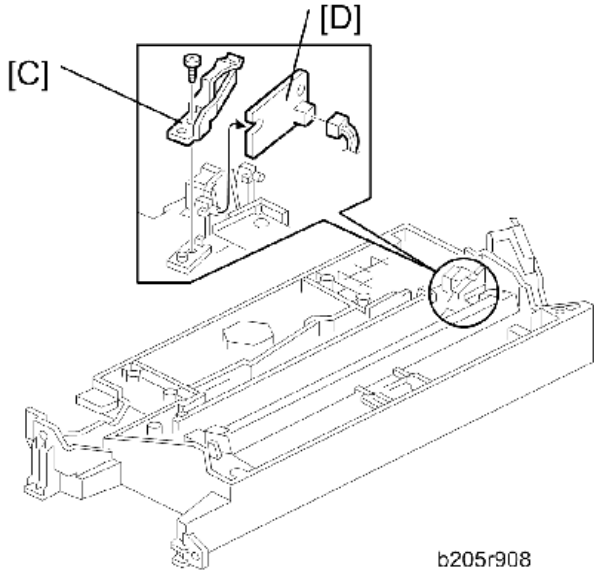


Laser Synchronization Detector

1. Remove the laser unit. (page 265 "Laser Unit")
2. Remove the heat sink [A] (x4).
3. Remove the laser unit cover [B] (x3).



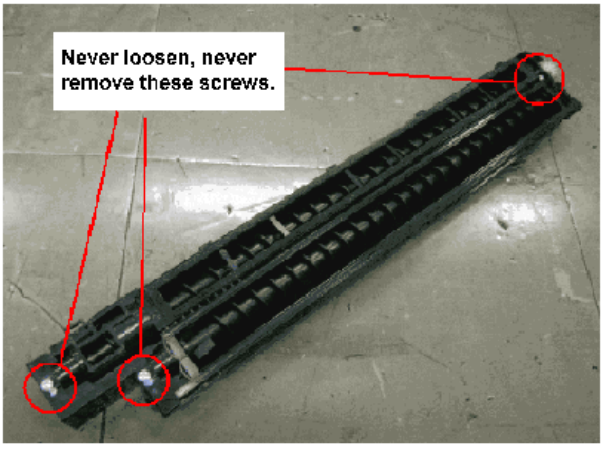
4. Remove the bracket [C] (x1).
5. Replace the laser synchronization detector [D] (x1).



Photoconductor Unit (PCU)

⚠CAUTION

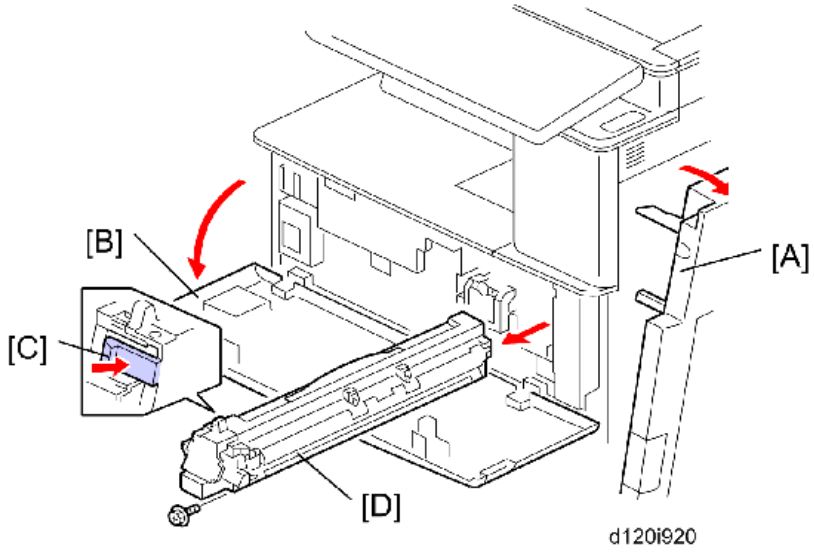
- Turn off the main power switch and disconnect the power cord before you start any of the procedures in this section. To prevent toner leakage, never loosen or remove the screws shown in the illustration below.



d017r901

PCU Removal

1. Open the right cover [A] and front cover [B].
2. Push the latch [C] and replace the PCU [D] (x1).

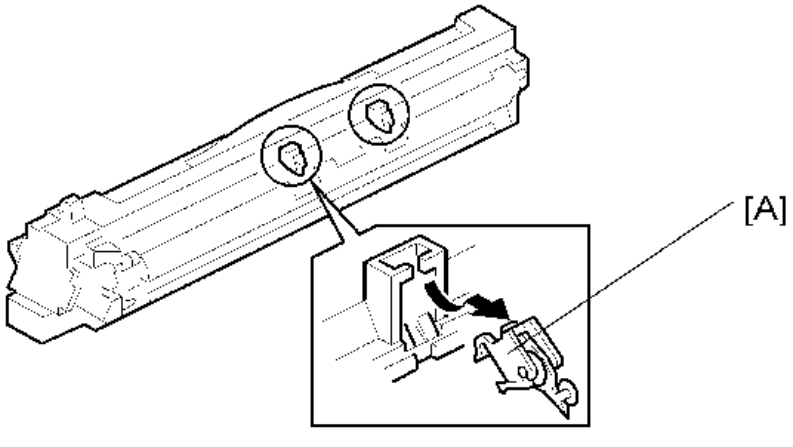


Note

- Do not touch the drum surface with bare hands.

Pick-off Pawls

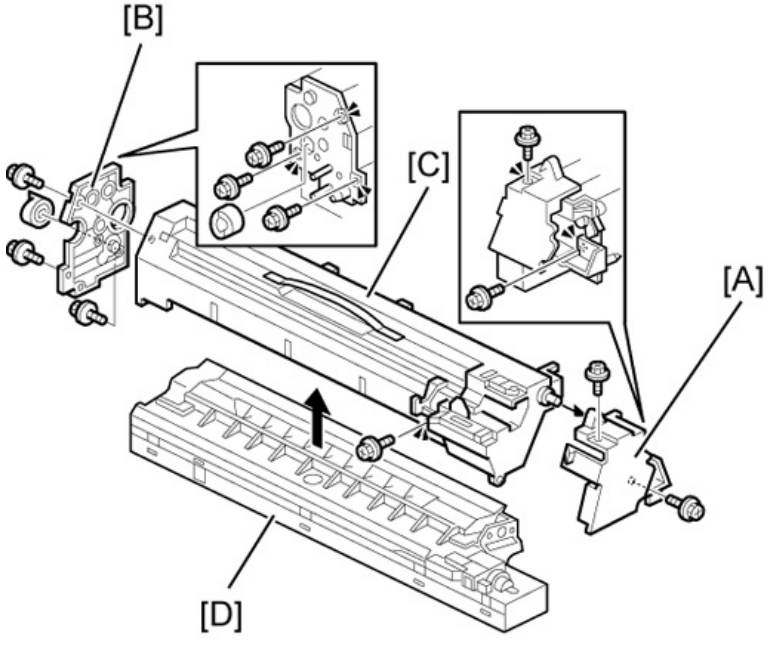
1. Remove the PCU. (page 270 "PCU Removal")
2. Hold the pawl [A] by its sides, pull it down and slowly twist it away from the PCU.



OPC Drum

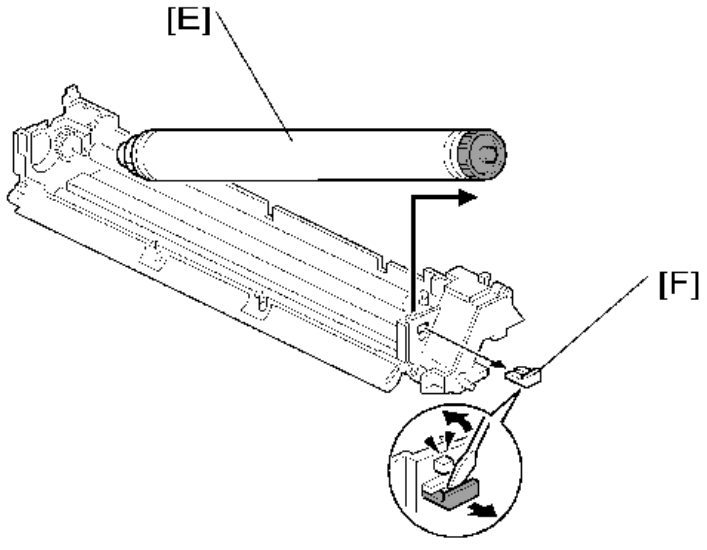
1. Remove the PCU. (page 270 "PCU Removal")

2. Remove the front cover [A] (x2).
3. Remove the rear cover [B] (x3, Coupling x1).
4. Remove the top part [C] (x1).
5. Remove the bottom part [D].



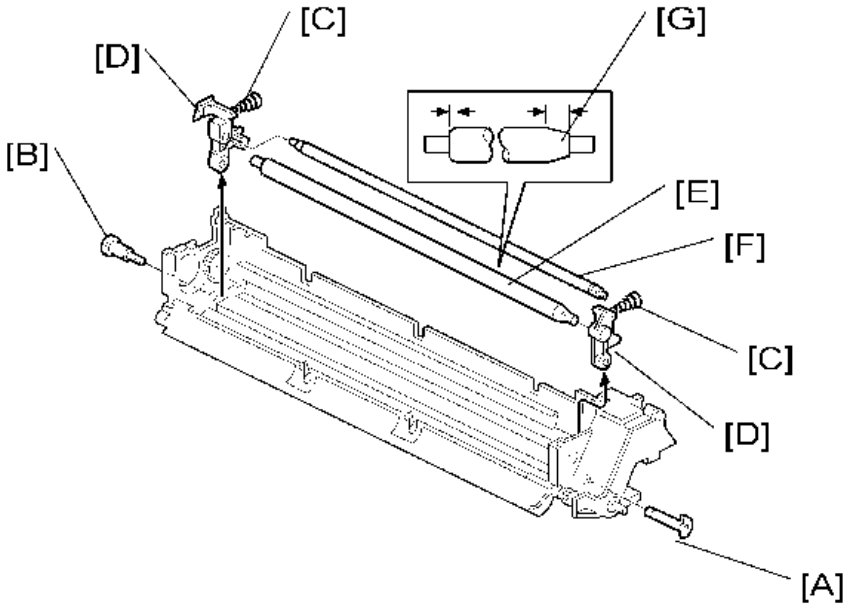
d120r170

6. Replace the drum [E] (White clip x1 [F]).



Charge Roller, Cleaning Roller

1. Remove:
   - PCU (page 270 "PCU Removal")
   - OPC drum (page 271 "OPC Drum")
2. Remove the front stud [A].
3. Remove the rear shoulder screw [B] (x1).
4. Release the front and rear springs [C].
5. Remove the roller assembly [D] (Springs x2, Arms x2, Rollers x2).
6. Replace the charge roller [E].
7. Replace the cleaning roller [F].

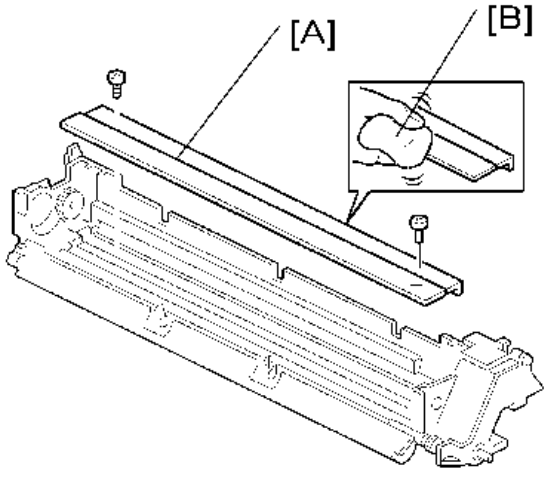


Re-installation: Charge Roller

- Put the end of the charge roller with the wide bevel [G] at the front of the PCU.
- The ends of the cleaning roller [F] are the same (put either end at the front).
- Make sure that the front stud of the roller assembly is put in the correct position.
- Install the front stud before you tighten the rear shoulder screw. Make sure that the head of the stud is put in the correct position.

Cleaning Blade

1. Remove:
   - PCU (page 270 "PCU Removal")
   - OPC drum (page 271 "OPC Drum")
   - Charge roller and cleaning roller (page 273 "Charge Roller, Cleaning Roller")
2. Replace the cleaning blade [A] (x2).

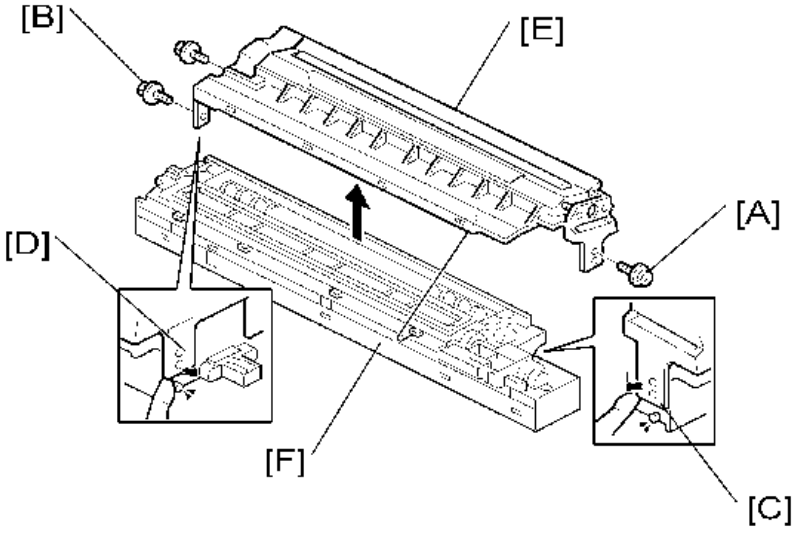


Reinstallation: Cleaning Blade

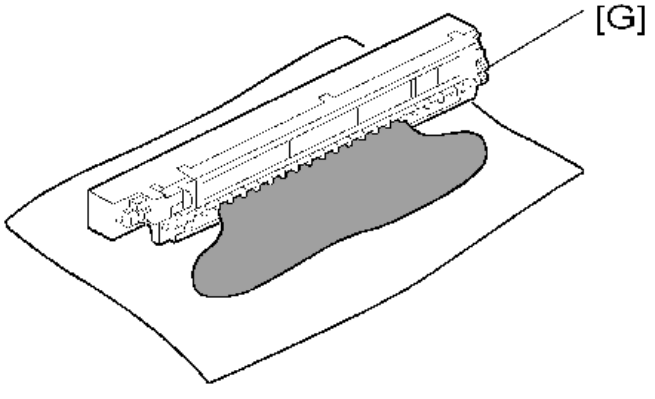
- To prevent damage to the new cleaning blade and OPC drum, apply some toner to the edge of the new blade [B].
- Install the new blade. Remove some toner from the edge of the old blade with your finger, and apply it evenly along the full length of the new blade.

Developer

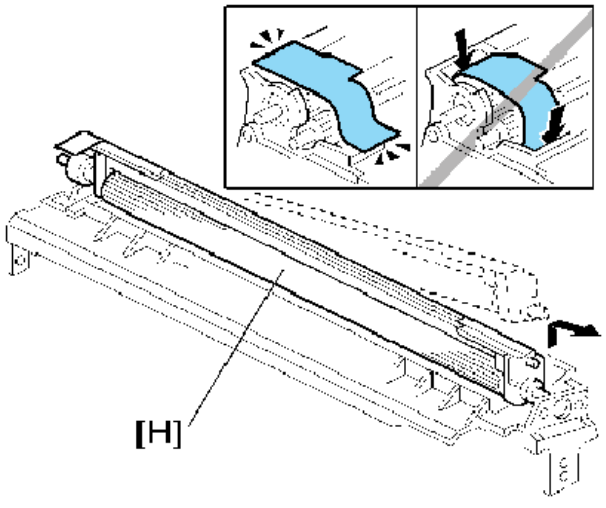
1. Spread the vinyl sheet provided with the developer kit on a flat surface.
2. Separate the top and bottom parts of the PCU. (page 271 "OPC Drum")
3. Set the bottom on the vinyl sheet.
4. Remove the front screw [A] (x1).
5. Remove the rear screws [B] (x2).
6. Release the front tab [C].
7. Release the rear tab [D].
8. Separate the top [E] and bottom [F] of the development unit.



9. Turn the gears [G] to remove the developer from the bottom half.



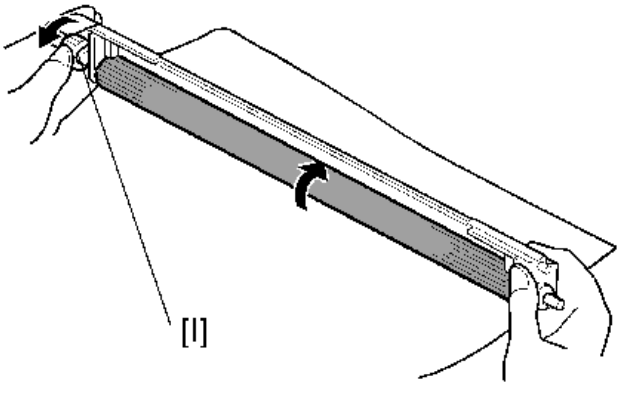
10. Remove the development roller [H] from the development unit.



Important

- **At reinstallation, make sure that the sheet is positioned as shown.**

11. Turn the development roller gear [I] to remove toner from around the development roller.

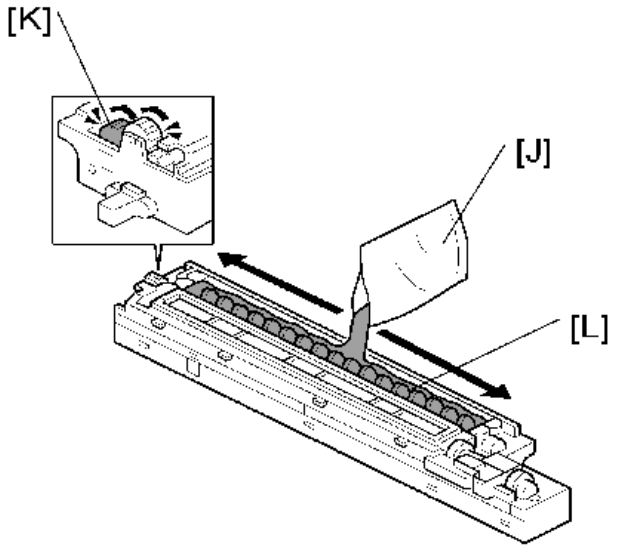


12. Assemble the development unit.

Important

- **Dispose of the used developer according to the local laws and regulations regarding the disposal of such items.**

13. Open the developer pack [J]
14. While turning the black gear [K], slowly move the pack left and right and pour half of the developer over the auger [L].



15. Continue to rotate the black gear until the developer is level.

While continuing to turn the black gear, slowly move the pack left and right and pour the remaining half of the developer over the augur until the developer is level.

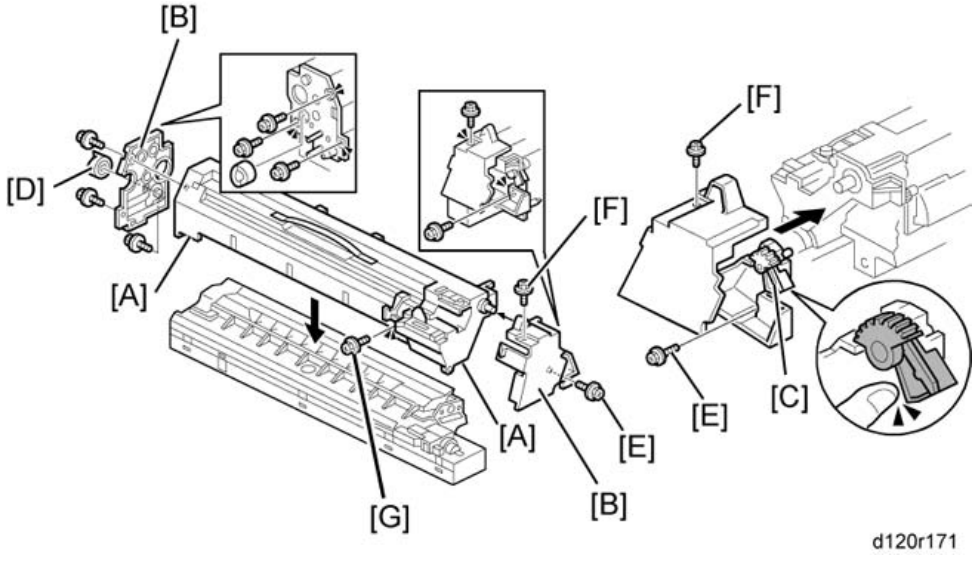
Important

- **Be careful. Do not spill developer on the gears or sponges.**
- **If you accidentally spill developer on the gears or sponges, remove it with a magnet or the tip of a magnetized screwdriver.**

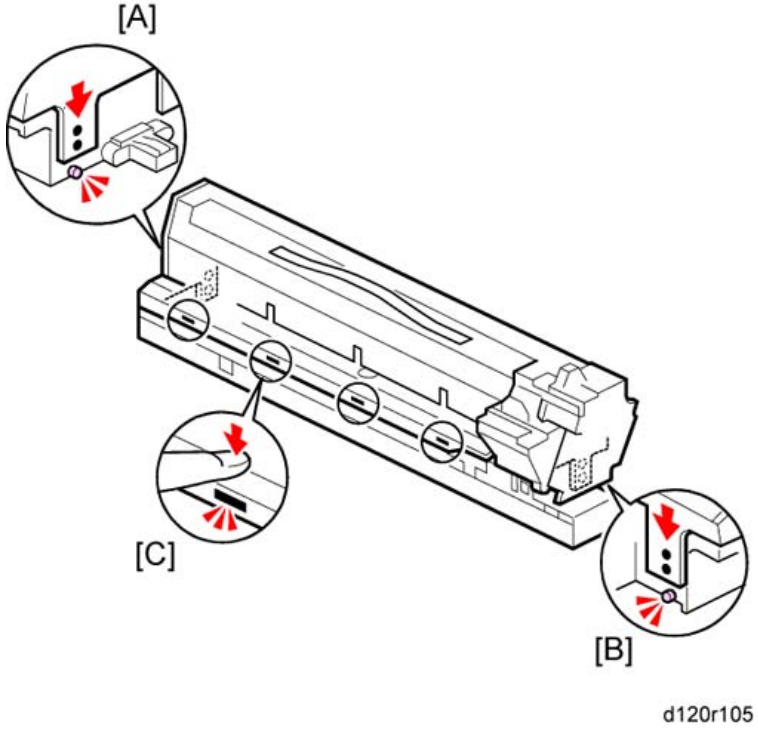
PCU Reassembly

Reassemble the PCU in this order:

1. Attach the front frame pawls and front and rear [A].
2. Set the rear cover and front cover [B].
    - Never touch the lever [C] until after the top screw has been fastened.
3. Tighten the three screws and coupling [D].
    - Never press down on the top of the PCU when you reattach the rear or front cover.
4. Tighten the lower screw [E].
    - Always install the lower screw first to maintain the correct gap between the rollers.
5. Tighten the top screw [F].
    - Lift and lower the lever [C] to make sure that the shutter opens fully and operates smoothly.
6. Attach the side screw [G].



7. Make sure that all of the holes and tabs on are engaged at [A], [B], and [C]. Then push down to lock the tabs on the front and rear end of the PCU.

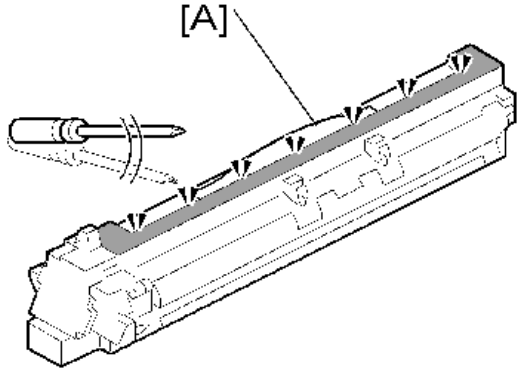


8. Make sure that the holes for the screws on the front and rear end of the PCU are aligned correctly. If the holes are not aligned correctly, make sure that the tabs at the front, rear, and left side of the PCU are engaged correctly.

After Replacement of PCU Components

1. Assemble the PCU and install it in the machine.
2. Turn on the main power switch.
3. If you replaced developer, go into the SP mode and do SP2-801 (Developer Initialization).
4. Make 5 sample copies.
5. Check the copies.
   - If the copies are clean (no black dots), the replacement is completed.

   -or-
   - If you see black dots of toner that fell on the copies, go to the next step.
6. Remove the PCU from the machine.
7. Lightly tap the top of the PCU [A] with a screwdriver at 8 locations. These locations must be at equal intervals. Tap 2 or 3 times at each location, to make the toner fall into the development section.



8. Install the PCU in the machine.
9. Turn on the main power switch, and close the front door. After the machine turns the development roller for 10 seconds, go to the next step.
10. Open and close the door two more times. The total rotation time is 30 seconds.
11. If you replaced PCU components:
    - If A4/8$_{1/2}$" x11" paper is installed, make 4 copies or prints.
    - If A3/11" x 17" paper is installed, make 2 copies or prints.
    - To make solid black prints, use SP2-109 No.8.

    Note
    - This step is not necessary if only the developer was replaced.

Transfer Unit

⚠CAUTION

- Turn off the main power switch and disconnect the power cord before you start any of the procedures in this section.

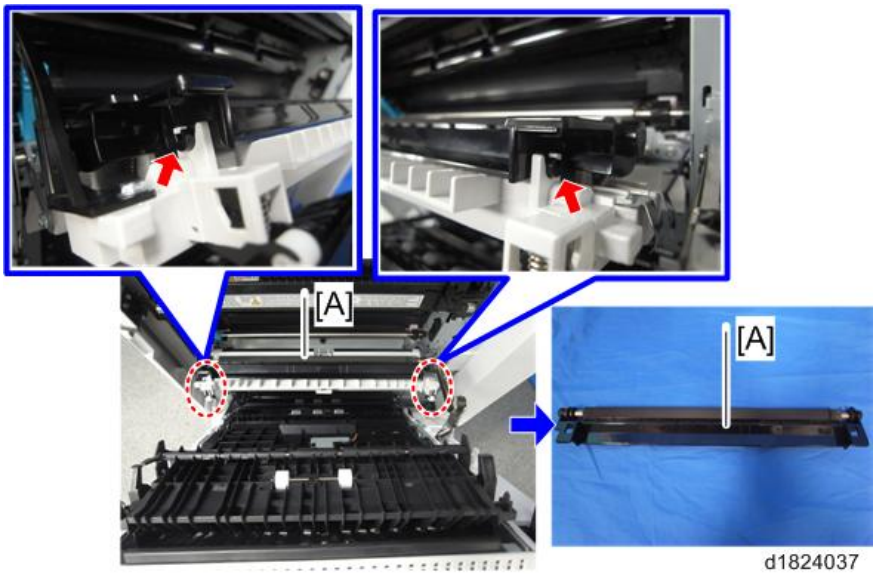
Transfer Roller Unit

1. Open the duplex unit [A].



d1824010

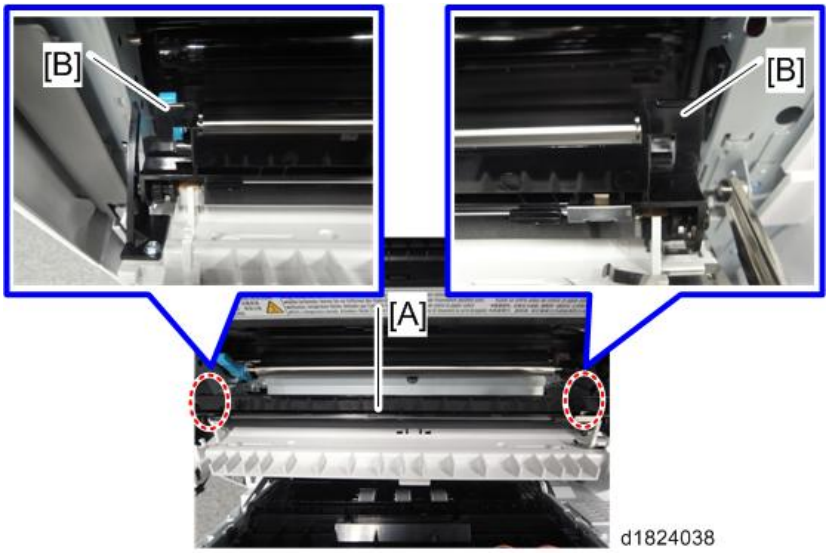
2. Replace the transfer roller unit [B] (Hooks x2).



d1824037

Note

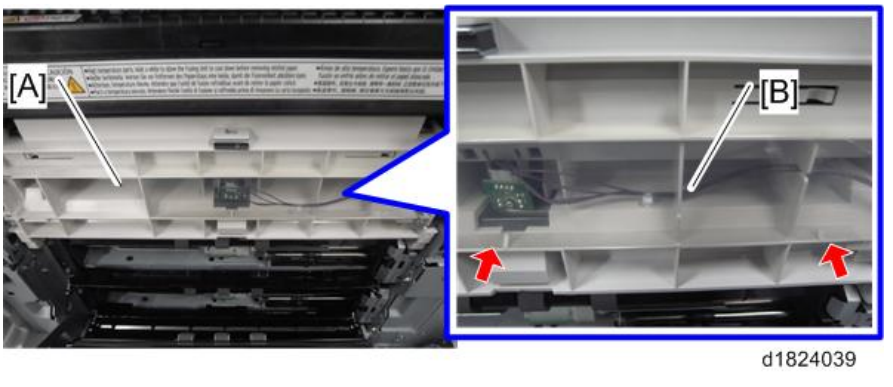
- Raise the transfer roller unit [A] and remove it by holding the handle [B] on both sides.



- Do not touch the transfer roller surface.

Image Density Sensor

1. Remove transfer roller unit. (page 281 "Transfer Roller Unit")
2. Displace the sheet [B] of the transfer roller guide [A] (hooks x2).



3. Open the sheet [A] and replace the image density sensor [B] (x1).



d1824040

4. After you install a new sensor, initialize the new sensor with SP2-935-001.

Fusing Unit

⚠CAUTION

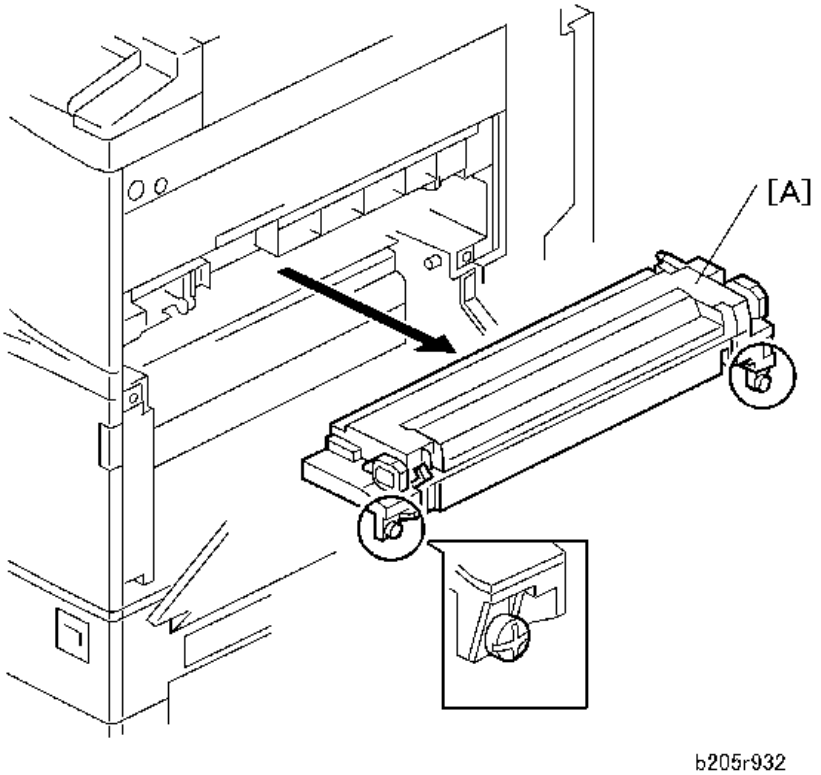
- Turn off the main power switch and disconnect the power cord before you start any of the procedures in this section.

Fusing Unit

⚠CAUTION

- Allow time for the unit to cool before doing the following procedure.

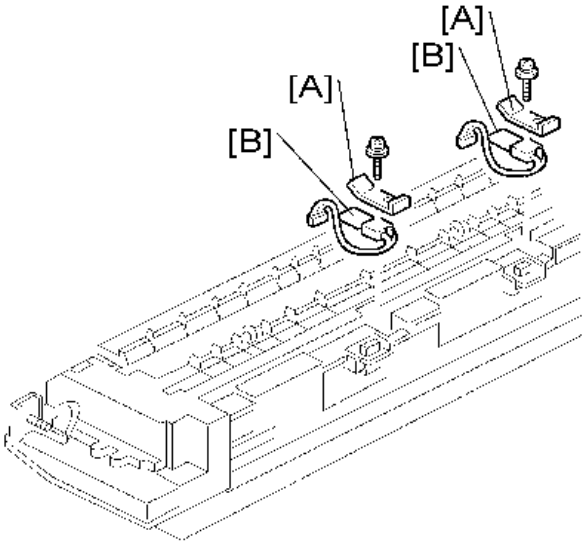
1. Open the duplex unit.
2. Remove the fusing unit [A] (x2).



Thermistors

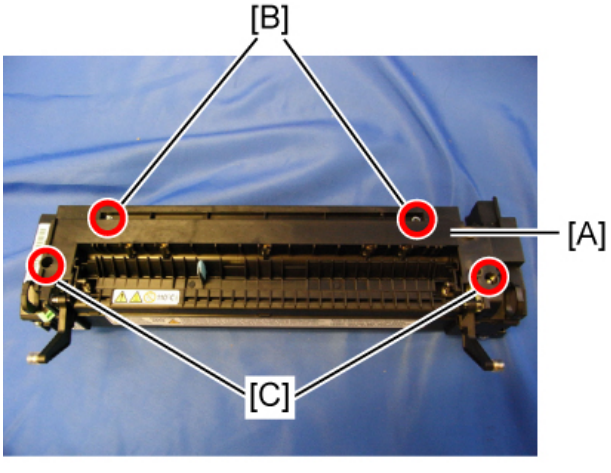
1. Remove the fusing unit. (page 284 "Fusing Unit")

2. Remove the plates [A] (x1 each).
3. Replace the thermistors [B] (x1).



Hot Roller Strippers

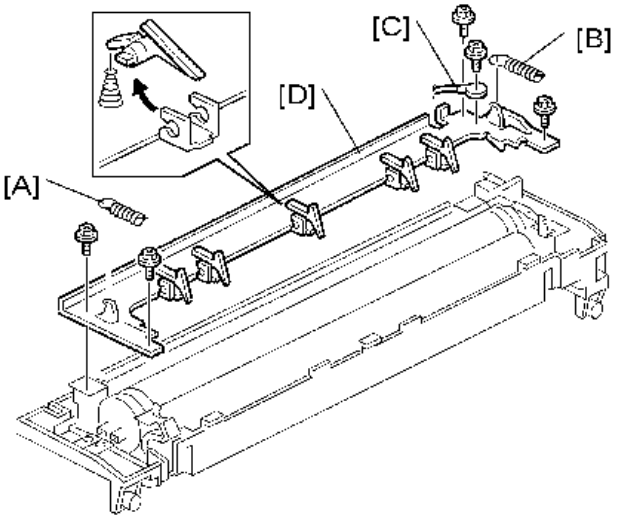
1. Remove the fusing unit. (page 284 "Fusing Unit")
2. Remove the fusing upper cover [A] ([B]: Screw with spring washer x2, [C]: Stud screw x2).



d120r113

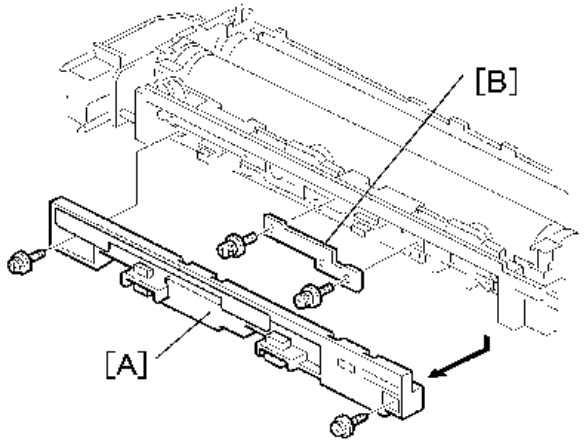
3. Remove the pressure spring [A].
4. Remove the pressure spring [B].
5. Remove the ground wire [C] (x1).

6. Remove the hot roller stripper bracket [D] (x4).
7. Remove the hot roller strippers (x5) (spring x1 each)



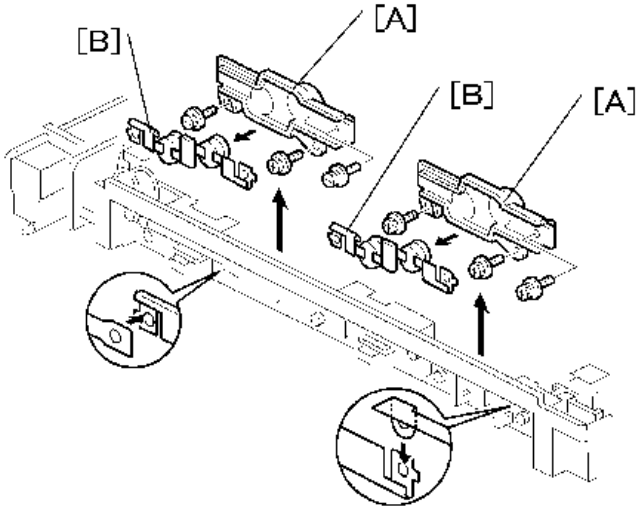
Thermostats

1. Remove the fusing unit. (page 284 "Fusing Unit")
2. Remove these parts: (page 285 "Hot Roller Strippers").
    - Fusing upper cover
    - Pressure springs
    - Hot roller stripper bracket
3. Remove the thermostat cover [A] (Tap x2).
4. Remove the plate [B] (x2, spring washers).



b205r936

5. Remove the thermostat holders [A] x2 (x3 each).
6. Replace the thermostats [B] x2.



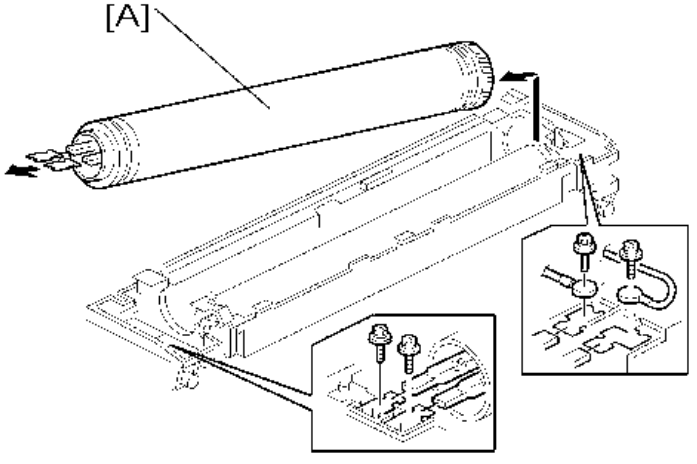
b205r937

Hot Roller and Fusing Lamps

1. Remove the fusing unit. (page 284 "Fusing Unit")
2. Remove these parts: (page 285 "Hot Roller Strippers").
    - Fusing upper cover
    - Pressure springs

- Hot roller stripper bracket

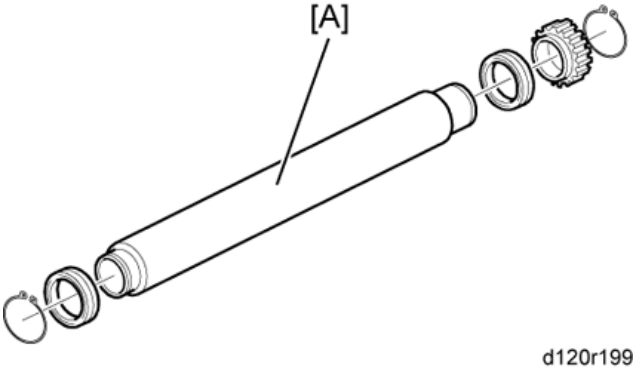
3. Replace the fusing lamps (x4) and hot roller assembly [A].



Note

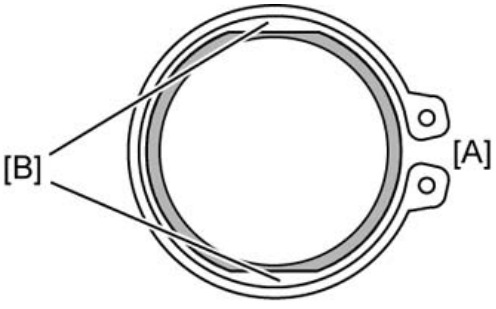
- Do not touch the surface of the fusing lamp with bare hands.

4. Replace the hot roller [A] (C-rings x2, Gear x1, Bushings x2).



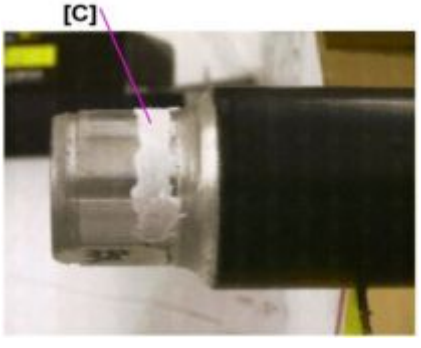
Reinstallation

1. At the rear (gear-side), attach the C-ring so that the opening [A] is 90 degrees from the D-cut sections [B] of the fusing roller.

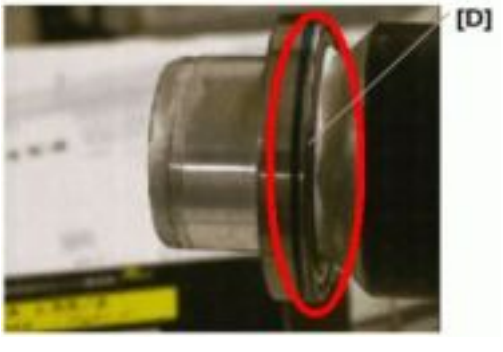


d120r200

2. Apply enough grease at [C] so the metal surface is not visible.



3. The grease should be visible after reattaching the bushing [D].

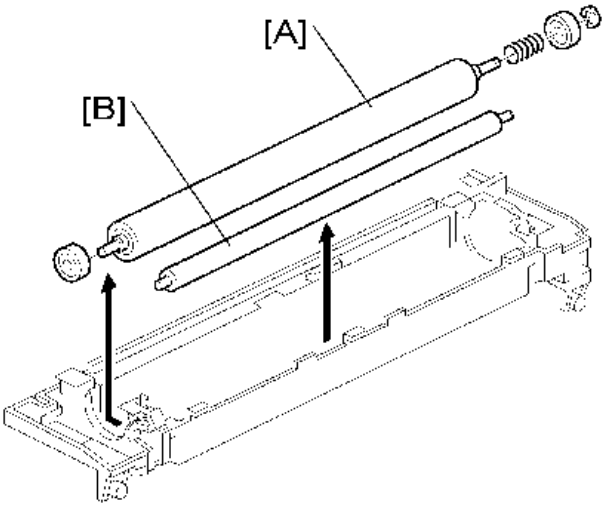


Important

- Before you install the new hot roller, peel off 3 cm (1 inch) from both ends of the protective sheet on the new roller.
- Do not touch the surface of the rollers.
- When reinstalling the fusing lamp, secure the front screws first.
- Be careful not to damage the surface of the hot roller.

Pressure Roller/Cleaning Roller

1. Remove the fusing lamp and hot roller assembly. (page 287 "Hot Roller and Fusing Lamps")
2. Replace the pressure roller [A] (C x1, Bushings x2, Spring x1).
3. Replace the cleaning roller [B].



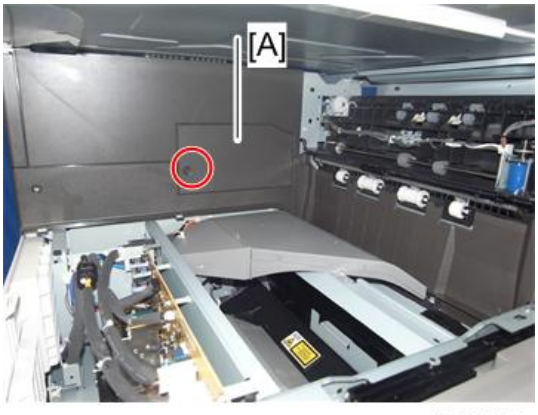
Note

- Apply grease (Barrierta) to the inner surface of the bushing for the pressure roller.
- Do not touch the surface of the rollers.

Paper Exit

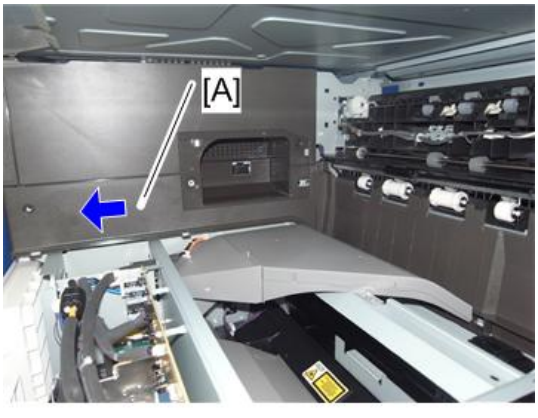
Paper Exit Sensor/Paper Overflow Sensor

1. Remove the following options if these have been installed.
    - Finisher
    - Bridge unit
    - Optional shift tray
2. Remove the paper exit cover. (page 238 "Paper Exit Cover")
3. Remove the output tray. (page 239 "Output Tray")
4. Remove the connector cover [A] (x1).



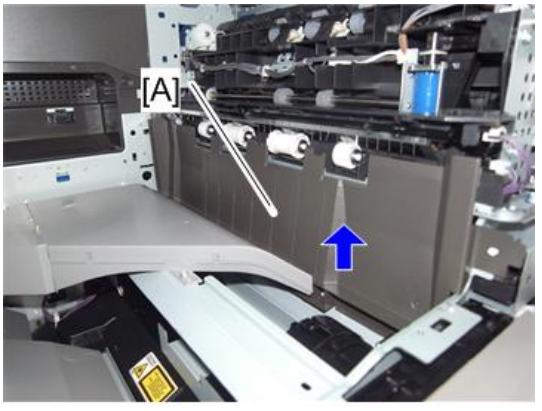
d1824056

5. Remove the inner rear cover [A] by sliding to the left.



d1824057

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



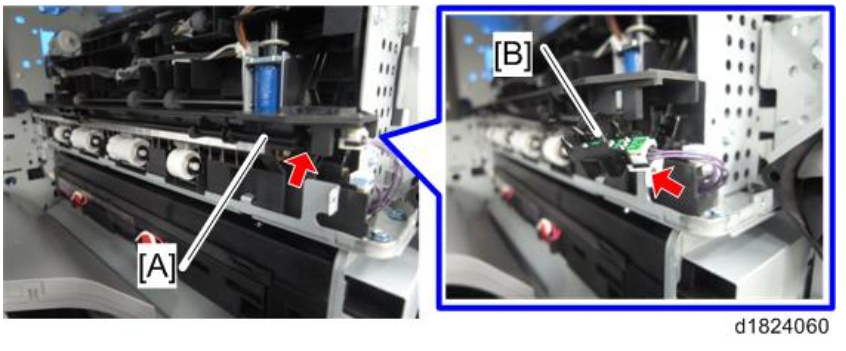
d1824058

7. Remove the sensor cover [A].



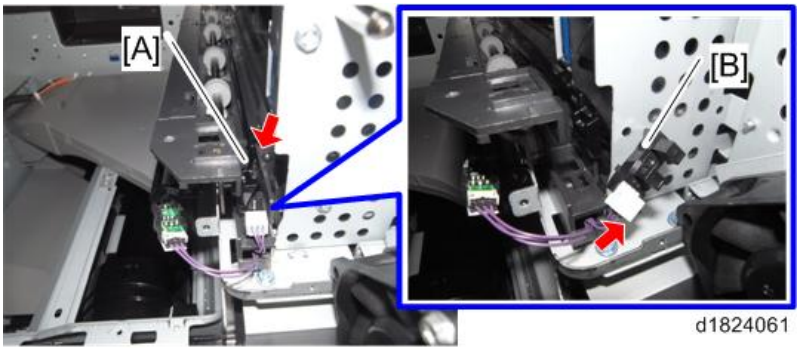
d1824059

8. Remove the paper exit sensor [B] after removing the feeler [A] (x1).



d1824060

9. Remove the paper overflow sensor [B] after removing the feeler [A] (x1).


[A]
[B]
d1824061

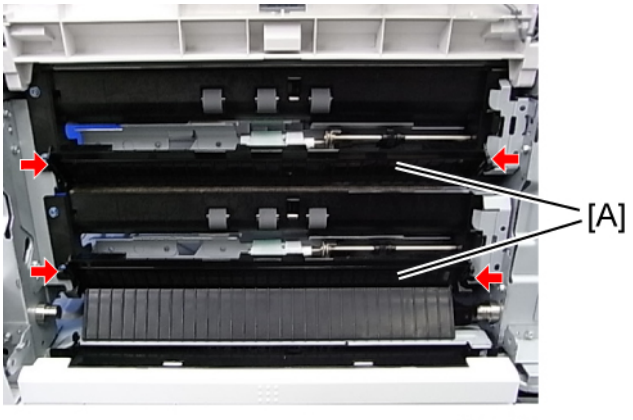
Paper Feed

⚠CAUTION

- Turn off the main power switch and disconnect the power cord before you start any of the procedures in this section.

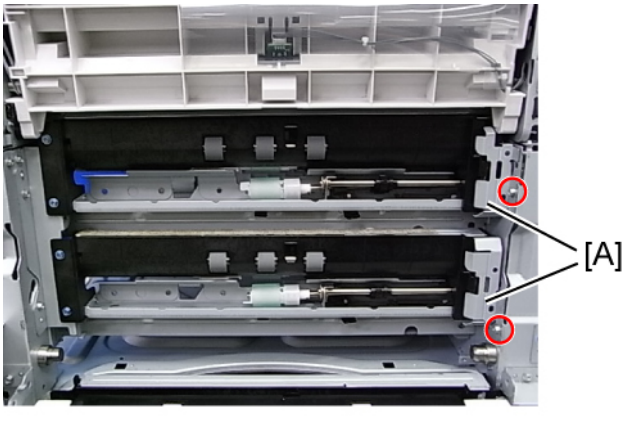
Paper Feed Unit

1. Remove:
    - Duplex unit (page 306 "Duplex Unit")
    - Paper feed clutch (page 299 "Paper Feed Clutch")
2. Pull out the 1st and 2nd paper trays.
3. Remove the paper guide plate [A] (tab x2 each)



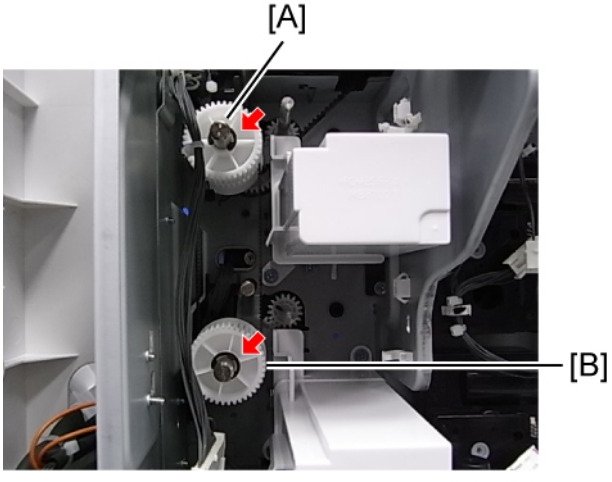
d120r172

4. Remove the harness cover [A] (x1 each).



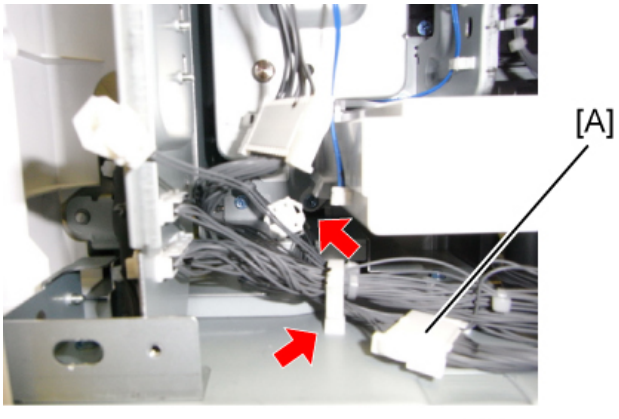
d120r173

5. Remove the upper gear [A] (x1) and lower gear [B] (x1).



d120r174

6. Remove the connector [A] (x2).



d120r155

7. Remove the paper feed unit [A] (x2, x1 each).

   Pull the left side of the paper feed unit, and slide it to the left.

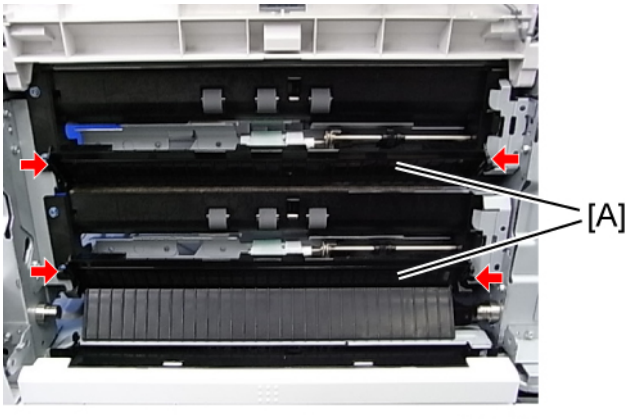


d120r175

Separation Roller, Feed Roller, Pick-up Roller

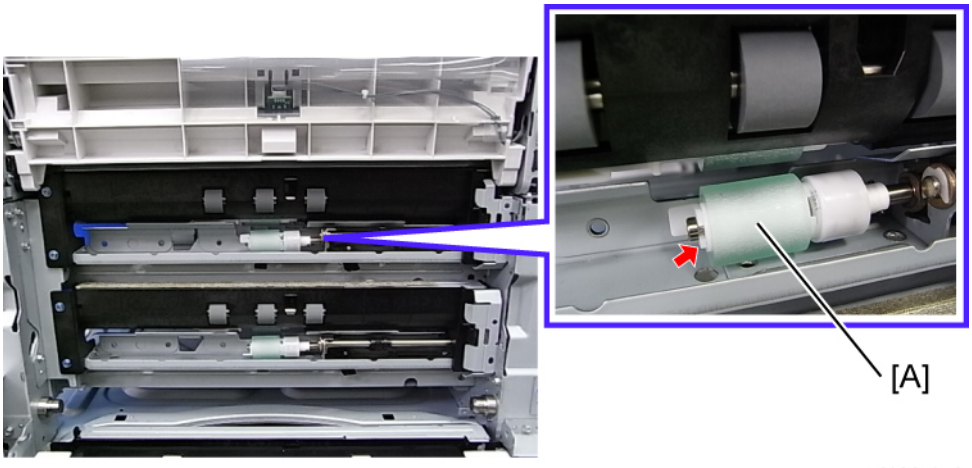
Tray 1 and Tray 2

1. Remove the duplex unit. (page 306 "Duplex Unit")
2. Pull out the 1st and 2nd paper trays.
3. Remove the paper guide plate [A] (tab x 2 each).



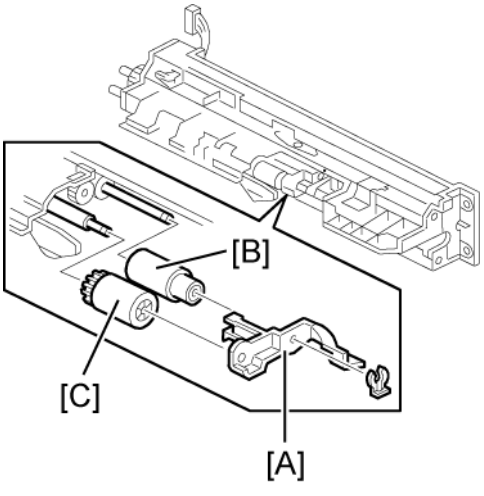
d120r172

4. Replace the separation roller [A] (x1).



d120r176

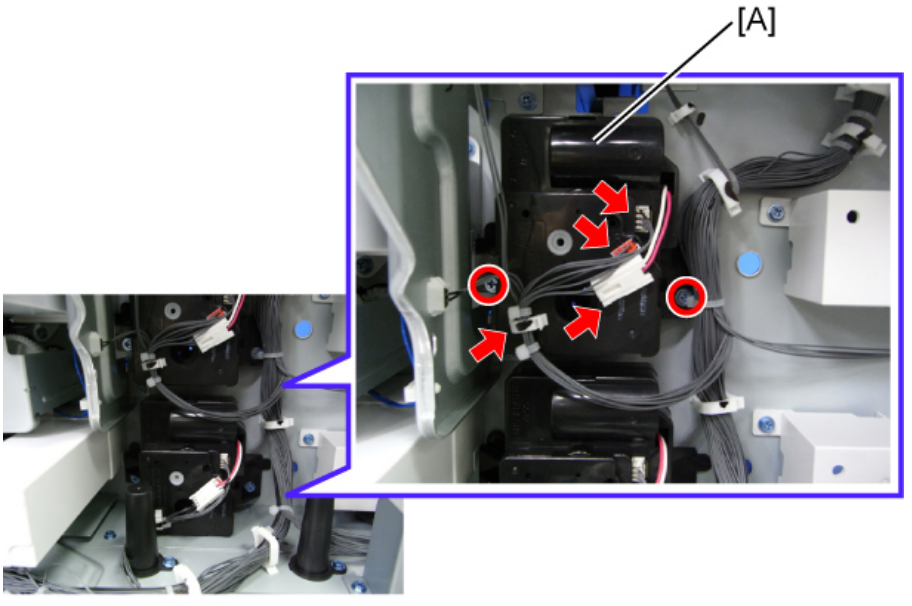
5. Remove the roller holder [A] (x1).
6. Replace the feed roller [B].
7. Replace the pick-up roller [C].



d120r518

Paper Tray Lift Motors

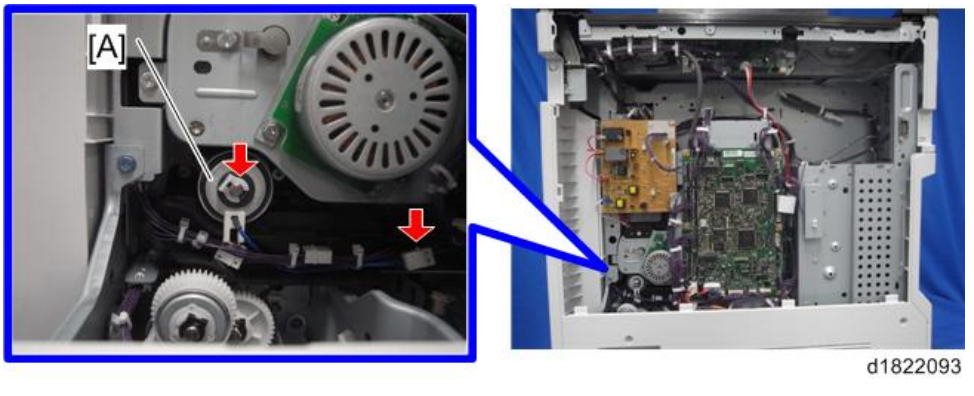
1. Remove:
   - Upper rear cover (page 225 "Upper Rear Cover")
   - Lower rear cover (page 227 "Lower Rear Cover")
2. Pull out the 1st and 2nd paper trays.
3. Replace the paper lift motors [A] (x2 each, x1, x3 each).



d120r134

Registration Clutch

1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Replace the registration clutch [A] (x1, x1).

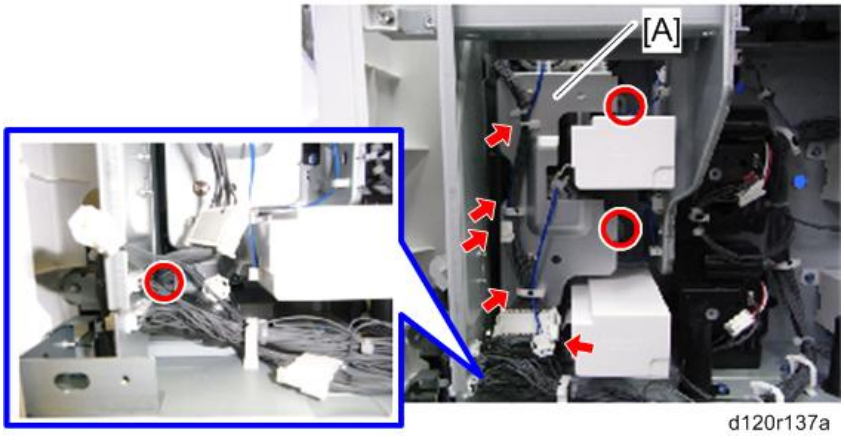


d1822093

Transport Clutch

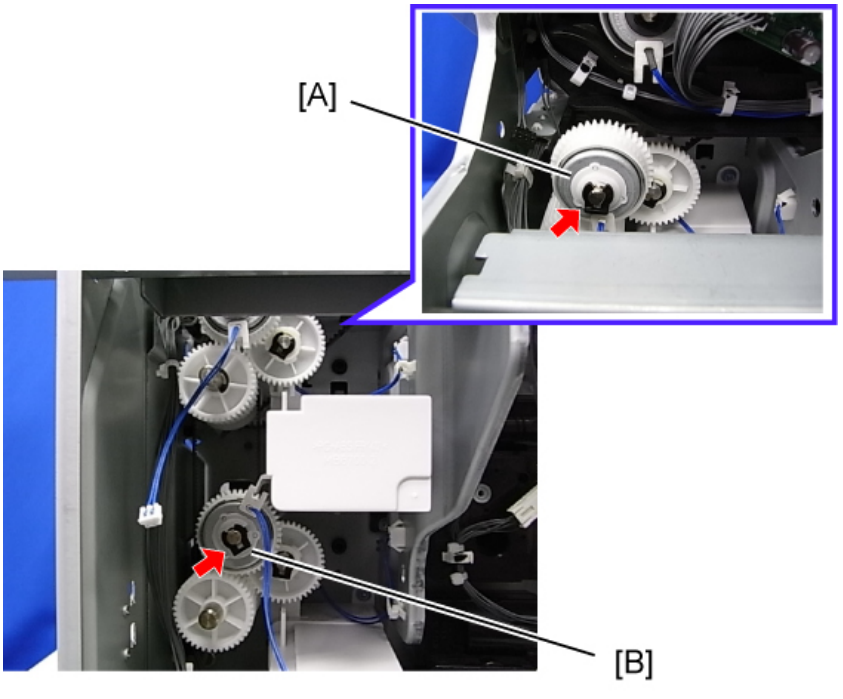
1. Remove:
    - Upper rear cover (page 225 "Upper Rear Cover")
    - Lower rear cover (page 227 "Lower Rear Cover")

2. Remove the bracket [A] (x3, x3, x2).



d120r137a

3. Replace the upper transport clutch [A] (x1, x1).
4. Replace the lower transport clutch [B] (x 1, x1).

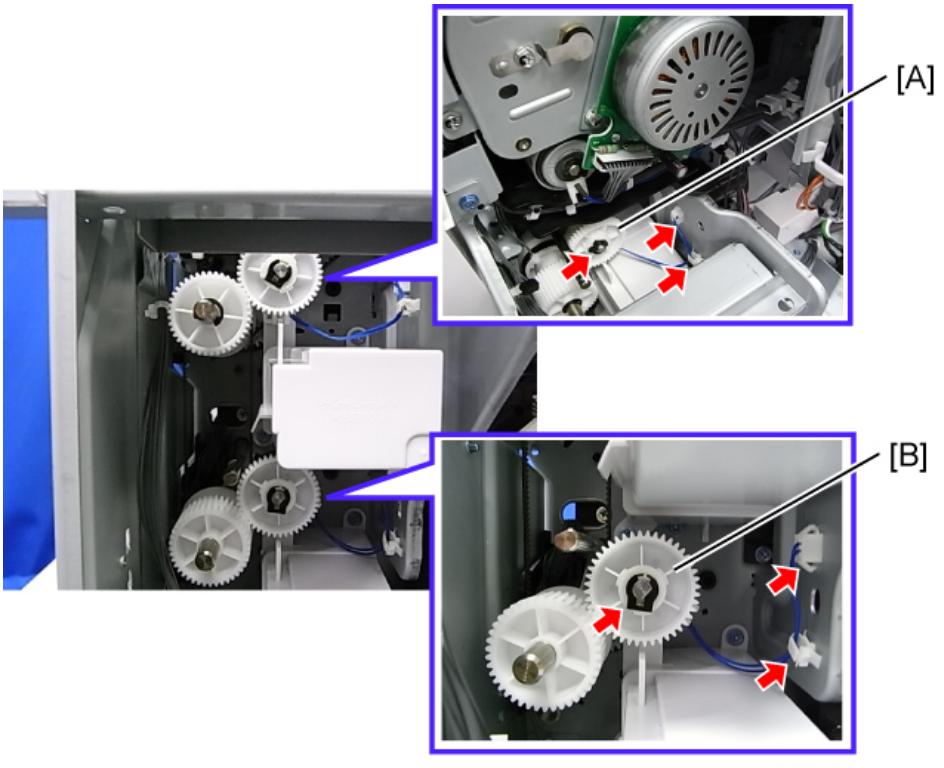


d120r138

Paper Feed Clutch

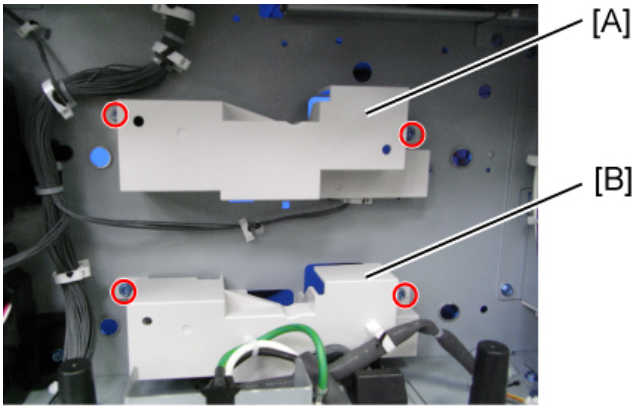
1. Remove the transport clutch. (page 298 "Transport Clutch")

2. Replace the upper feed clutch [A] (x1, x1, x1).
3. Replace the lower feed clutch [B] (x1, x1, x1).



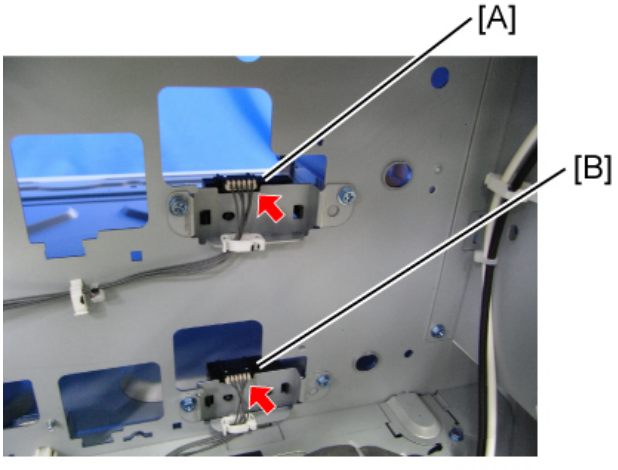
Paper Size Sensors

1. Remove:
    - Upper rear cover (page 225 "Upper Rear Cover")
    - Lower rear cover (page 227 "Lower Rear Cover")
2. Pull out the 1st and 2nd paper trays.
3. Remove the tray 1 paper size sensor cover [A] (x2).
4. Remove the tray 2 paper size sensor cover [B] (x2).



d120r110

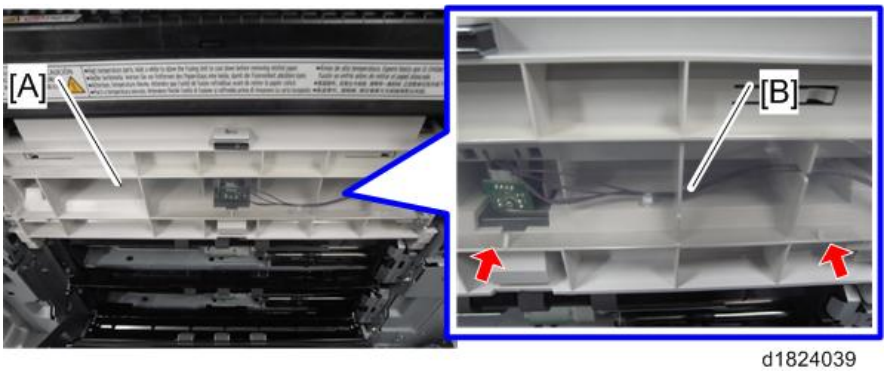
5. Replace the tray 1 paper size sensor [A] (x1).
6. Replace the tray 2 paper size sensor [B] (x1).



d120r111

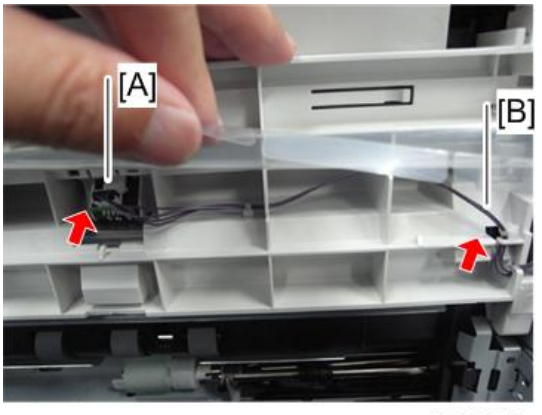
Registration Sensor

1. Remove the duplex unit. (page 306 "Duplex Unit")
2. Displace the sheet [A] of the transfer roller guide [B] (hooks x2).



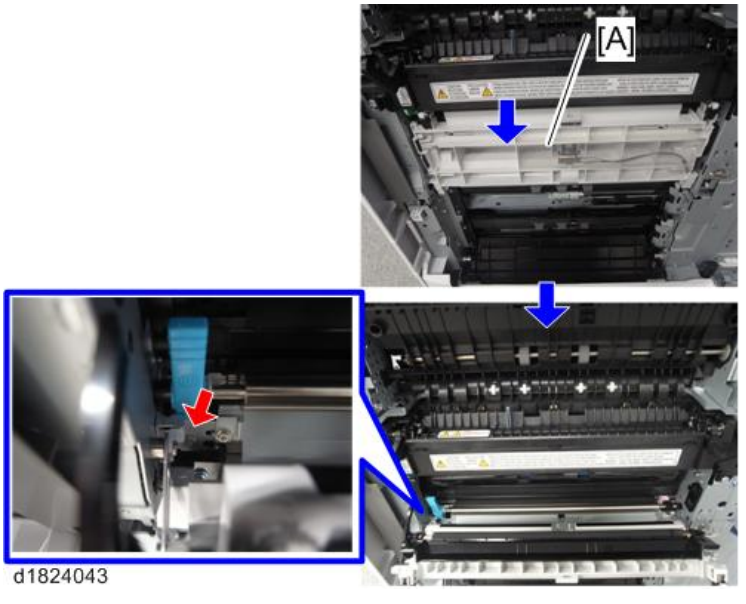
d1824039

3. Open the sheet and remove the connector [A] and harness [B] of the image density sensor.



d1824055

4. Open the transfer roller guide [A] (x1).



d1824043



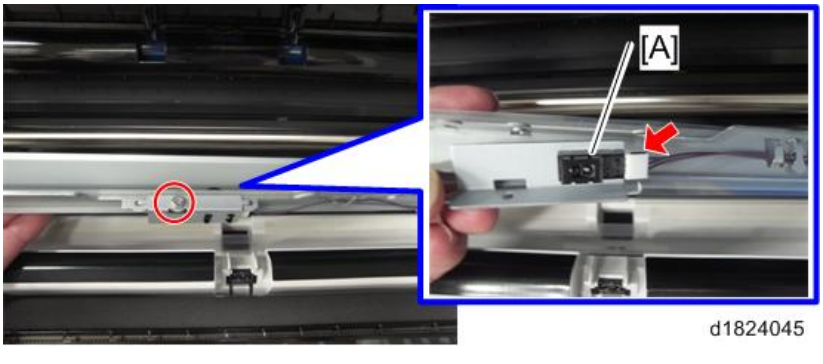
d120r180

5. Remove the paper guide plate [A] (x2).



d1824044

6. Replace the registration sensor [A] (x1, x1).

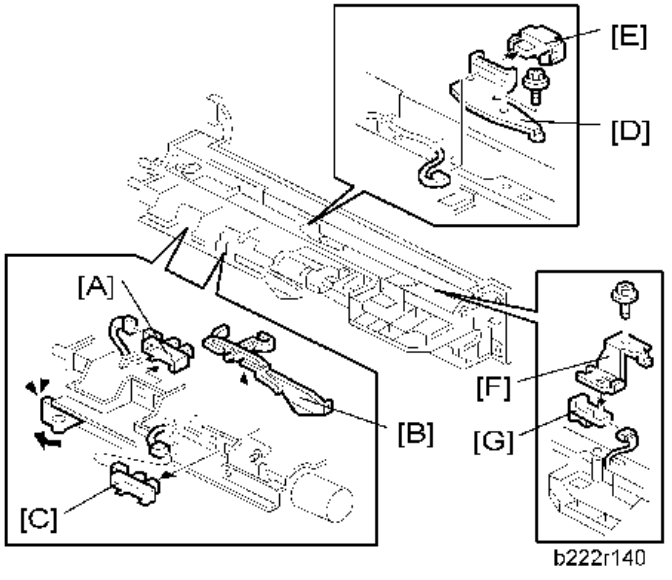


d1824045

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

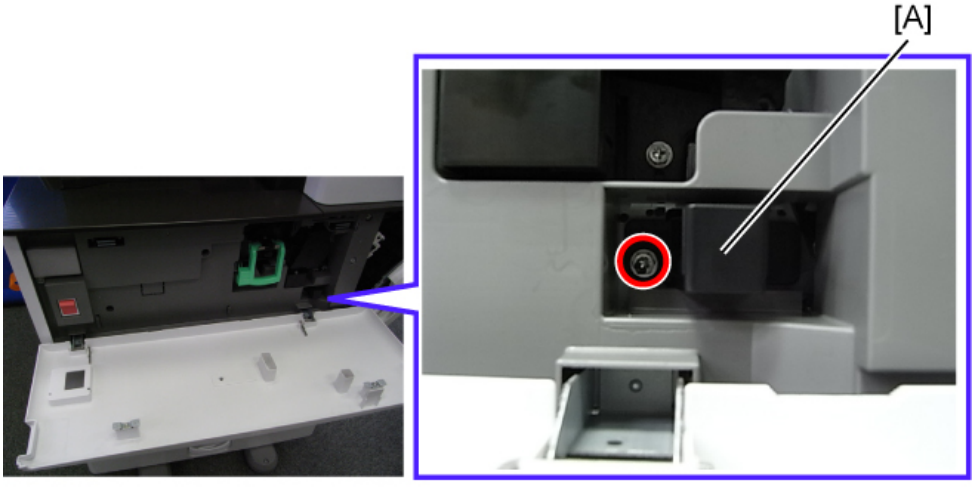
1. Remove the paper feed unit. (page 294 "Paper Feed Unit")

2. Replace the paper overflow sensor [A].
3. Remove the paper end feeler [B] (hook, x1).
4. Replace the paper end sensor [C] (hook, x1)
5. Remove the vertical transport sensor bracket [D] (x1, x1).
6. Replace the vertical transport sensor [E] (x1, hook).
7. Remove the paper feed sensor bracket [F] (x1).
8. Replace the paper feed sensor [G] (x1, hook).



Dust Collection Box

1. Open the front door.
2. Remove the dust collection box [A] (x1).



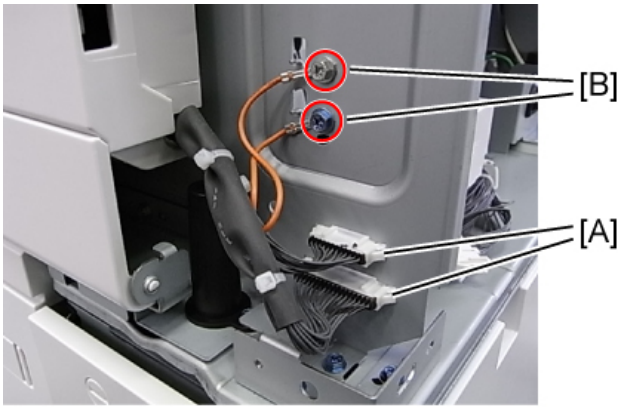
d120r140

3. Tap the dust collection box above a sheet of paper, to remove the paper dust.
4. Use a dry cloth to clean the inside of the dust collection box.

Duplex Unit/By-pass Tray Unit

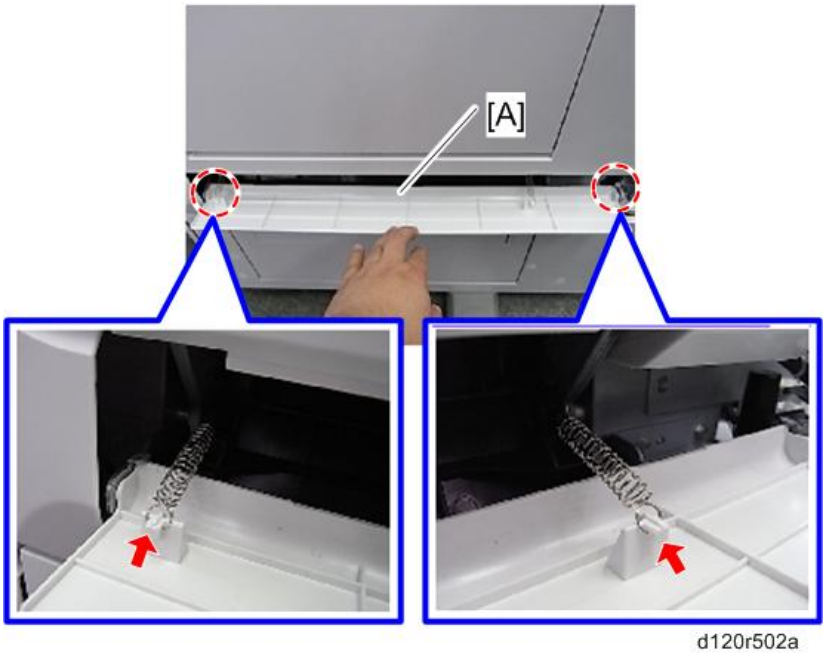
Duplex Unit

1. Remove the right rear cover (page 232 "Right Rear Cover")
2. Remove or disconnect two connectors [A].
3. Remove or disconnect two ground cables [B] (x2).



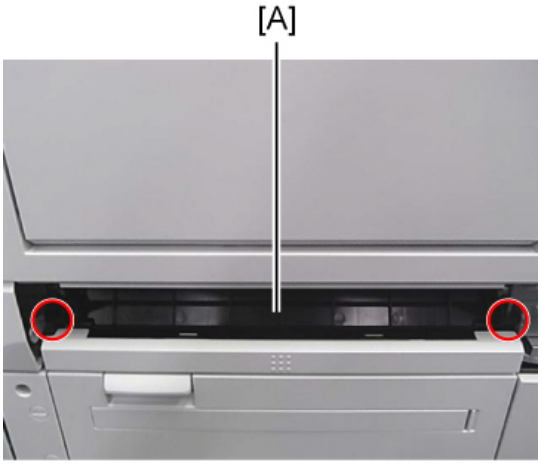
d120r501

4. Remove the lower right cover [A] (springs x2, tabs x2).



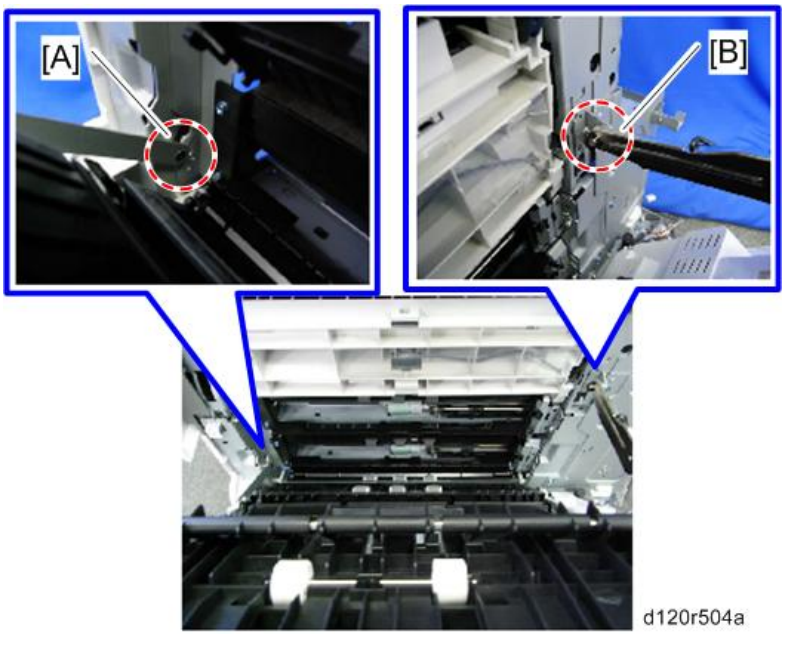
d120r502a

5. Remove the guide plate (tab x2).



d120r503

6. Open the duplex unit.
7. Release the front arm [A] and rear arm [B] (x1).



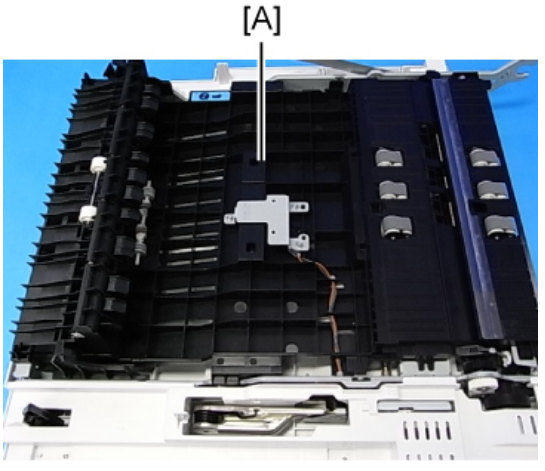
d120r504a

8. Slide the duplex unit to the front side, and then remove it.

Duplex Entrance Sensor

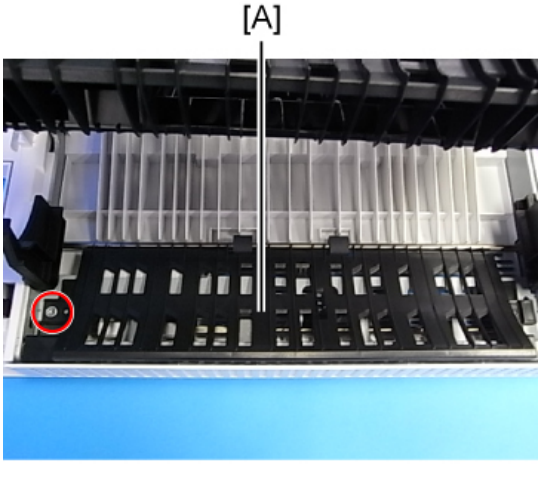
1. Remove the duplex unit. (page 306 "Duplex Unit")

2. Lift up the duplex guide plate [A] first when reinstalling the duplex outer guide plate.



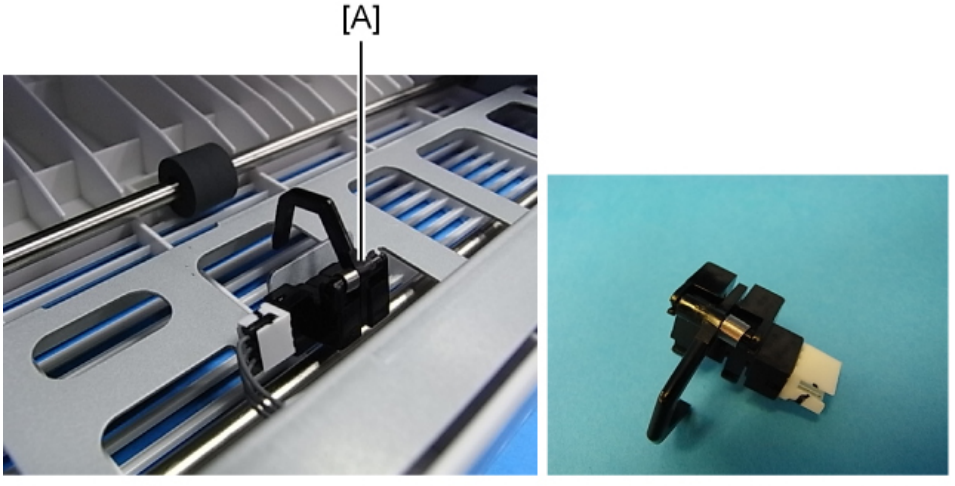
d120r506

3. Remove the duplex outer guide plate [A] (x1).



d120r505

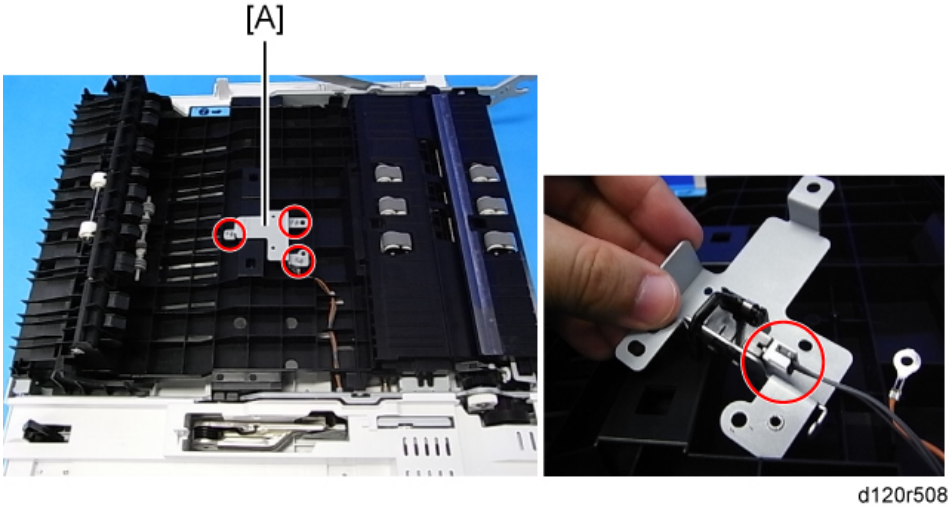
4. Replace the duplex entrance sensor [A] (x1).



d120r507

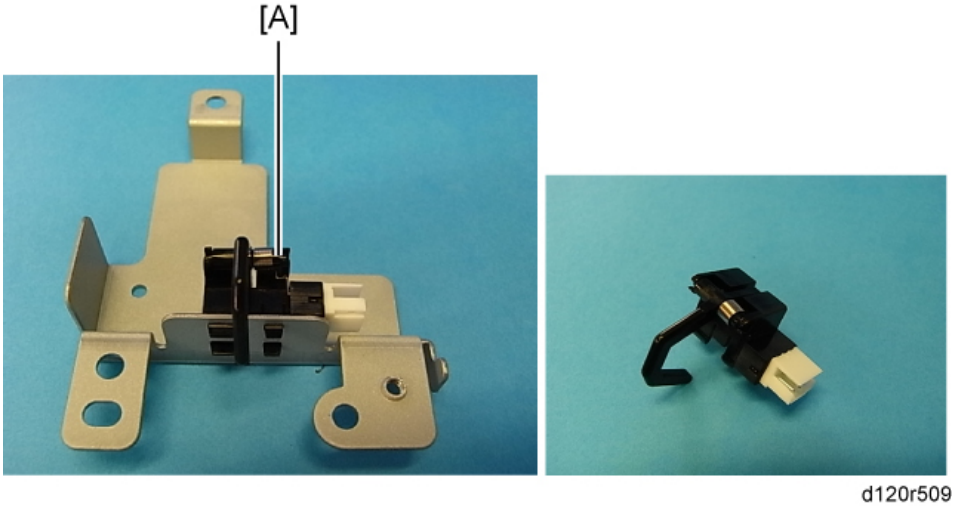
Duplex Exit Sensor

1. Remove the duplex unit. (page 306 "Duplex Unit")
2. Remove the duplex exit sensor assembly [A] (x3, x1).



d120r508

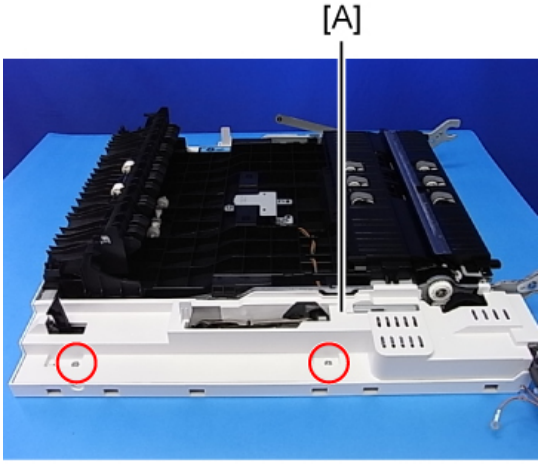
3. Replace the duplex exit sensor [A] (hook).



d120r509

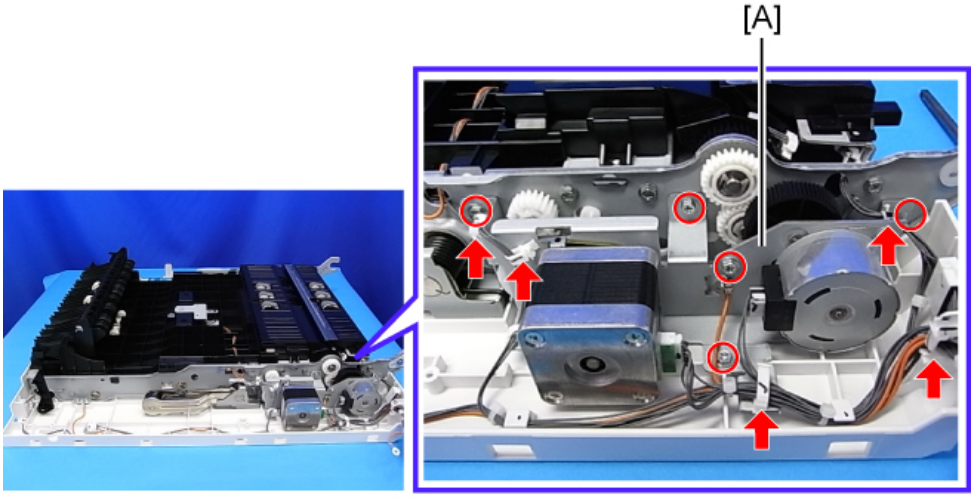
Duplex Motor/By-pass Motor

1. Remove the duplex unit. (page 306 "Duplex Unit")
2. Remove the duplex inner cover [A] (x2).



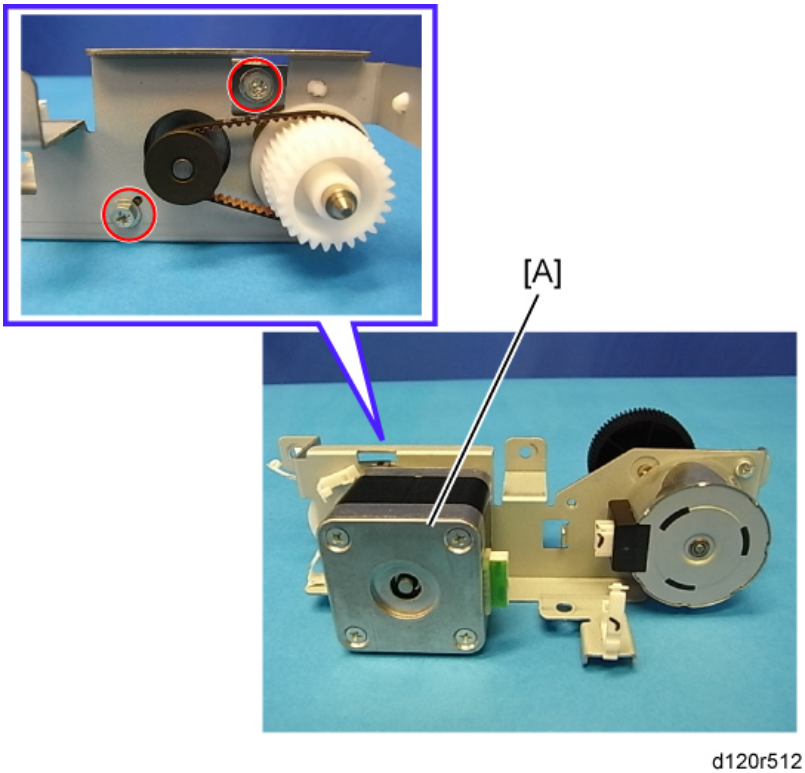
d120r510

3. Remove the duplex motor /by-pass motor with the bracket [A] (x5, x5, x2).



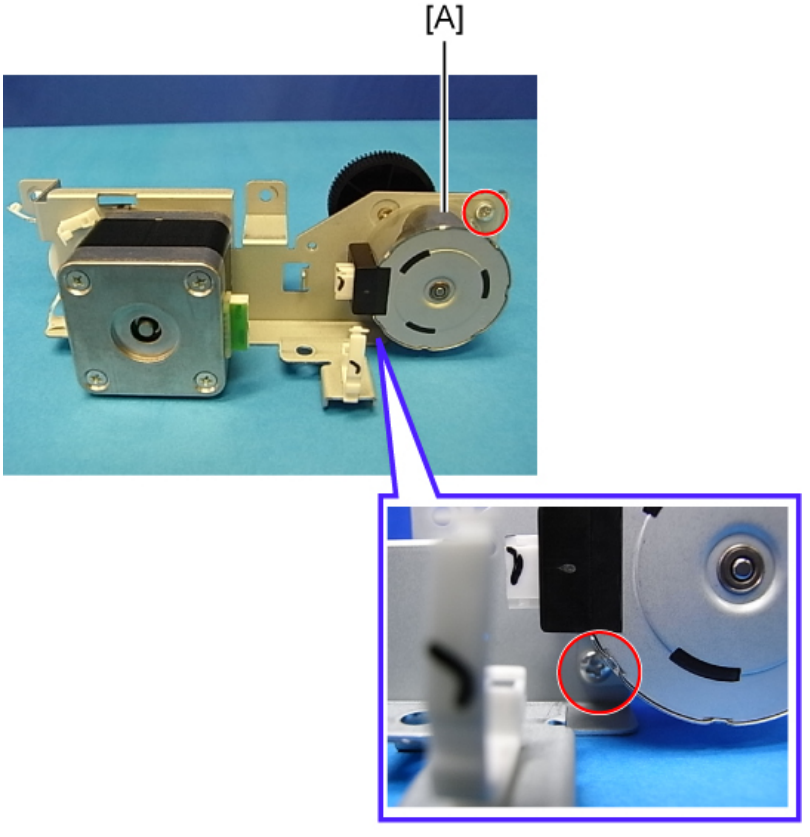
d120r511

4. Replace the duplex motor [A] from the bracket (x2).



d120r512

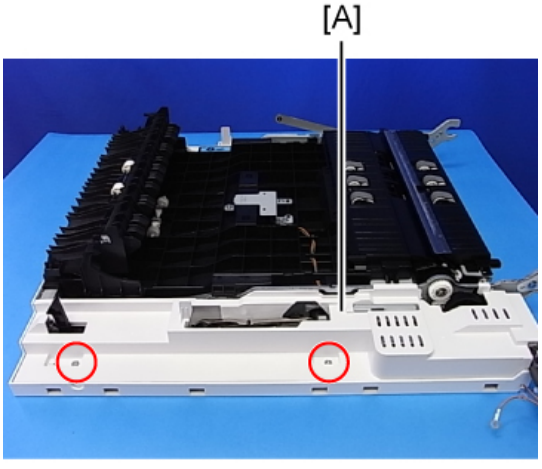
5. Replace the by-pass motor [A] from the bracket (x2).



d120r513

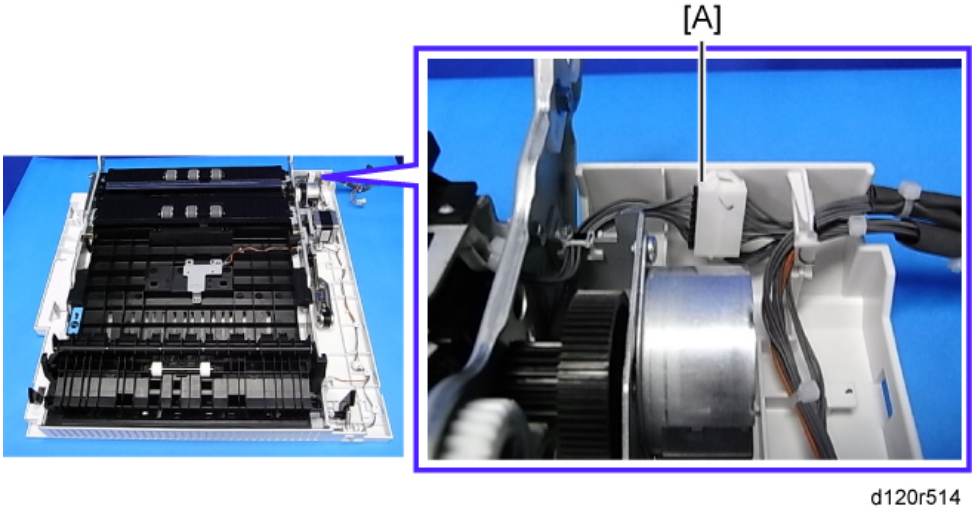
By-pass Tray Unit

1. Remove the duplex unit. (page 306 "Duplex Unit")
2. Remove the duplex inner cover [A] (x2).



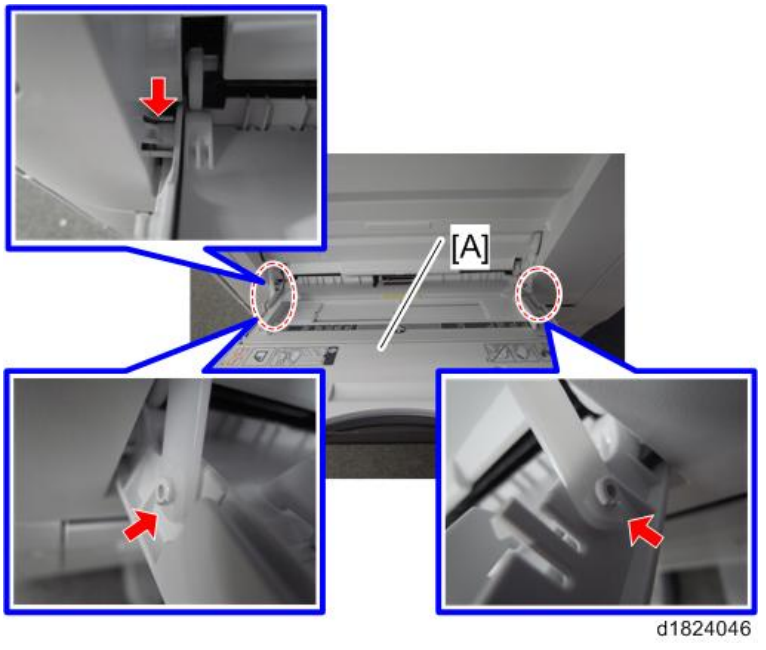
d120r510

3. Disconnect the connector [A].



d120r514

4. Replace the by-pass tray unit (x 2, hook x1).



d1824046

Note

- Use a flat-head screw driver or similar tool to push the hook down.

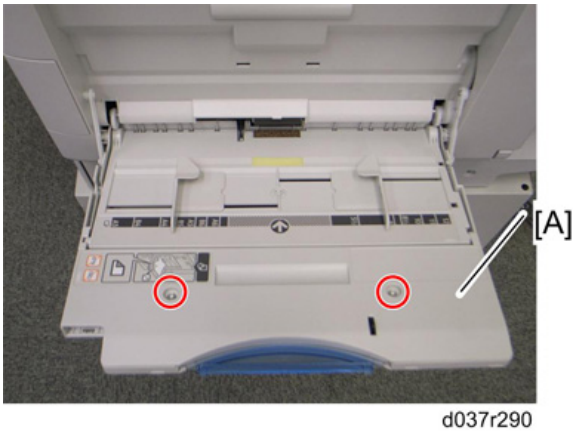
By-pass Paper Length Sensor

1. Open the by-pass tray unit [A].



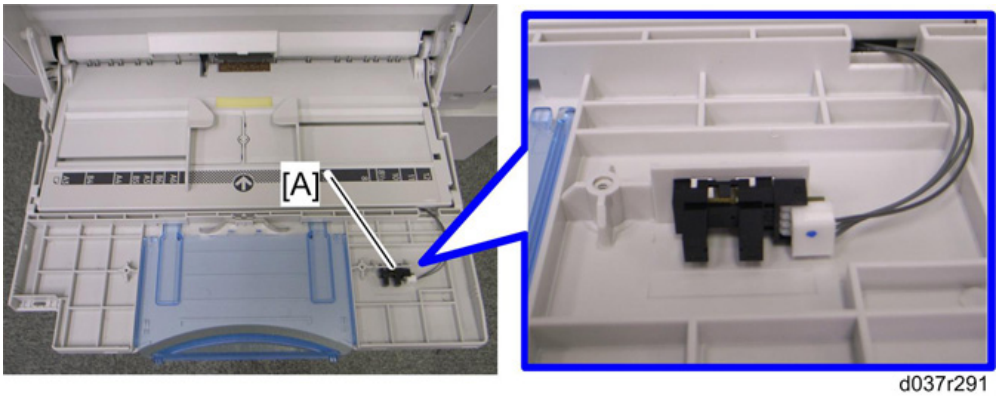
d1824047

2. Remove the by-pass tray right cover [A] (x2).



d037r290

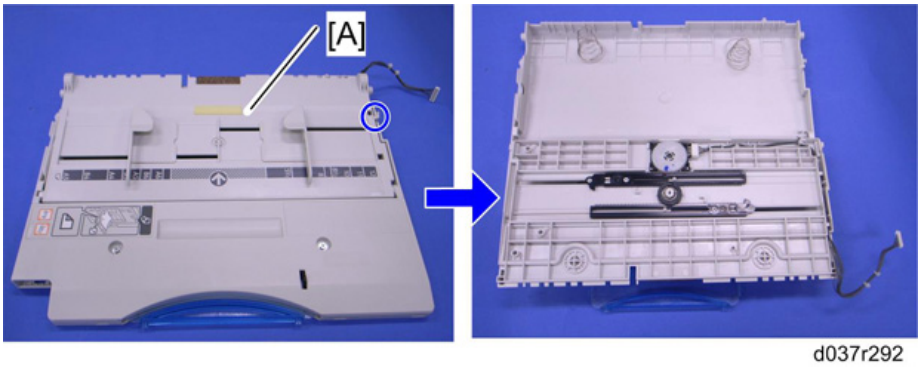
3. Replace the by-pass paper length sensor [A] (x1).



d037r291

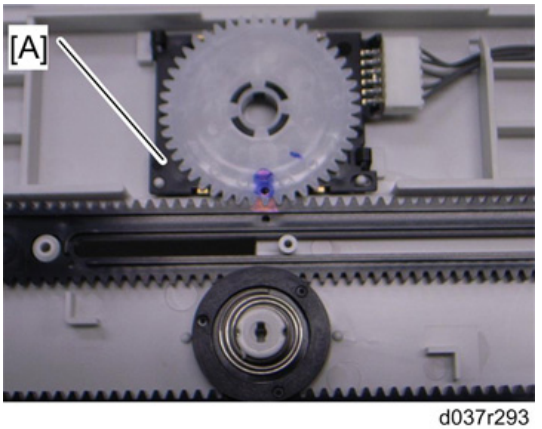
By-Pass Paper Size Sensor

1. Remove the by-pass tray unit. (page 312 "By-pass Tray Unit")
2. Remove the by-pass tray cover [A] (hook x1).



d037r292

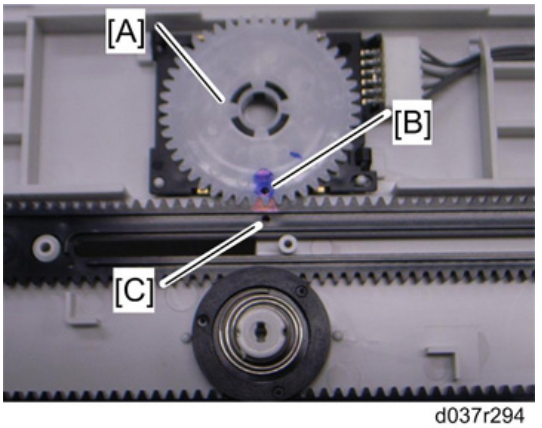
3. Replace the by-pass paper size sensor [A] (x1).



d037r293

When reinstalling the by-pass paper size sensor

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



d037r294

3. Reassemble the copier.
4. Plug in and turn on the main power switch.
5. Check this switch operation with SP5-803-015 (INPUT Check By-pass: Paper Size Sensor)

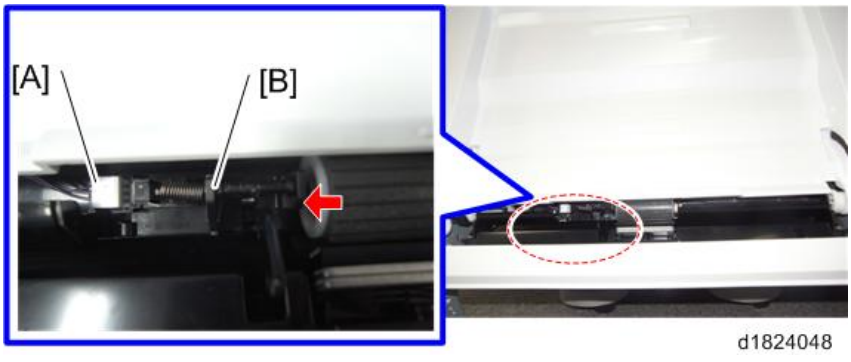
- Display on the LCD -

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

B5 SEF	00000111	Smaller A6 SEF	00001101

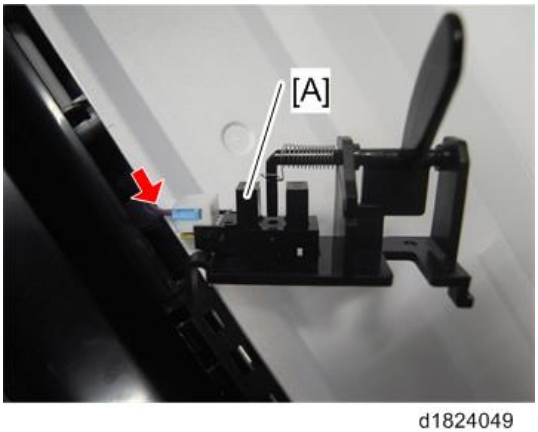
By-pass Paper End Sensor

1. Remove the by-pass tray unit. (page 312 "By-pass Tray Unit")
2. Remove the by-pass paper end sensor [A] and the feeler [B] from the duplex unit (hooks x2).



d1824048

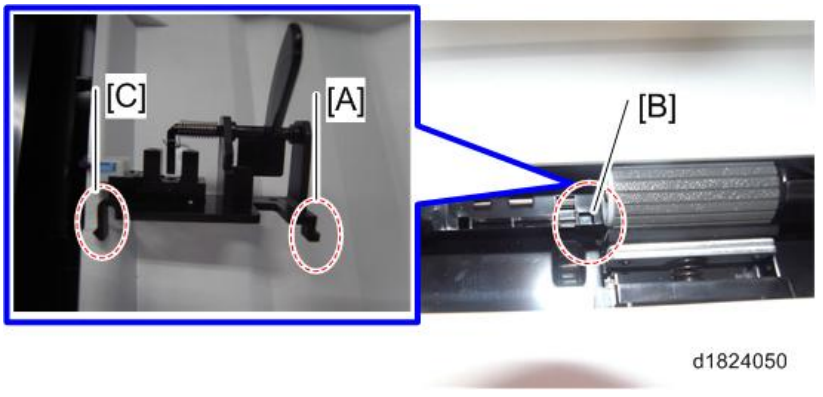
3. Replace the by-pass paper end sensor [A] (x1).



d1824049

Note

- When installing the by-pass paper end sensor, first place the right hook [A] into the hole [B] in the duplex unit and then place the left hook [C] using a flat-head screw driver or similar tool.



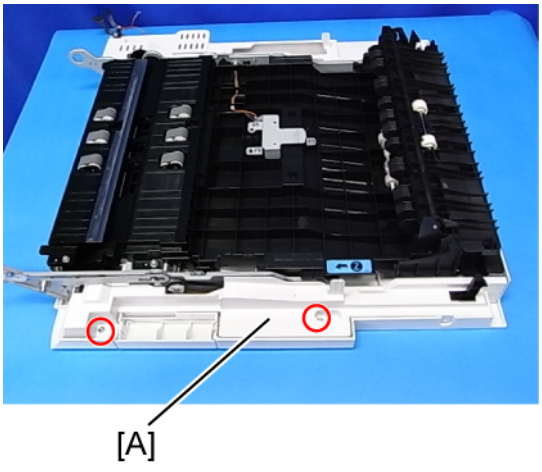
By-pass Pick-up Roller

1. Remove the by-pass paper end sensor. (page 317 "By-pass Paper End Sensor")
2. Replace the by-pass pick-up roller [A] (hook x1).



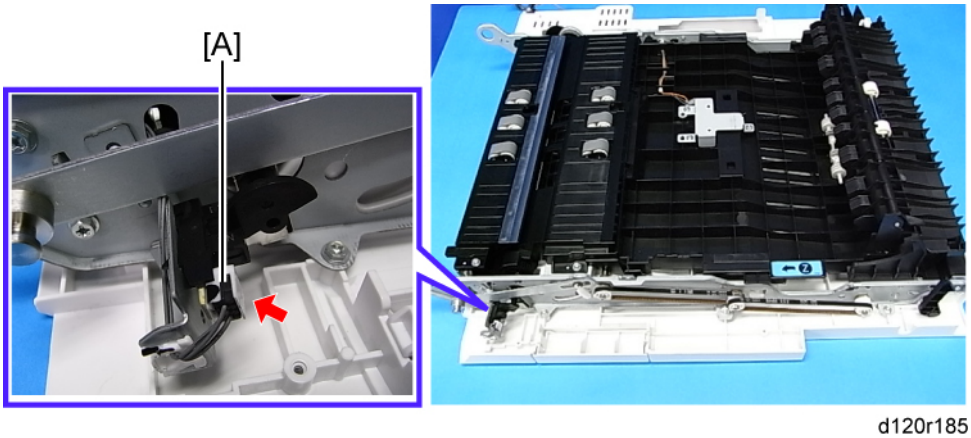
By-pass Tray HP Sensor

1. Remove the duplex unit. (page 306 "Duplex Unit")
2. Remove the duplex inner front cover [A] (x2).



d120r184

3. Replace the by-pass HP sensor [A] (x1).



d120r185

PCBs and Other Items

⚠CAUTION

- Turn off the main power switch and disconnect the power cord before you start any of the procedures in this section.

Controller Board

Important

- **If you intend to replace the NVRAM, upload its contents to an SD card with SP5-824 before you remove NVRAM and replace it with a new one. Never remove the NVRAM until after you have uploaded its contents.**

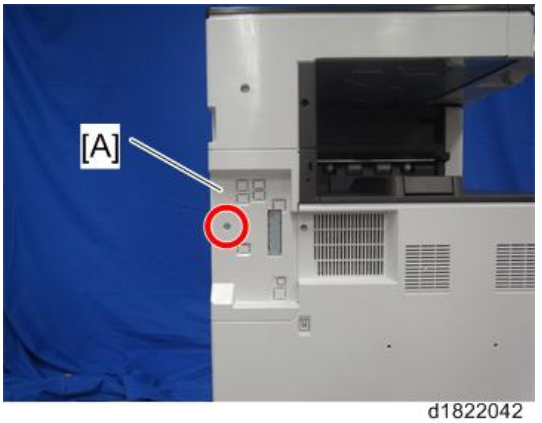
Before replacing the controller board in the model without HDD

When you replace the controller board in a model without a HDD, address book data can be copied from an old controller board to a new controller board using an SD card.

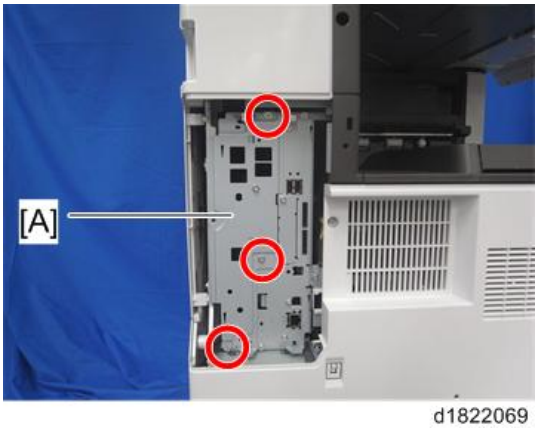
Copy the address book data to an SD card from the flash ROM on the controller board with **SP5-846-051** if possible.

Replacement Procedure

1. Remove the controller cover [A] (x1).

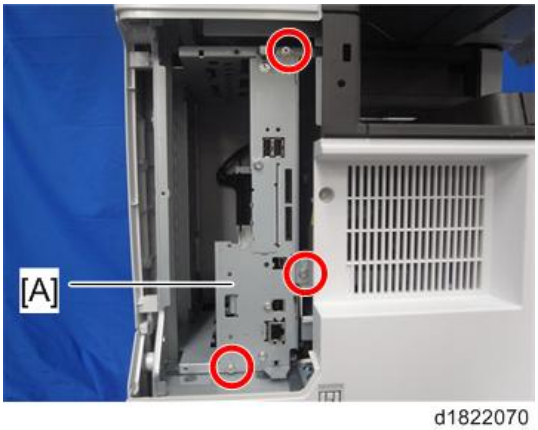


2. Remove the FCU panel [A] (x3).



d1822069

3. Remove the controller board unit [A] (x3).

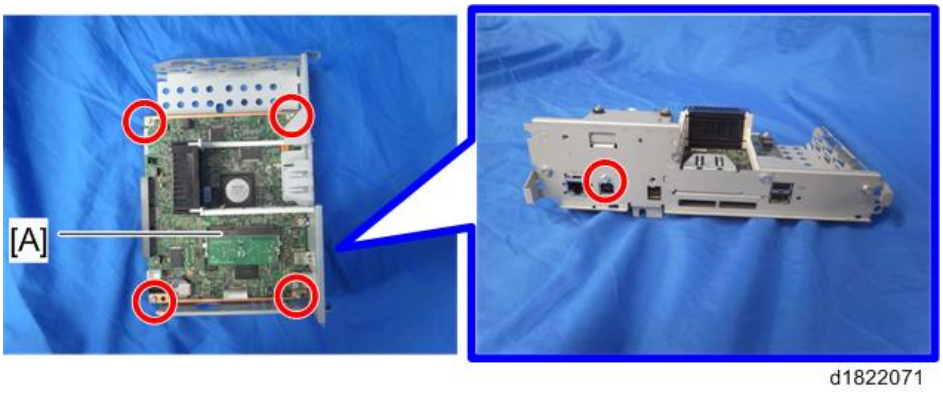


d1822070

Important

- **Before touching the controller board, always touch a metal surface to discharge any static that has accumulated on your hands.**

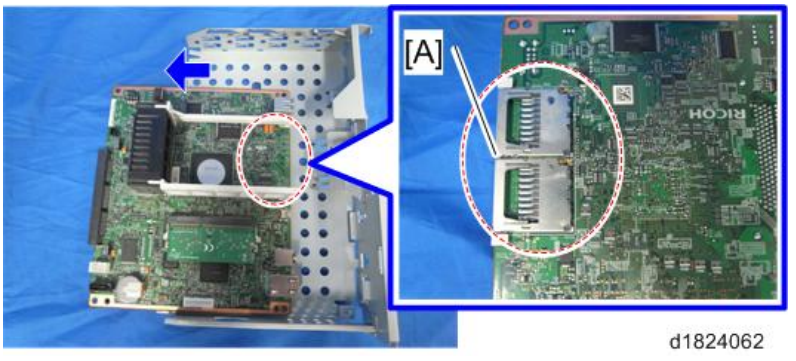
4. Remove the controller board [A] (x5).



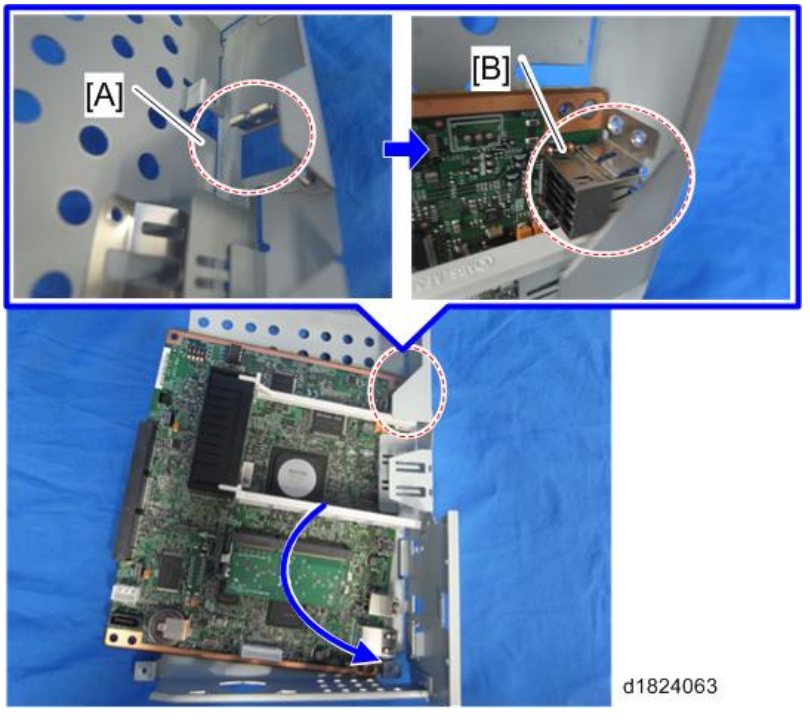
d1822071

Important

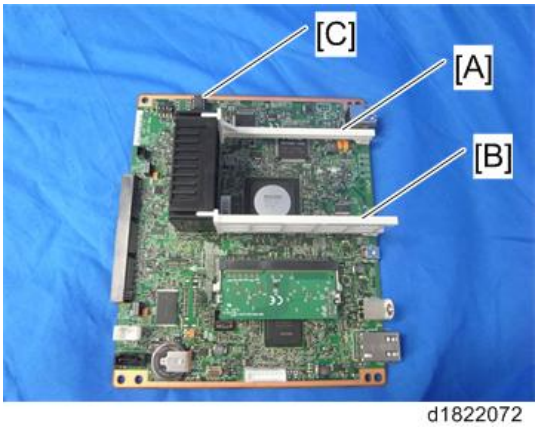
- Before removing the controller board, remove the HDD and option interface boards.
- When removing the controller board, remove the board horizontally to the left so as not to damage the SD card slot [A] on the rear of the board.



- When attaching the controller board, first, fit the USB slot [B] on the bracket [A], and then attach the bottom.



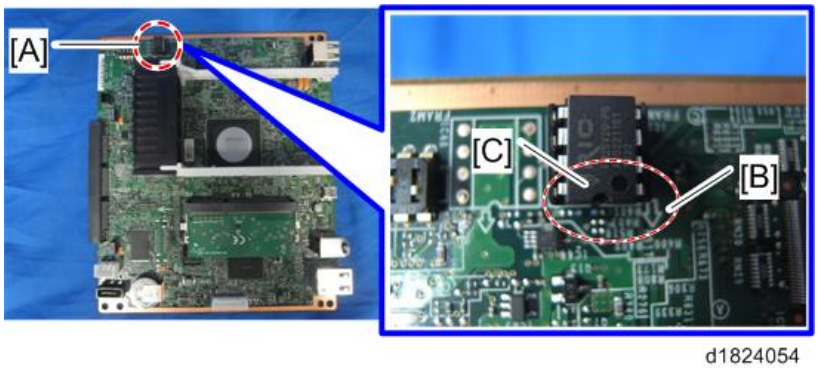
5. Remove the NVRAM [C], the upper brace [A] and the lower brace [B].



d1822072

Note

- Before removing the NVRAM, back up data.
- When replacing the controller board, remove the NVRAM from the old controller board. Then install it at the same position on the new controller board. Install so that the indentation [C] on NVRAM [A] is facing the direction of the arrow [B] that is printed on the controller board.



d1824054

- Before replacing the controller board check which ESA applications have been installed. After replacing the controller board, re-install the ESA applications by following the installation instructions for each application.
- After reinstalling the ESA applications, print the SMC (SP-5-990-024/025 (SMC: SDK/Application Info)). Store the SMC sheet and the SD card(s) that were used to install the ESA application(s).

6. If you have replaced the controller board, set the DIP switches on the new controller board to the same settings as the old board.

After installing the controller board

1. For a model without a HDD, do **SP5-846-052** to copy back the address book to the flash ROM on the controller board from the SD card to which you have already copied the address book data if possible.
2. If the customer is using the data encryption feature, the encryption key must be restored.

   Note

   - If the message "SD card for restoration is required." appears after the controller replacement, the encryption key should be restored. (page 210 "Encryption Key Restoration")
3. Turn the main power switch off and on.

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 5 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

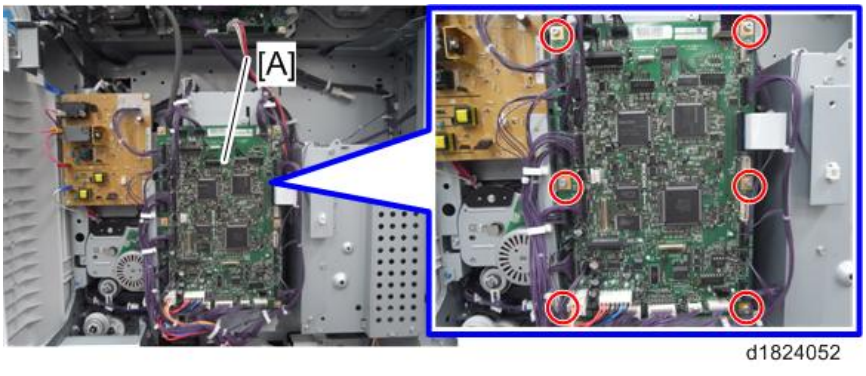
- The value of the total counter is reset to "0" when the NVRAM is replaced.

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).**
  2. **Install the Security function (Data Overwrite Security and HDD Encryption unit) again. (page 203 "Security Setting")**

BCU Board

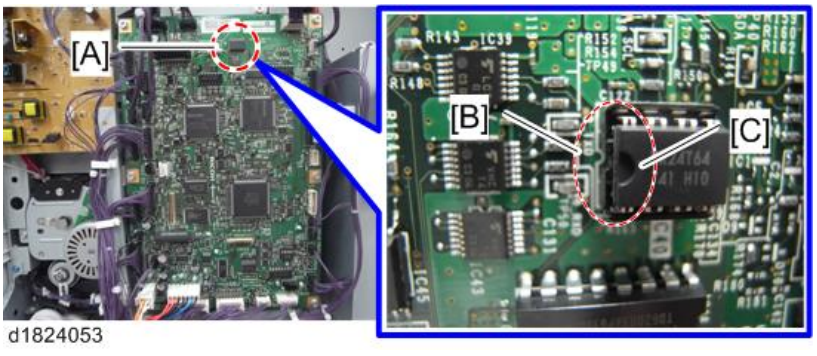
1. Remove:
   - Upper rear cover (page 225 "Upper Rear Cover")
   - Lower rear cover (page 227 "Lower Rear Cover")
2. Replace the BCU board [A] (x6, x all).



d1824052

3. Remove the EEPROM [A] from the old board and install it on the new board.

   Install so that the indentation on EEPROM [C] is facing the direction of the dent [B] that is printed on the BCU board.



d1824053

4. Install the new BCU in the machine.
5. Select SP5-811-004 and input the BCU serial number.

Note

- If you do not input the BCU serial number, SC995-01 occurs.

6. Turn the main power switch off and on.
7. Set the DIP switches on the new BCU board to the same settings as the old board.

Note

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

EEPROM on the BCU

⚠CAUTION

- Keep EEPROM away from any objects that can cause static electricity. Static electricity can damage NVRAM data.

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Print out the SMC data (SP5-990-001).
3. Turn the main switch off.
4. Install an SD card into SD card slot 2. Then turn the main power on.
5. Copy the EEPROM data to an SD card (SP5-824-001) onto the SD card.
6. Turn off the main switch. Then unplug the power cord.
7. Replace the EEPROM on the BCU and reassemble the machine.
8. Plug in the power cord. Then turn the main switch on.
9. SC195 occurs.
10. Copy the data from the SD card to the EEPROM (SP5-825-001).
11. Program the BCU serial number (SP5-811-004).
12. Turn the main switch off. Then remove the SD card from SD card slot 2.
13. Turn the main switch on.

Important

- **Even if SC995-001 is displayed when you turn on the main switch (after replacing the EEPROM), continue with this procedure.**

14. Access SP5-996-001 and set the area code.

Important

- **SP5996-001 is a Factory SP mode. Please contact your Service key-person about the access method.**
- **The initial value stored in the EEPROM is "1".**
- **After the EEPROM is replaced, the display for SP5-996-001 changes to Japanese.**
- **Refer to the following area code list.**

Area code	Destination
1	JP
2	NA
3	EU
4	TWN
5	AISA
6	CHN
7	KOR

15. Turn the main switch off and on.

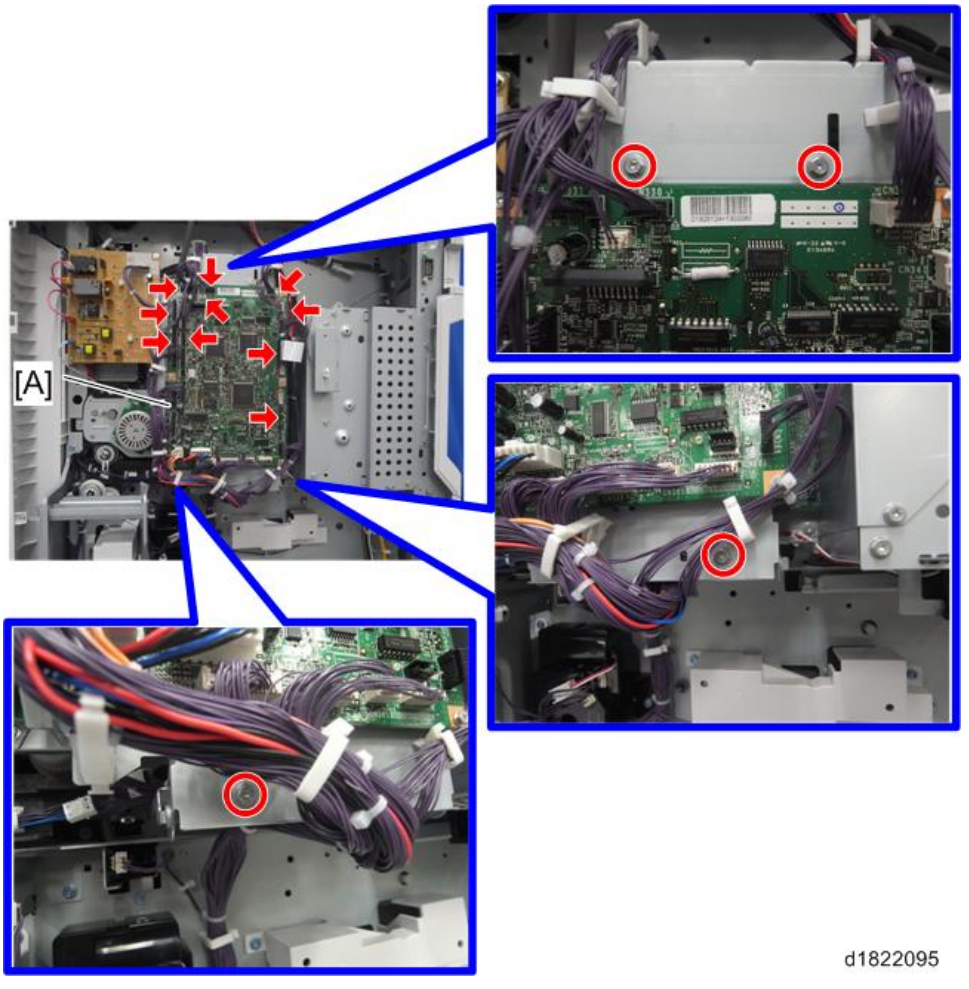
IPU

1. Remove:
   - Upper rear cover (page 225 "Upper Rear Cover")
   - Lower rear cover (page 227 "Lower Rear Cover")
2. Remove the controller unit. (page 320 "Controller Board")

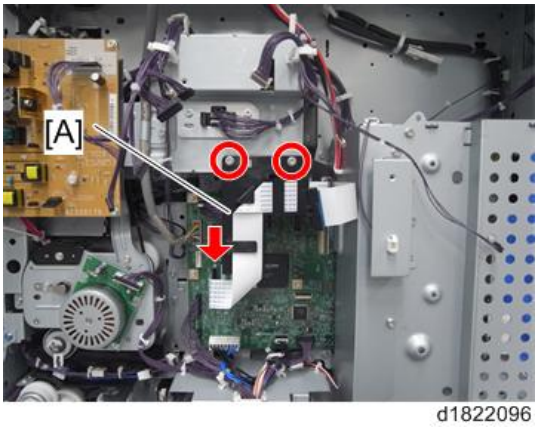
Note

- Replace the IPU after removing the controller unit to reduce the risk of damage.

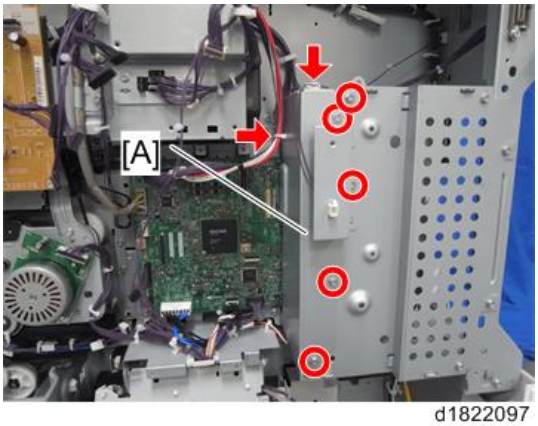
3. Tilt the BCU bracket [A] to the front (x4, x10).



4. Remove the harness guide [A] (x2, x1).

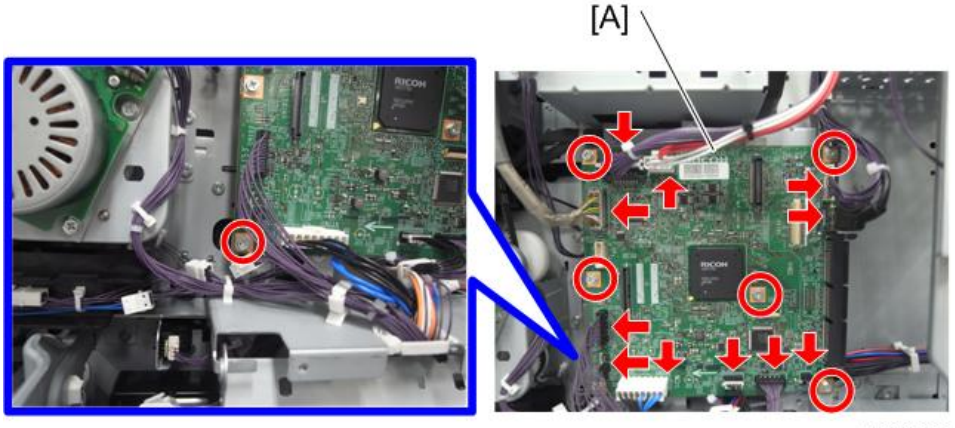


5. Remove the bracket [A] (x5, x2).



d1822097

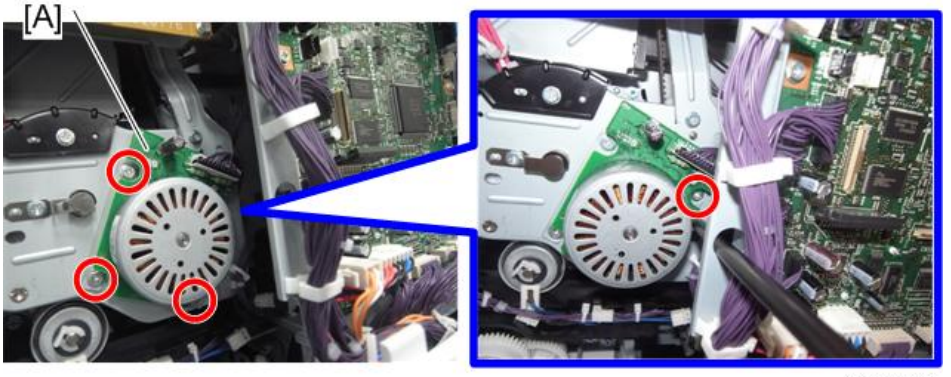
6. Replace the IPU [A] (x6, x11).



d1822098

Main Motor

1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Replace the main motor [A] (x4, x1).

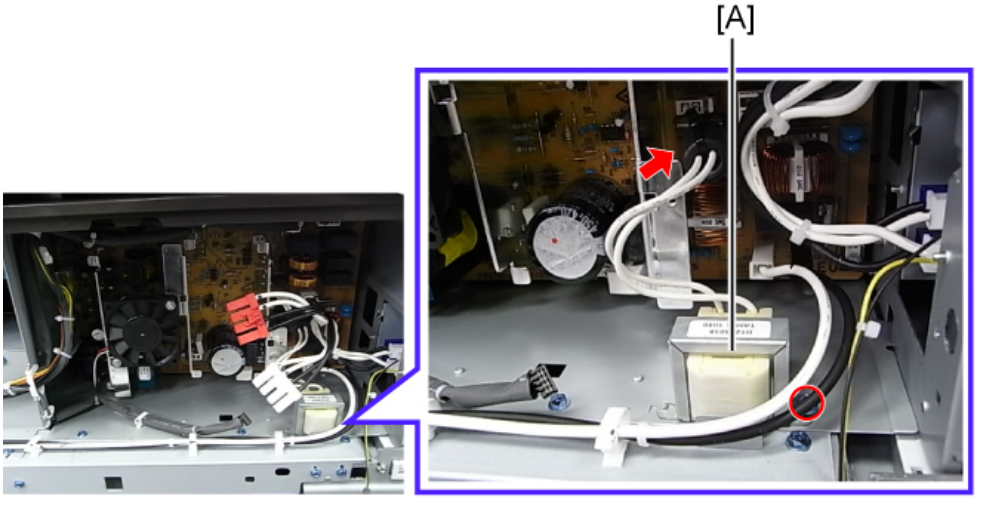


d1822099

4

PSU

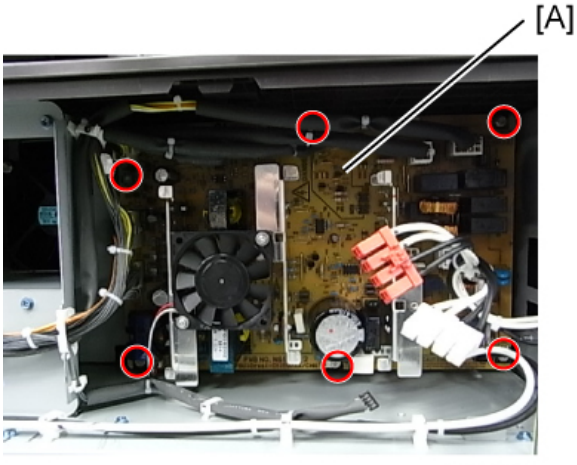
1. Remove:
    - Optional finishers except internal finisher if it has been installed.
2. Remove the transformer [A] (x1, x1) (For the 230 V machine only).



d120r150

3. Replace the PSU [A] (x all, x5, Standoff x1).

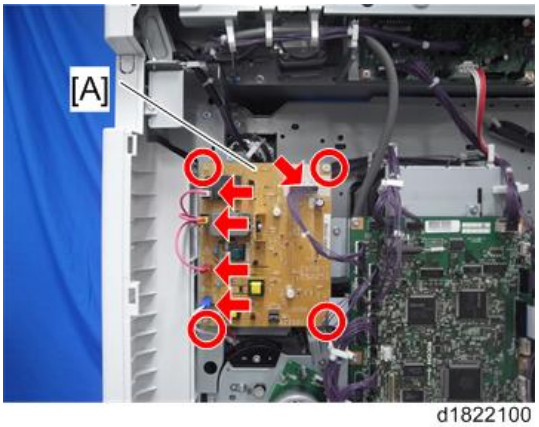
RTB 62
Manual correction - Caution for PSU replacement



d120r151

Power Pack

1. Remove the upper rear cover. (page 225 "Upper Rear Cover")
2. Replace the power pack [A] (x5, x2, Standoff x2).



d1822100

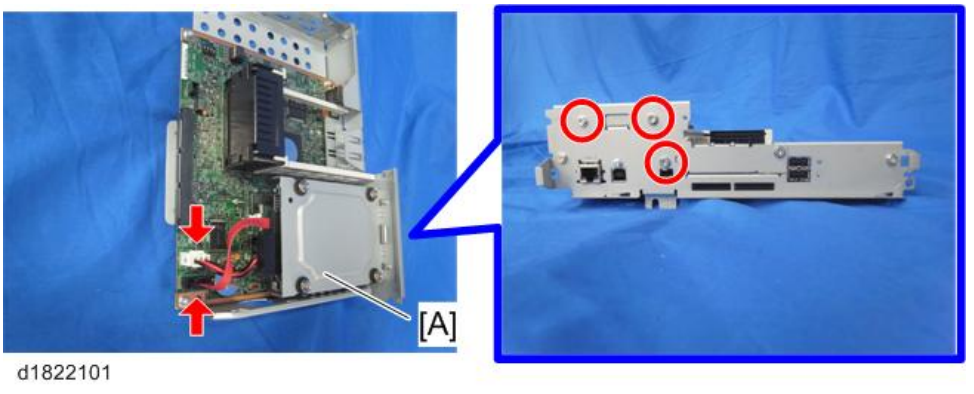
HDD

1. Before you replace the HDD:
    - Insert an SD card in SD card slot 2 (lower slot).
    - Go into the SP mode.
    - Do SP5-846 51 to upload the address book data to the SD card.

Important

- **If the HDD is damaged, you may not be able to retrieve this data from the HDD.**

2. Remove the controller board unit. (page 320 "Controller Board")
3. Remove the HDD unit [A] (x3, x2).



4. Remove the old HDD [A] from its bracket (x4, x2).
5. Install the new HDD unit.
6. Turn the main power switch off and on.
7. Format the HDD with SP5-832-1.
8. Do SP5-853 to copy the preset stamp data from the firmware to the hard disk.
9. Do SP5-846-52 to restore the address book data to the HDD.

After HDD Replacement

- Never remove a used HDD unit from the work site (even if it is suspected of being damaged) without the consent of the client.
- The HDD must remain with the customer for disposal or safe keeping.
- The HDD may contain proprietary or classified (Confidential, Secret) information. Specifically, the HDD contains document server documents and data stored in temporary files created automatically during copy job sorting and jam recovery. Such data is stored on the HDD in a special format, so it cannot normally be read but it can possibly be recovered with illegal methods.

Reinstallation

- Explain to the customer that the following information stored on the HDD is lost when the HDD is replaced: document server documents, fixed stamps, document server address book
- The address book and document server documents (if needed) must be input again.

- If the customer is using the Data Overwrite Security, the Data Encryption feature or OCR Scanned PDF, these applications must be installed again.

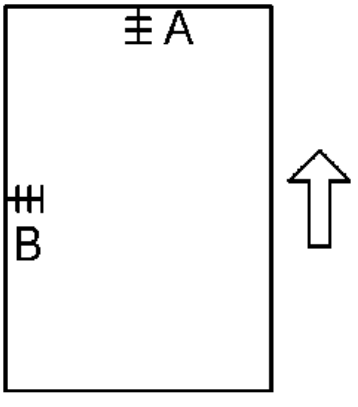
Adjustment after Replacement

Printing

Note

- Make sure the paper is installed correctly in each paper tray before you start these adjustments.
- Use the Trimming Area Pattern (SP2-109-001, No.14) to print the test pattern for the following procedures.
- Set SP 2-109-001 to 0 again after completing these printing adjustments.

Registration - Leading Edge/Side-to-Side



A: Leading Edge Registration (3 ± 2 mm)

B: Side-to-side Registration (2 ± 1.5 mm)

1. Check the leading edge registration [A] for each paper feed station, and adjust them using SP1-001.

Tray	SP No.
Tray: Plain	SP1-001-002
Tray: Thick 1	SP1-001-003
Tray: Thick 2	SP1-001-004
By-pass: Plain	SP1-001-007
By-pass: Thick 1	SP1-001-008

Tray	SP No.
By-pass: Thick 2	SP1-001-009
Duplex: Plain	SP1-001-013
Duplex: Thick 1	SP1-001-014

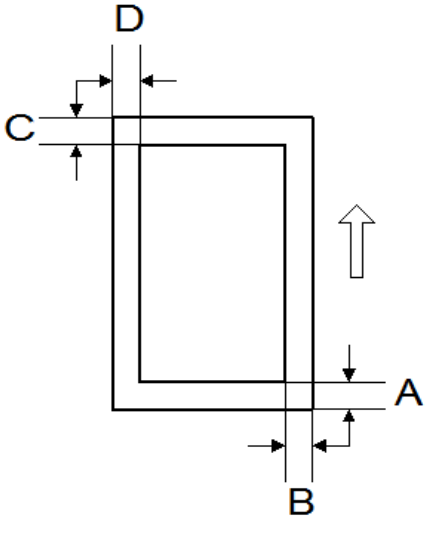
2. Check the side-to-side registration [B] for each paper feed station, and adjust them using SP1-002.

Tray	SP No.
By-pass	SP1-002-001
Tray 1	SP1-002-002
Tray 2	SP1-002-003
Tray 3 (Optional PFU tray 1 or LCT)	SP1-002-004
Tray 4 (Optional PFU tray 2)	SP1-002-005
Duplex (side 1)	SP1-002-006

Blank Margin

Note

- If the leading edge/side-to-side registration cannot be adjusted within the specifications, adjust the leading/left side edge blank margin.



A: Trailing Edge Blank Margin

B: Right Edge Blank Margin

C: Leading Edge Blank Margin

D: Left Edge Blank Margin

1. Check the trailing edge [A], right edge [B], leading edge [C], left edge [D] blank margins, and adjust them using the following SP modes.

Edge	SP No.	Adjustment Range
Leading Edge	SP2-103-001	3.0 ±2.0 mm (Plain, Thin)
Trailing Edge	SP2-103-002	More than 0.5 mm
Left Edge	SP2-103-003	2.0 ±1.5 mm
Right Edge	SP2-103-004	2.0 +2.5 /-1.5 mm
Duplex: Trailing Edge: L Size: Plain	SP2-103-005	2.0 ±2.0 mm
Duplex: Trailing Edge: M Size: Plain	SP2-103-006	
Duplex: Trailing Edge: S Size: Plain	SP2-103-007	
Duplex: Left Edge Plain	SP2-103-008	-2.0 ±1.5 mm
Duplex: Right Edge: Plain	SP2-103-009	2.0 +2.5 /-1.5 mm
Duplex: Trailing Edge: L Size: Thick	SP2-103-010	2.0 ±2.0 mm
Duplex: Trailing Edge: M Size: Thick	SP2-103-011	
Duplex: Trailing Edge: S Size: Thick	SP2-103-012	
Duplex: Left Edge Thick	SP2-103-013	-2.0 ±1.5 mm

Edge	SP No.	Adjustment Range
Duplex: Right Edge: Thick	SP2-103-014	2.0 +2.5 /-1.5 mm

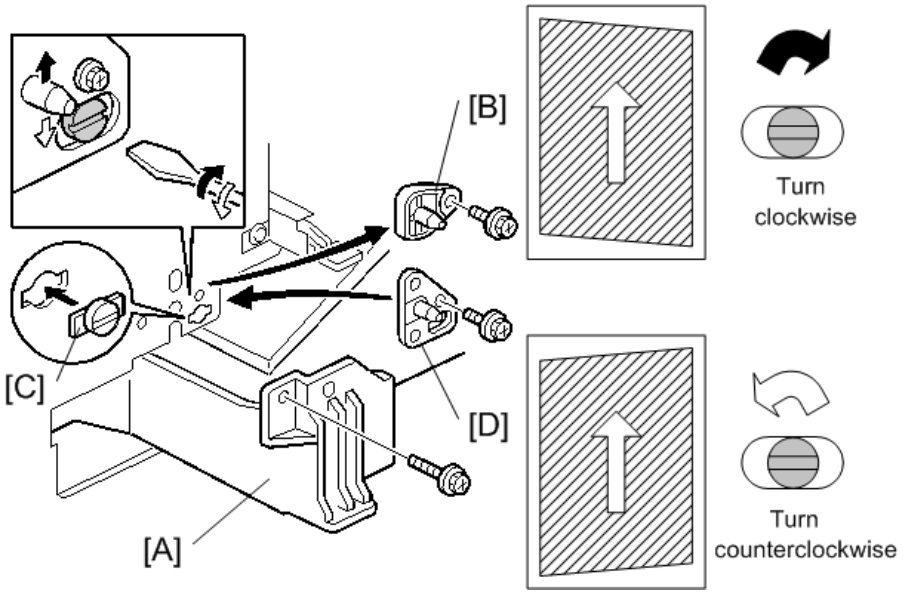
- L Size: Paper Length is 297.1 mm or more
- M Size: Paper Length is 216.1 to 297 mm
- S Size: Paper Length is 216 mm or less.

Main Scan Magnification

1. Use SP2-109-001, no.5 (Grid Pattern) to print the single-dot grid pattern.
2. Check the magnification, and adjust the magnification using SP2-102 (Magnification Adjustment Main Scan) if necessary. The specification is ± 1%.

Parallelogram Image Adjustment

Do the following procedure if a parallelogram is printed while adjusting the printing registration or the printing margin using a trimming area pattern.



Note

- The following procedure should be done after adjusting the side-to-side registration for each paper tray station.

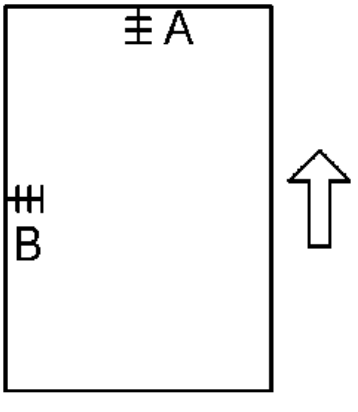
1. Check whether the trimming area pattern (SP2-109, No.14) is printed as a parallelogram, as shown. If it is, do the following.
2. Remove the laser unit [A] (page 265 "Laser Unit").
3. Remove the bracket [B] (x2).
4. Install the adjusting cam [C] (P/N: A2309003).
5. Secure the adjustment bracket [D] (P/N: A1849501) using the screw which was used for bracket [B]. However, do not tighten the screws at this time.
6. Adjusts the laser unit position by turning the adjusting cam. (Refer to the above illustration for the relationship between the image and the cam rotation direction).
7. Tighten the adjustment bracket.
8. Print the trimming area pattern to check the image. If it is still unsatisfactory, repeat steps 4 to 8.

Scanning

Note

- Before doing the following scanner adjustments, perform or check the printing registration /side-to-side adjustment and the blank margin adjustment.
- Use an S5S test chart to perform the following adjustments.

Registration: Platen Mode



A: Leading Edge Registration (Sub Scan Registration Adj)

B: Side-to-side Registration (Main Scan Reg)

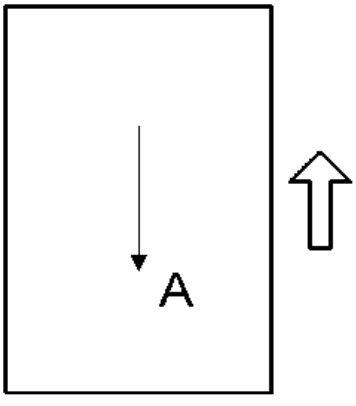
1. Place the test chart on the exposure glass and make a copy from one of the feed stations.
2. Check the leading edge and side-to-side registration, and adjust them using the following SP modes if necessary.

SP No.	SP Name	Adjustment Range
SP4-010-001	Sub Scan Registration Adj	±2.0 mm
SP4-011-001	Main Scan Reg	±2.5 mm

Magnification

Note

- Use an S5S test chart to do the following adjustment.



A: Sub-scan magnification

1. Place the test chart on the exposure glass and make a copy from one of the feed stations.
2. Check the magnification ratio and adjust using the following SP mode if necessary.

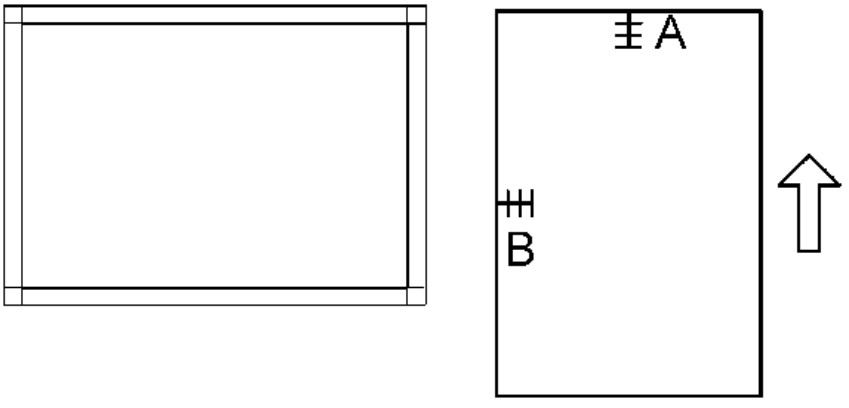
SP No.	SP Name	Adjustment Range
SP4-008-001	Sub Scan Magnification Adj	±1.0 %

Scanner Wire

See the Adjusting the Scanner Wire. (page 255 "Adjusting the Scanner Wire")

ADF Image Adjustment

Registration



A: Leading Edge Registration

B: Side-to-side Registration

Note

- Make a temporary test chart as shown above using A3/DLT paper.

1. Place the temporary test chart on the ADF and make a copy from one of the feed stations.
2. Check the registration, and adjust using the following SP modes if necessary.

SP No.	SP Name	Adjustment Range
SP6-006-001	ADF Adjustment Side-to-Side Regist: Front	±3.0 mm
SP6-006-002	ADF Adjustment Side-to-Side Regist: Rear	±3.0 mm
SP6-006-003	ADF Adjustment Leading Edge Registration	±5.0 mm
SP6-006-005	ADF Adjustment Buckle: Duplex Front	±5.0 mm
SP6-006-006	ADF Adjustment Buckle: Duplex Rear	±5.0 mm
SP6-006-007	ADF Adjustment Rear Edge Erase	±10.0 mm

Sub Scan Magnification

Note

- Make a temporary test chart as shown above using A3/DLT paper.

1. Place the temporary test chart on the ADF and make a copy from one of the feed stations.
2. Check the magnification, and adjust using the following SP modes if necessary.

SP No.	SP Name	Adjustment Range
SP6-017-001	DF Magnification Adj.	±5.0 %

Touch Screen Calibration

After clearing the memory, or if the touch panel detection function is not working correctly, follow this procedure to calibrate the touch screen.

Note

- Do not attempt to use items [2] to [5] and [7] to [9] on the Self-Diagnostic Menu. These items are for design use only.

1. Plug in the AC power cord, and then turn on the main power switch.
2. When Home or Copy screen appears, press the [Energy Saver] key.
3. Press [1], [9], [9], and [3] at the ten-key pad, and then press [C] (Clear) 5 times to open the "Self Diagnostics Menu."
4. Press [[1] Touch Screen Adjust] (or press [1] on the ten-key pad).



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5. Use a pointed (not sharp!) tool to press the mark (+) at the upper left of the screen.



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6. Press in order the lower right, lower left, middle, and upper right of the screen (+).
7. Press [[#] OK] on the screen (or press [#] on the ten-key pad) to save.
8. Press [[6] Touch Screen Test].



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9. Press the points (upper left, lower left, upper right and lower right) and confirm that each value is within ±5 dots.



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10. Press [[#] Exit] on the screen (or press [#] on the ten-key pad) to close the “Self Diagnostic Menu”.

5. Service Table

Service Program Mode

⚠CAUTION

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

SP Tables

See "Appendices" for the following information:

- System 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.

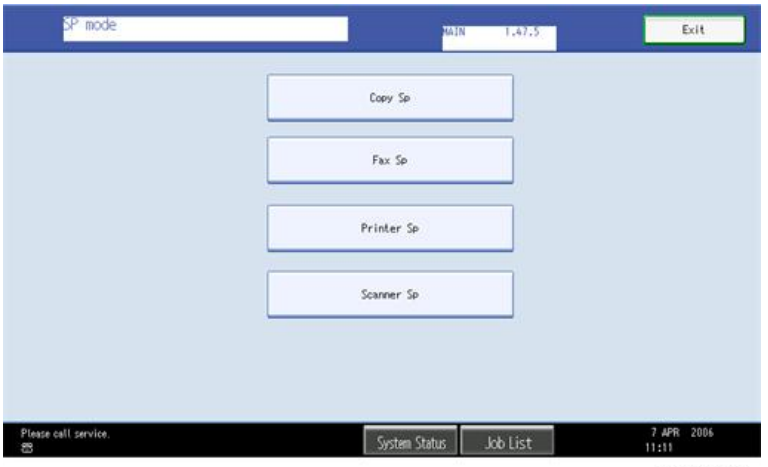
Exiting SP Mode

- Press "Exit" on the LCD twice to return to the copy window.

Types of SP Modes

- System SP: SP modes related to the engine functions
- Printer SP: SP modes related to the controller functions
- Scanner SP: SP modes related to the scanner functions
- Fax SP: SP modes related to the fax functions

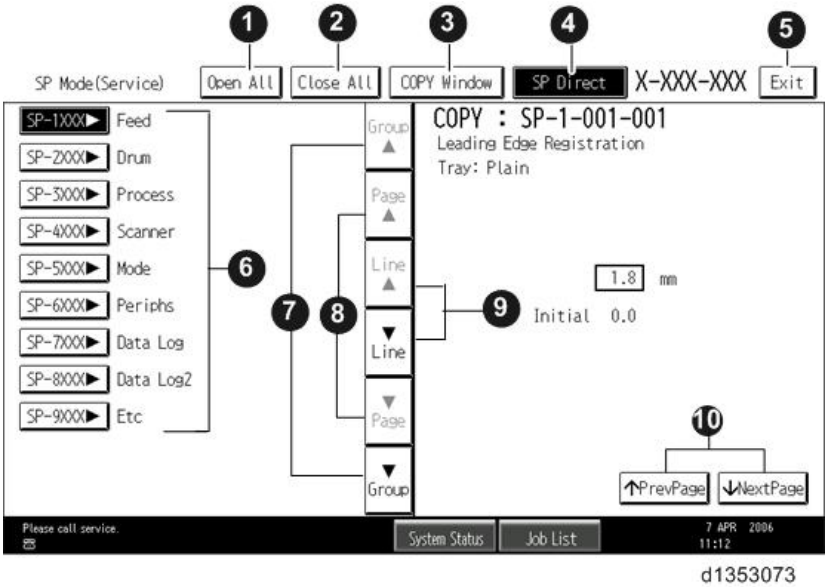
Select one of the Service Program modes (System, Printer, Scanner, or Fax) from the touch panel as shown in the diagram below after you access the SP mode. This section explains the functions of the System/Printer/Scanner SP modes. Refer to the Fax service manual for the Fax SP modes.



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SP Mode Button Summary

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



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1	Opens all SP groups and sublevels.
2	Closes all open groups and sublevels and restores the initial SP mode display.

3	Opens the copy window (copy mode) so you can make test copies. Press SP Mode (highlighted) in the copy window to return to the SP mode screen,
4	Enter the SP code directly with the number keys if you know the SP number. Then press [#]. The required SP Mode number will be highlighted when pressing [#]. If not, just press the required SP Mode number.)
5	Press two times to leave the SP mode and return to the copy window to resume normal operation.
6	Press any Class 1 number to open a list of Class 2 SP modes.
7	Press to scroll the show to the previous or next group.
8	Press to scroll to the previous or next display in segments the size of the screen display (page).
9	Press to scroll the show the previous or next line (line by line).
10	Press to move the highlight on the left to the previous or next selection in the list.

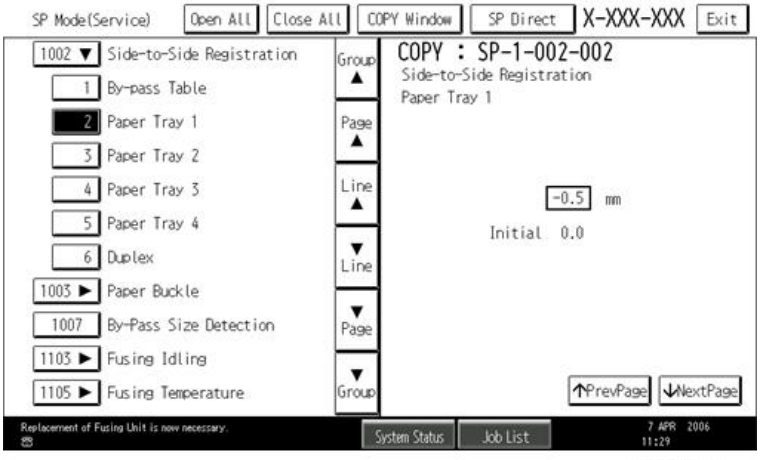
Switching Between SP Mode and Copy Mode for Test Printing

1. In the SP mode, select the test print. Then press "Copy Window".
2. Use the copy window (copier mode), to select the appropriate settings (paper size, etc.) for the test print.
3. Press [Start] key to start the test print.
4. Press SP Mode (highlighted) to return to the SP mode screen and repeat from step 1.

Selecting the Program Number

Program numbers have two or three levels.

1. Refer to the Service Tables to find the SP that you want to adjust before you begin.
2. Press the Group number on the left side SP Mode window that contains the SP that you want to adjust.
3. Use the scrolling buttons in the center of the SP mode window to show the SP number that you want to open. Then press that number to expand the list.
4. Use the center touch-panel buttons to scroll to the number and title of the item that you want to set and press it. The small entry box on the right activates and shows the below default or the current settings.



Note

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

5. Do this procedure to enter a setting:
   - Press ⊙ to toggle between plus and minus and use the keypad to enter the appropriate number. The number you enter writes over the previous setting.
   - Press [#] to enter the setting. (The value is not registered if you enter a number that is out of range.)
   - Press "Yes" when you are prompted to complete the selection.
6. If you need to perform a test print, press Copy Window to open the copy window and select the settings for the test print. Press [Start] key and then press SP Mode (highlighted) in the copy window to return to the SP mode display.
7. Press Exit two times to return to the copy window when you are finished.

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 power switch off and on. It is not necessary to ask the Administrator to log in again each time the main power switch is turned on.

2. Go into the SP mode and set SP5-169 to "1" if you must use the printer bit switches.
3. After machine servicing is completed:
    - Change SP5-169 from "1" to "0".
    - Turn the machine power switch off and on. Tell the administrator that you have completed servicing the machine.
    - The Administrator will then set the "Service Mode Lock" to ON.

Remarks

The maximum number of characters which can show on the control panel screen is limited to 30 characters. For this reason, some of the SP modes shown on the screen need to be abbreviated. The following are abbreviations used for the SP modes for which the full description is over 20 characters.

Item	Description
Paper Weight	Thin paper: 52-59 g/m^2, 13.9-15.7lb. Plain Paper1: 60-74 g/m^2, 16-19.7lb. Plain Paper2: 75-81 g/m^2, 20-21.6lb. Middle Thick: 82-105 g/m^2, 21.9-28lb. Thick Paper1: 106-157 g/m^2, 28.3-41.9lb.
Paper Type	N: Normal paper MTH: Middle thick paper TH: Thick paper
Paper Feed Station	P: Paper tray B: By-pass table
Print Mode	S: Simplex D: Duplex

Others

The 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 in the front cover.)

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.

Test Pattern Print

Test Pattern (SP2-109-001)

1. Turn the main switch on.
2. Start the SP mode.
3. Select SP2-109-001 (Test Pattern: Pattern Select).
4. Specify the pattern number and press the OK key.
5. Press the copy start key. The copy mode is activated
6. Specify copy settings and press the Start key.
7. To return to the SP mode, press the Stop key.

No.	Pattern
0	None
1	Vertical Line (1dot)
2	Vertical Line (2dot)
3	Horizontal Line (1dot)
4	Horizontal Line (2dot)
5	Grid Vertical Line
6	Grid Horizontal Line
7	Grid Pattern Small
8	Grid Pattern Large
9	Argyle Pattern Small
10	Argyle Pattern Large
11	Independent Pattern (1dot)
12	Independent Pattern (2dot)
13	Independent Pattern (4dot)
14	Trimming Area
15	Black Band (Horizontal)

No.	Pattern
16	Black Band (Vertical)
17	Checker Flag Pattern
18	Grayscale (Vertical)
19	Grayscale (Horizontal)
20	Full Dot Pattern
21	All White Pattern

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/Copy Application	Operating system	Flash ROM on the controller board	System/Copy
Printer Application	Feature application	Printer/Scanner SD card or Printer SD card	Printer
Scanner Application	Feature application	Printer/Scanner SD card or Printer SD card	Scanner
Fax Application	Feature application	Flash ROM on the controller board	Fax
NIB	Network Interface	Flash ROM on the controller board	Network Support
Operation Panel	Panel control	Operation Panel	Lcdc.
Fax FCU	Fax control	FCU	GWFCU3.5-1(WW)
Remote Fax	Fax control	Flash ROM on the controller board	Remote Fax
Language	Language firmware Two languages can be selected from 16 languages.	Operation Panel	Language 1
			Language 2
WebDocBox	Document server application	Flash ROM on the controller board	Web Uapl
WebSys	Web Service application	Flash ROM on the controller board	Web Support

Type of firmware	Function	Location of firmware	Message shown
PDF	PDF direct printing	Printer/Scanner SD card or Printer SD card	PDF
PS	Page description language (PostScript3)	Printer/Scanner SD card or Printer SD card	PS
RPCS	Page description language (RPCS for XPS driver data process)	Printer/Scanner SD card or Printer SD card	RPCS
MediaPrint:JPEG/IFF	MediaPrint control	Flash ROM on the controller board	MediaPrint:JPEG/TIFF
Netfile Application	Feature application	Flash ROM on the controller board	NetworkDocBox
Summary font	Summary fonts	Flash ROM on the controller board	FONT
PCL Font	PCL fonts	Printer/Scanner SD card or Printer SD card	FONT1
PS 3 font	Post Script 3 fonts	PS3 SD card	FONT2
ARDF	ARDF control	ARDF	ADF
Finisher	Finisher control	Finisher	Finisher
Java VM	SDK application	Flash ROM on the controller board	SDK
Data Overwrite Security	Security application	Flash ROM on the controller board	HDD Format Option

Before You Begin

An SD card is a precision device. Always observe the following precautions when you handle SD cards:

- Always switch the machine off before you insert an SD card. Never insert the SD card into the slot with the power on.
- Do not remove the SD card from the service slot after the power has been switched on.
- Never switch the machine off while the firmware is downloading from the SD card.

- Keep SD cards in a safe location where they are not exposed to high temperature, high humidity, or exposure to direct sunlight.
- Always handle SD cards with care. Do not bend or scratch them. Do not let the SD card get exposed to shock or vibration.
- Make sure that the write protection of an SD card is unlocked when you download an application to it. If not, downloading fails and a download error (e.g. Error Code 44) occurs during a firmware upgrade.

Keep the following points in mind when you use the firmware update software:

- "Upload" means to send data from the machine to the SD card. "Download" means to send data from the SD card to the machine.
- To select an item on the LCD, touch the appropriate button on the soft touch-screen of the LCD, or, press the appropriate number key on the 10-key pad of the operation panel. For example, when "Exit (0)" shows on the screen you can touch the Exit button on the screen, or, press the [0] key on the operation panel of the copier.
- Make sure that the machine is disconnected from the network to prevent a print job for arriving while the firmware update is in progress before you start the firmware update procedure.

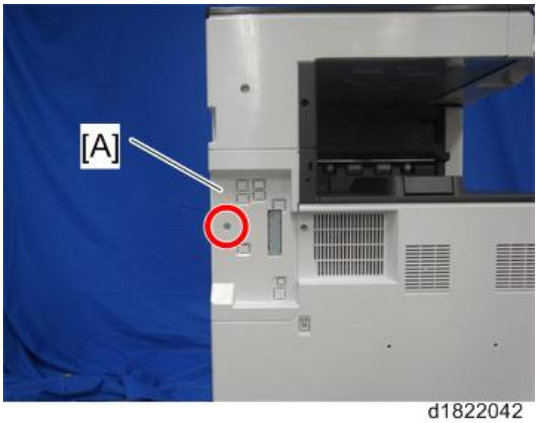
Updating Firmware

Preparation

- If the SD card is blank, make a "romdata" folder on the SD card.
- If the card already contains a “romdata” folder, copy the “firmware” to the folder.

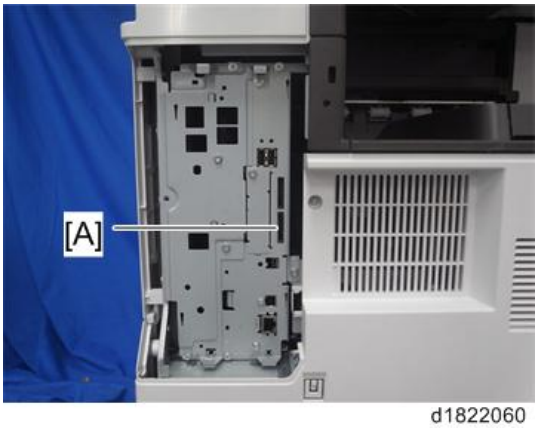
Updating Procedure

1. Turn off the main power switch.
2. Remove the controller cover [A] (x1).



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3. Insert the SD card into SD Card Slot 2 [A]. Make sure the label on the SD card faces the front side of the machine.



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4. Slowly push the SD card into the slot so it locks in place. You will hear it click. Make sure the SD card locks in place.

Note

- To remove the SD, push it in to unlock the spring lock. Then release it so it pops out of the slot.

5. Disconnect the network cable from the copier if the machine is connected to a network.
6. Switch the main power switch on. After about 45 seconds, the initial version update screen appears on the LCD in English.
7. On the screen, touch the button or press the corresponding number key on the operation panel to select the item in the menu that you want to update.

ROM/NEW	What it means

ROM:	Tells you the number of the module and name of the version currently installed. The first line is the module number, the second line the version name.
NEW:	Tells you the number of the module and name version on the SD card. The first line is the module number, the second line the version name.

Note

- Controller, engine and operation panel firmware cannot be updated at the same time. It is recommended to update firmware modules one by one.

8. Touch "UpDate (#)" (or [#] key) to start the update.

Note

- The progress bar does not show for the operation panel firmware after you touch "OpPanel". The power on key flashes on and off at 0.5 s intervals when the LCDC firmware is updating. The power key flashes on and off at three seconds intervals when the update is finished.

9. The "Update is Done" message appears on the operation panel after completing the updating. The message differs depending on the firmware that has been updated.
10. Switch the copier main power switch off when you see the "Update is Done" message or follow the procedure that is displayed on the operation panel.
11. Press in the SD card to release it. Then remove it from the slot.
12. Switch the copier on for normal operation.

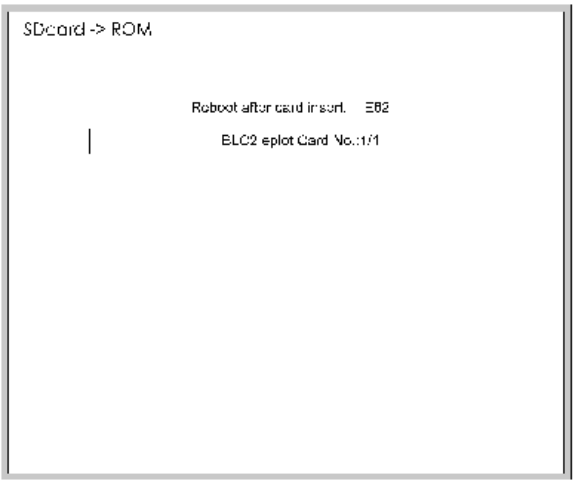
Error Messages

An error message shows in the first line if an error occurs during the download.

The error code consists of the letter "E" and a number. The example above shows error "E24" displayed. For details, refer to the “Handling Firmware Update Errors” in this section.

Firmware Update Error

If a firmware update error occurs, this means the update was cancelled during the update because the module selected for update was not on the SD card.



Recovery after Power Loss

If the ROM update is interrupted as a result of accidental loss of power while the firmware is updating, then the correct operation of the machine cannot be guaranteed after the machine is switched on again. If the ROM update does not complete successfully for any reason, then in order to ensure the correct operation of the machine, the ROM update error will continue to show until the ROM is updated successfully.

In this case, insert the card again and switch on the machine to continue the firmware download automatically from the card without the menu display.

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	• Cycle the machine off/on. • If the program starts in the SD card, reinsert the SD card. • If you cannot resolve the problem with the above steps, replace the controller board.
21	Not enough memory for downloading	• Cycle the machine off/on. • If you cannot resolve the problem with the above steps, replace the controller board.

Code	Meaning	Solution
22	Cannot decompress compressed data	• Cycle the machine off/on. • Replace the SD card that was used to update • If you cannot resolve the problem with the above steps, replace the controller board.
24	SD card access error	• Cycle the machine off/on. • Make sure SD card inserted correctly, or use another SD card. • If you cannot resolve the problem with the above steps, replace the controller board.
30	Cannot download stamp data (no HDD)	• Connect HDD correctly. • In the case of HDD failure, replace the HDD. • Cannot be downloaded to a machine with no HDD.
32	Different SD card between download interruption and download resumption	• Setting the SD card was interrupted. Cycle the machine off/on. • If the update cannot be made even if you insert the correct SD card, there is a possibility that the SD card is broken. Retry again with a different SD card. • If you cannot resolve the problem with the above steps, replace the controller board. • If the program is in the SD card, reinsert the SD card. • If you updated engine, FCU, or operating unit, replace each board.
33	Incorrect version data in the SD card	• Acquire correct update data then install again.
34	Module error - Correct module (destination) is not in the SD card.	• Acquire the correct data (Japan, Overseas, OEM, etc.) then install again.
35	Module error – Module in the SD card is not for this machine	• Acquire correct update data then install again.

Code	Meaning	Solution
36	Module error – The machine does not have the program that you are trying to download.	• Install the correct program in advance. • Make sure SD card inserted correctly. • If the update cannot be made even if you insert the correct SD card, there is a possibility that the SD card is broken. Retry again with a different SD card.
38	Program version is not allowed to update	• Acquire correct update data then install again.
40	Engine module download failed	• Cycle the machine off/on. • If the download failed again, replace the controller board.
41	Fax module download failed	• Cycle the machine off/on. • If the download failed again, replace the controller board and FCU.
42	Operation/language module download failed	• Cycle the machine off/on. • If the download failed again, replace the controller board and operation board.
43	Stamp data module download failed	• Cycle the machine off/on. • If the update cannot be made even if you insert the correct SD card, there is a possibility that the SD card is broken. Retry again with a different SD card.
44	Controller module download failed (access error)	• Cycle the machine off/on. • If the program is in the SD card, replace the SD card. • If the program is in the controller board, replace the controller board.
49	Firmware update is prohibited	• Firmware update is disabled in the administrator settings. Retry by changing the settings to allow firmware update.
50	Digital certificate check result of updating data was NG.	• Acquire correct update data then install again.

Updating JavaVM

Creating an SD Card for Updating

1. Download the update modules from Firmware Download Center. As one of the model modules, "Java VM v11 UpdateTool" is available for download. (The version differs depending on the model.)
2. Unzip the downloaded file. Copy the whole "sdk" folder to the root of the SD card directly below.

Note

- When unzipping the downloaded file, two subfolders ("update" and "sdk") exist in the "sdk" folder. Rather than just copying the subfolder "sdk", copy the whole folder "sdk".

Updating Procedure

⚠CAUTION

- SD card can be inserted with the machine power off.
- During the updating process, do not turn off the power.
- If you turn off the power during the updating, the machine performance is not guaranteed. (There is a possibility that an SC and boot failure occurs.)
- If you accidentally turn off the power during the updating, retry the updating procedure from the beginning. (If the update fails again, you will need to replace the controller board.)

1. If the boot priority application is set to the ESA application, switch to the copy application. ([System Settings]-[General Features]-[Function Priority])
2. Insert the SD card you created into the service slot, and then turn ON the main power switch.
3. After booting Java VM, update of the application is started. "Updating SDK/J" appears in the banner message of the touch panel display. (Estimated time: about 2 minutes)



4. When the update is complete, "Update SDK / J done SUCCESS" will appear in the banner message of the touch panel display. After turning off the power, remove the SD card from the slot.

   When you fail to update, "Update SDK/J done FAIL" is displayed. You can confirm the cause of the error message below.

5. Reconfigure the Heap size. ([Extended Feature Settings]-[Administrator Tools]-[Heap/Stack Size Settings]). See the manual for the ESA application to know what value to set for the heap size.
6. Return to the previous setting for the boot priority application.

List of Error Messages

Update results are output as a text file on the SD card called "sdkjversionup.log" in the "\sdk \update" folder.

Result	File contents	Description of the output
Success	script file = /mnt/sd0/sdk/update/bootscript 2012/08/22 17:57:47 start 2012/08/22 17:59:47 end SUCCESS	Boot script path Boot scripts processing start time End time boot script processing, the results
Failure	script file = /mnt/sd0/sdk/update/bootscript 2012/08/22 17:57:47 start XXXX Error 2012/08/22 17:57:57 end FAIL	Boot script path Boot scripts processing start time Error message (Possibly multiple) End time boot script processing, the results

Error Message	Cause	Remedy
PIECEMARK Error,machine=XXXXX	Applied the wrong updating tool (Using the updating tool of a different model)	Use the correct updating tool for this model.
pasePut() - error : The file of the copy origin is not found Put Error!	Inadequacy with the SD card for updating (Files are missing in the updating tool)	Re-create the SD card for updating.
paseCopy() - error : The file of the copy origin is not found. Copy Error!	Inadequacy SD card for updating (Files in the updating tool are missing)	Inadequacy SD card for updating (Files in the updating tool are missing)
[file name: XX] error,No space left on device pasePut() - error : The destination directory cannot be made. pasePut() - error : fileCopy Error. Put Error!	Writing destination is full. (The NAND flash memory on the controller board is full.)	Uninstall the unnecessary SDK applications. If you can not uninstall it, implement escalation, stating the "model name, application configuration, SMC sheet (SP5-990-006/024/025), and error file."
[file name: XX] error,No space left on device paseCopy() - error : The destination directory cannot be made. paseCopy() - error : fileCopy Error. Copy Error!	Writing destination is full. (The NAND flash memory on the controller board is full.)	Uninstall the unnecessary SDK applications. If you can not uninstall it, implement escalation stating the "model name, application configuration, SMC sheet (SP5-990-006/024/025), and error file."

Error Message	Cause	Remedy
Put Error! *1	Error, not normally expected to occur	If you cannot uninstall it, implement escalation stating the "model name, application configuration, SMC sheet (SP5-990-006/024/025), and error file." *1 Without the foregoing error message, only "Put Error / Copy Error" will be displayed
Copy Error! *1		
Delete Error!		
[XXXXX] is an unsupported command.		
Version Error		

Selecting the Panel Display Language

Switchable Languages

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.
2. Press the "User Tools/Counter" 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.

NVRAM Data Upload/Download

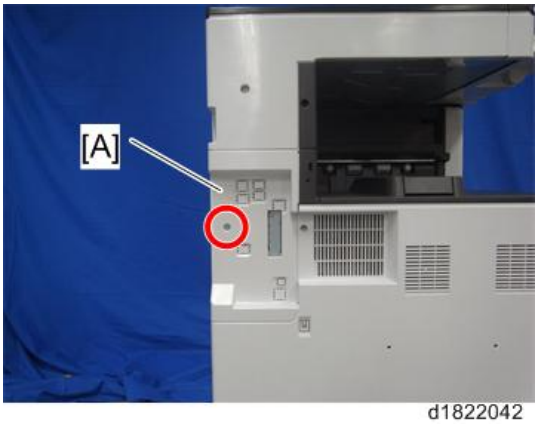
Uploading Content of NVRAM to an SD card

Do the following procedure to upload SP code settings from NVRAM to an SD card.

Note

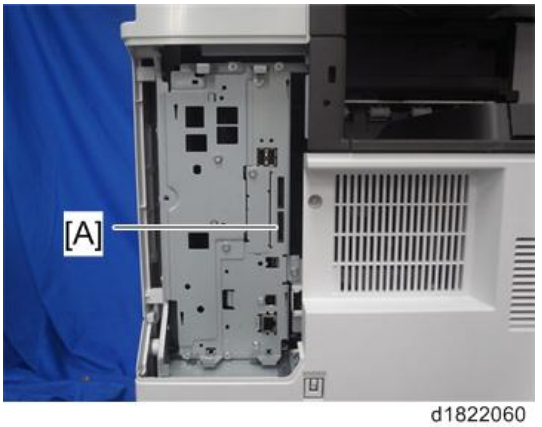
- This data should always be uploaded to an SD card before the NVRAM is replaced.
- Make sure that the write protection of an SD card is unlocked

1. Do SP5-990-001 (SMC Print) before you switch the machine off. You will need a record of the NVRAM settings if the upload fails.
2. Switch the copier main power switch off.
3. Remove the controller cover [A] (x1).



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4. Insert the SD card into SD slot 2 [A]. Then switch the copier on.



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5. Execute SP5-824-001 (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 copier main power switch off.
2. Remove the controller cover (x1).
3. Insert the SD card with the NVRAM data into SD slot 2.
4. Switch the copier main power switch on.
5. Do SP5-825-001 (NVRAM Data Download) and press the "Execute" key.

   Note

   - The serial number of the file on the SD card must match the serial number of the machine for the NVRAM data to download successfully. The download fails if the serial numbers do not match.

This procedure does not download the following data to the NVRAM:

- Total Count
- C/O, P/O Count

UP/SP Data Import/Export

Overview

Import/export conditions

Import/export is possible between devices only if their model type, region of use, and the following device configurations match.

- Input Tray
- Output Tray
- ARDF
- Whether or not equipped with a hard disk
- Whether or not equipped with a finisher and the type of finisher

UP Data Import/Export

Data that can be imported and exported

- Copier / Document Server Features
- Printer Features
- Scanner Features
- Facsimile Features
- Browser Features
- Extended Feature Settings
- Program (Document Server)
- Program (Copier)
- Program (Scanner)
- Web Image Monitor Setting
- Web Service Settings
- System Settings

Data that cannot be imported or exported

- Some System Settings *1 *2

*1 The setting for the date, settings that require the device certificate, and settings that need to be adjusted for each machine (for example, image adjustment settings) cannot be imported or exported.

*2 Settings only for executing functions and settings only for viewing cannot be imported or exported.

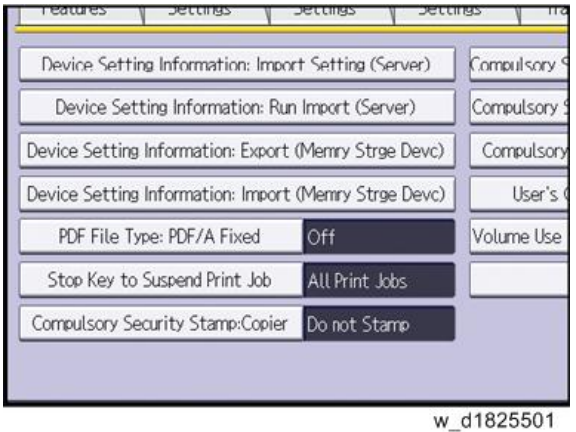
- Extended Feature Settings
- Address book
- Programs (fax function)
- Programs (printer function)
- User stamp in Copier / Document Server Features
- Settings that can be specified via telnet
- @Remote-related data
- Counters
- EFI printer unit settings
- Settings that can only be specified via Web Image Monitor or Web Service (for example, Bonjour, SSDP setting)

Exporting Device Information

This can be exported / imported by an administrator with all privileges.

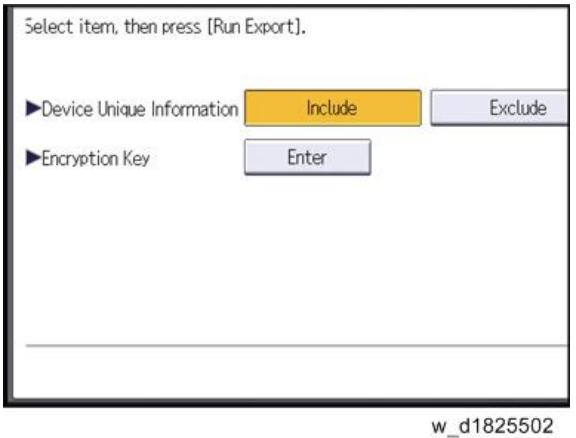
When exporting SP device information from the control panel, the data is saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.
2. Log in from the control panel as an administrator with all privileges.
3. Press [System Settings].
4. Press [Administrator Tools].
5. Press [Next] four times.
6. Press [Device Setting Information: Export (Memry Strge Devc)].



w_d1825501

7. Set the export conditions.



w_d1825502

- Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.
- Specify an encryption key.

8. Press [Run Export].
9. Press [OK].
10. Press [Exit].
11. Log out.

Note

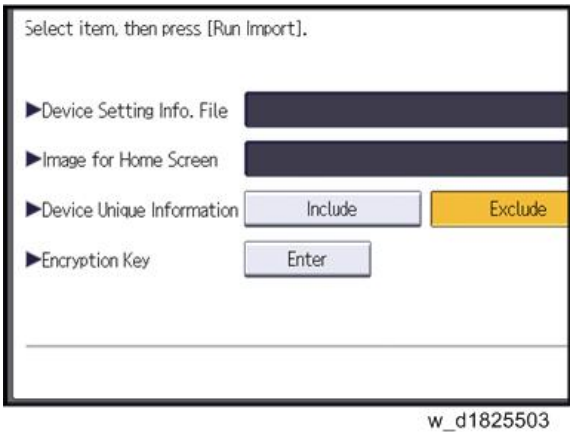
- If data export fails, the details of the error can be viewed in the log.
- When device Information is periodically imported, it is necessary to create the device setting information file with special software and store it on the web server.

Importing Device Information

This can be exported / imported by an administrator with all privileges.

Import device information saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.
2. Log in from the control panel as an administrator with all privileges.
3. Press [System Settings].
4. Press [Administrator Tools].
5. Press [Next] four times.
6. Press [Device Setting Information: Import (Memry Strge Devc)].
7. Configure the import conditions.



w_d1825503

   - Press [Select] of the "Device Setting Info. File" to select the file(s) to import.
   - When inserting a file into a home screen, press [Select] for the Image for Home screen and select the file. You cannot use this setting when using the Smart Operation Panel.
   - Specify whether to [Include] or [Exclude] the "Device Unique Information". "Device Unique Information" includes the IP address, host name, fax number, etc.
   - Enter the encryption key that was specified when the file was exported.
8. Press [Run Import].
9. Press [OK].
10. Press [Exit].

    The machine restarts.

Note

- If data export fails, the details of the error can be viewed in the log.

SP Data Import/Export

Data that can be imported and exported

- System SP
- Printer SP
- Fax SP
- Scanner SP

Exporting Device Information

When exporting SP device information from the control panel, the data is saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.
2. Enter SP mode.
3. Press SP5-749-001 (Import/Export: Export)
4. Select “Target” SP settings (System/Printer/Fax/Scanner) to be exported.
5. Select “Option” settings (Unique/Secret).

Item	Specification	Note
Unique	Unique information of the machine is included in the exported file if you select "Unique" setting.	**Unique information that can be updated** #1. Items that are to be used to identify the machine. Example: Network Information/ Host name / Information related to fax number /Mail address assigned to the machine #2. Items for specifying the options equipped on the machine. Example: Lot number for developer **Unique information that cannot be updated** #1. Items that may cause a problem if imported Example: Serial number / Information related to @Remote #2. Items for managing the history of the machine Example: Time and date / Counter information / Installation date #3. Setting values for the Engine

Item	Specification	Note
Secret	Secret information is exported if you select "Secret" setting.	**Secret information** #1. Data that cannot be exported without being encrypted. (Exported data is encrypted.) Example: Password / Encryption key / PIN code #2. Confidential information for the customer Example: User name / User ID / Department code / Mail address / **Phone number** #3. Personal information Example: Document name / Image data #4. Sensitive information for the customer Example: MAC address / Network parameters

* The IP address is exported when both 'Unique' and 'Secret' are selected.

6. Select “Crpt config” setting (Encryption).

Encryption	Select whether to encrypt or not when exporting. If you push the "Encryption" key, you can export secret information.	If the encryption function is used, setting of an encryption key is required by direct input. • Type the arbitrary password using the soft keyboard • Can enter up to 32 characters

7. Press [Execute].
8. Press [OK].

Note

- If data export fails, the details of the error can be viewed in the log.

Importing Device Information

Import device information saved on an SD card.

1. Insert an SD card into the media slot on the side of the control panel.
2. Enter SP mode.
3. Press SP5-749-101(Import/Export: Import)
4. Select a unique setting.

5. Press [Encryption Key], if the encryption key was created when the file was exported.
6. Select an encryption setting.

Unique	If you want to apply the unique information to the target machine, select the "Unique" key.	Refer to the above information.
Encryption	If an encrypted file is selected as the import file, this setting is required.	

7. Press [Execute].
8. Press [OK].

Note

- If data export fails, the details of the error can be viewed in the log.

5

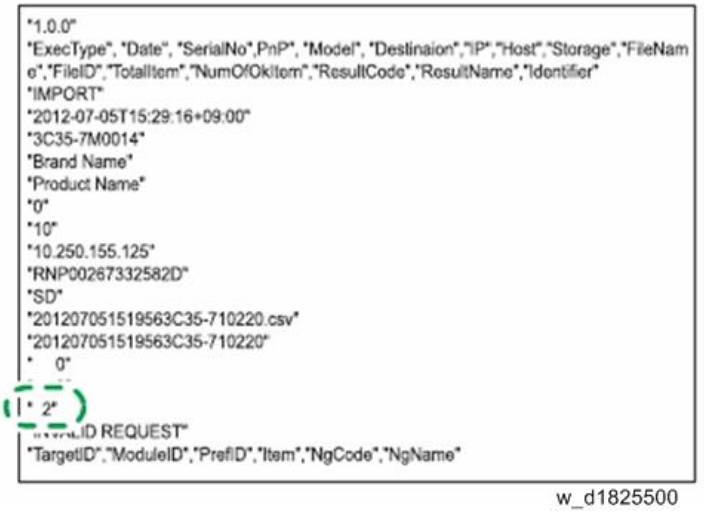
Possible solutions for import/export problems

The access log file is created when export/import is executed. The file is stored in the same location as the exported device setting information file.

If an error occurs, check the log's result code in the access log file first. Values other than 0 indicate that an error occurred.

The result code will appear in the circled area illustrated below.

- Example of a log file



w_d1825500

If you cannot solve the problem or do not know how to solve it after checking the code, note down the error log entry, then contact your supervisor.

Result Code	Cause	Solutions
2 (INVALID REQUEST)	A file import was attempted between different models or machines with different device configurations.	Import files exported from the same model with the same device configurations.
4 (INVALID OUTPUT DIR)	Failed to write the device information to the destination device.	Check whether the destination device is operating normally.
7(MODULE ERROR)	An unexpected error occurred during import or export.	Switch the power off and then back on, and then try the operation again. If the error persists, contact your supervisor.
8 (DISK FULL)	The available storage space on the external medium is insufficient.	Execute the operation again after making sure there is enough storage space.
9 (DEVICE ERROR)	Failed to write or read the log file.	Check whether the path to the folder for storing the file or the folder in which the file is stored is missing.
10 (LOG ERROR)	The hard disk is faulty.	Contact your supervisor.

Result Code	Cause	Solutions
20 (PART FAILED)	Failed to import some settings.	The reason for the failure is logged in "NgCode". Check the code. **Reason for the Error (Ng-Name)** 2. INVALID VALUE The specified value exceeds the allowable range. 3. PERMISSION ERROR The permission to edit the setting is missing. 4. NOT EXIST The setting does not exist in the system. 5. INTERLOCK ERROR The setting cannot be changed because of the system status or interlocking with other specified settings. 6. OTHER ERROR The setting cannot be changed for some other reason.
21 (INVALID FILE)	Failed to import the file because it is in the wrong format in the external medium.	Check whether the file format is correct. The import file should be a CSV file.
22 (INVALID KEY)	The encryption key is not valid.	Use the correct encryption key.

Note

- When exporting device information from the control panel, the data can be saved only on an SD card.
- The file format for exports is CSV.

Address Book Export/Import

Export

Backup address book information on SD card formatted with the specified software.

1. Switch the power OFF.
2. After removing the SD slot cover of the controller unit, set the SD card in the service slot.
3. Switch the power ON.
4. Execute SP5-846-051 full address book backup.
5. Switch the power OFF.
6. Remove the SD card.
7. Return the SD slot cover to the original position.

Note

- When local user information to be uploaded is not contained in the SD card, an execute malfunction is displayed. It cannot be used in the write-protect state.
- Since the address book is the customer's information, take care about handling it, and never bring it back.

Import

1. Switch the power OFF.
2. After removing the SD slot cover of the controller unit, set the SD card in the service slot.
3. Switch the power ON.
4. Execute SP5-846-052 (address book information restore).
5. Switch the power OFF.
6. Remove the SD card.
7. Return the SD card slot cover to the original position.
8. Switch the power ON, and check that the address book has been restored.

Note

- User code counter information is initialized.
- Administrator and supervisor information is not backed up. Also, it is not erased during restore.
- If a download file does not exist, or if erasure is complete, execution malfunction is displayed.

Specification

The information which can be exported /imported is the following items.

- Entry information
- User code information
- E-mail information
- Protection code information
- Fax information
- Fax additional information
- Group information
- Title information
- Title position information
- Folder information
- SMTP attestation
- Local authorization
- Folder authorization information
- Account ACL information
- New document initial ACL information
- LDAP authorization information

Capturing the Debug Logs

Overview

With this feature, you can save debug logs that are stored in the machine (HDD or operation panel) on an SD card. It allows the Customer Engineer to save and retrieve error information for analysis.

The Capturing Log feature saves debug logs for the following three.

- Controller debug log
- Engine debug log
- Debug log of the operation panel

Important

- **In older models, a technician enabled the logging tool after a problem occurred. After that, when the problem had been reproduced, the technician was able to retrieve the debug log.**
- **However, this new feature saves the debug logs at the time that problems occur. Then you can copy the logs to an SD card.**
- **You can retrieve the debug logs using a SD card without a network.**
- **Analysis of the debug log is effective for problems caused by the software. Analysis of the debug log is not valid for the selection of defective parts or problems caused by hardware.**

Types of debug logs that can be saved

Type	Storage Timing	Destination (maximum storage capacity)
Controller debug log (GW debug log)	• Saved at all times	HDD (4 GB) Compressed when written to an SD card from the HDD (from 4 GB to about 300 MB)
Engine debug log	• When an engine SC occurs • When paper feeding/output stop by jams • When the machine doors are opened during normal operation	HDD (Up to 300 times)

Type	Storage Timing	Destination (maximum storage capacity)
Operation panel debug log	• When a controller SC occurs • When saving by manual operation with the Number keys and the Reset key (Press “Reset”, “0”, "1” and “C” (hold for 3 seconds)) • When the operation unit detects an error • When the operation panel detects an error	Operation panel (400 MB /Up to 30 times) When updating the firmware for the operation panel, the debug logs are erased.

Note

- Debug logs are not saved in the following conditions.
- While erasing all memory
- While data encryption equipment is installed
- While changing the firmware configuration
- Forced power OFF (accidentally disconnecting the outlet)
- Engine debug log in shutdown
- When the power supply to the HDD is off because of energy saving (engine OFF mode /STR mode)

Security of the Operation Log

The following operation logs related to security are not saved.

- User ID
- Password
- IP address
- Telephone number
- Encryption key
- Transition to SP mode

  Also the following operation logs are not saved.
- Number keys (0 to 9) on the operation panel
- Soft keyboard on the touch panel display
- External keyboard

Retrieving the Debug Logs

Important

RTB 54
New procedures

- **Retrieve debug logs to identify the date of occurrence of the problems and to find details of the problems**
- **e.g.: At around 8:00 am on March 10, an engine stall occurred. The operation panel does not respond. Turn the main power supply off / on.**
- **You need to retrieve the debug logs dating back three days from the date of the problem.**
- **Analysis of the debug log is effective for problems caused by the software. Analysis of the debug log is not valid for the selection of defective parts or problems caused by hardware.**

Procedure for Retrieving the Debug Log

1. Insert the SD card into the slot on the side of the operation panel.
2. Enter SP mode.

RTB 48
A note was added after step 1

3. Set the start date of the log with SP5-857-101 (Start date of debug log output)

   e.g.: March 28, 2013: input 20130328 (yyyymmdd)

   Note

   - Set the date three days earlier than the occurrence of the problems.
4. Set the end date of the log with SP5-857-102 (End date of debug log output)

   e.g.: March 31, 2013: input 20130331 (yyyymmdd)
5. Execute SP5-857-103 (Get a debug log of all) to write the debug log to the SD card.

   If the transfer is finished successfully, 'completed' is displayed on the touch panel display.

   Note

   - The approximate time it takes to transfer the debug log is as follows. Transfer time may be affected by the type or format of the SD card. (It is recommended that you format the SD card using the Panasonic SD Formatter (freeware)).
   - Controller debug log (GW debug log): 2 - 20 minutes
   - Engine debug log: 2 minutes
   - Operation panel debug log: 2 - 20 minutes
6. Make sure that the SD card access LED is off, then remove the SD card.

   Note

   - If 'failed' appears on the touch panel display, turn the power off, and then recover from step 1 again.

The debug logs are saved with the following file names.

Controller debug log (GW debug log)	/LogTrace/machine number/watching/ yyyymmdd_hhmmss_unique identification number.gz
Engine debug log	/LogTrace/machine number/engine/ yyyymmdd_hhmmss.gz
Operation panel debug log	/LogTrace/machine number/opepanel/ yyyymmdd_hhmmss.tar.gz

6. Troubleshooting

Service Call

Summary

Level	Definition	Reset Procedure
A	To prevent damage to the machine, the main machine cannot be operated until the SC has been reset by a service representative (see the note below).	Enter SP mode, go into SP5810, press [Execute], and turn the main power switch off and on.
B	SCs that disable only the features that use the defective item. Although these SCs are not shown to the user under normal conditions, they are displayed on the operation panel only when the defective feature is selected.	Turn the operation switch or main switch off and on.
C	The SC history is updated. The machine can be operated as usual.	The SC will not be displayed. Only the SC history is updated.
D	Turning the main switch off then on resets SCs displayed on the operation panel. These are re-displayed if the error occurs again.	Turn the operation switch off and on.

When a Level "D" SC code occurs

When a Level D SC occurs, a screen opens on the operation panel to tell the operator:

- An error occurred
- The job in progress will be erased
- The machine will reboot automatically after approximately 30 seconds.

The operator can wait until the machine reboots automatically or touch "Reset" on the screen to reset the machine immediately and go back to the copy screen.

If the operator does not touch "Reset"

The next message tells the operator that the machine will reset automatically and that the previous job was lost and must be started again. After reading the message, the operator touches "Confirm" on the screen. The next screen shows the number and title of the SC code, and stops until the operator turns the machine off and on.

If the operator touches "Reset"

If the operator touches "Reset" to bypass the 30-second interval for the machine to reboot, the machine reboots immediately and the operation panel displays the copy screen.

Important

- **Do not try to use the operation panel during an automatic reboot. If the Remote Service System is in use, the SC code is sent immediately to the Service Center.**

SC100 (Engine: Scanning)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC101-01	D	Lamp Error (Scanning)
		The white level peak did not reach the prescribed threshold when the white plate was scanned.
		• LED defective • IDB (LED driver) defective • SBU defective • IPU defective • Power/signal harness defective • Condensation in scanner unit • Mirrors or lenses dirty or positioned incorrectly • White plate dirty or installed incorrectly
		1. Turn the power off/on. 2. Perform the following operations: • Reconnect the power/signal harness. • Reattach/clean the mirrors/lenses. • Reattach/clean the white plate. • Reattach/clean the scanner guide plate. 3. Replace the following parts: • Replace the LED board. • Replace the IDB board or SIO board. • Replace the SBU board. • Replace the IPU board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC101-02	D	Lamp Error (LED illumination adjustment)
		LED error was detected.
		• LED defective • IDB (LED driver) defective • Power/signal harness defective
		1. Turn the power off/on. 2. Perform the following operations: • Reconnect the power/signal harness. 3. Replace the following parts: • Replace the LED board. • Replace the IDB board or SIO board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC102	D	LED Illumination Adjustment Error
		The white level peak reached the prescribed threshold when the white plate was scanned after a specified number of adjustments.
		• LED defective • IDB (LED driver) defective • SBU defective • IPU defective • Power/signal harness defective
		1. Turn the power off/on. 2. Reconnect the power/signal harness. 3. Replace the following parts: • Replace the LED board. • Replace the SBU board. • Replace the IDB board or SIO board. • Replace the IPU board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC120	D	Scanner Home Position Error 1
		The scanner home position sensor does not go OFF. Details: Error detection timing • During homing (when the machine is turned ON or when it returns from energy save mode) • During an automatic adjustment (when the machine is turned ON or when it returns from energy save mode) • During a scan from the ADF or exposure glass.
		• Scanner motor driver defective • Scanner motor defective • Scanner HP sensor defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly
		Replace the following parts: • Replace the HP sensor • Replace the scanner motor • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC121	D	Scanner Home Position Error 2
		The scanner home position sensor does not go ON. Details: Error detection timing • During homing • During an automatic adjustment • During a scan from the ADF or exposure glass.
		• Scanner motor driver defective • Scanner motor defective • Scanner HP sensor defective • Harness defective • Timing belt, pulley, wire, or carriage not installed correctly
		Replace the following parts: • Replace the home position sensor • Replace the scanner motor • Replace the harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC141	D	Black level detection error
		The black level cannot be adjusted within the target during auto gain control.
		• SBU defective • IPU defective • Power/signal harness defective
		1. Turn the power off/on. 2. Reconnect the power/signal harness. 3. Replace the following parts: • Replace the SBU board. • Replace the IPU board. • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC142	D	White level detection error
		The white level cannot be adjusted to the second target level within the target during auto gain control.
		• SBU defective • LED defective • IDB (LED driver) defective • IPU defective • Power/signal harness defective • Scanner drive error • Condensation in scanner unit • Mirrors or lenses dirty or positioned incorrectly • White plate dirty or installed incorrectly

		1. Turn the power off/on.
		2. Perform the following operations:
		  • Reconnect the power/signal harness.
		  • Reattach/clean the mirrors/lenses.
		  • Reattach/clean the white plate.
		3. Replace the following parts:
		  • Replace the SBU board.
		  • Replace the LED board.
		  • Replace the IDB board.
		  • Replace the IPU board.
		  • Replace the SIO board.
		  • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC144	D	SBU Communication Error
		• Connection to SBU cannot be confirmed. (Connection detection error) • Cannot communicate with the SBU, or the communication result is abnormal.
		• SBU defective • The other side of the communication (BCU, IPU etc.) defective • Power/signal harness defective

		1. Turn the power off/on.
		2. Reconnect the power/signal harness.
		3. Replace the following parts:
		  • Replace the SBU board.
		  • Replace the IPU board.
		  • Replace the BCU board.
		  • Replace the power/signal harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC161-01	D	IPU Error (LSYNC abnormal)
		An error occurred during the self-diagnostic test performed every time the machine is turned on, or returns to full operation from energy save mode.
		• IPU (or BCU) board defective (ASIC-BREIT connection failure, LSYNC abnormal, etc.) • Cable between SBU and IPU (or BCU) defective
		• Replace the IPU (or BCU) board. • Check the cable between SBU and IPU (or BCU)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC165	D	Copy data security unit error
		• The copy data security option is enabled in the User Tools but the option board is detected as missing or defective. • The copy data security option was detected as defective when the machine was turned on or returned from energy save mode.
		• Copy data security unit board not installed correctly • Copy data security unit board defective
		• Reinstall the copy data security unit board. • Replace the copy data security unit board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC195	D	Machine serial number error
		Comparison of the product identification code in the machine serial number (11 digits).
		The product identification code in the machine serial number (11 digits) does not match.
		Re-enter the machine serial number.

SC200 (Engine: Exposure)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC202	D	Polygon Motor: ON Timeout Error
		After the polygon motor turned on, or within T1 sec. after the rpm's changed, the motor did not enter READY status.
		• The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective • Polygon motor drive pulse cannot be output correctly. (Polygon controller) • XSCRDY signal observation failing (Polygon controller)
		• Turn the power off/on • Replace the laser unit or polygon motor • Replace the polygon harness • Replace the IPU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC203	D	Polygon Motor: OFF Timeout Error
		The XSCRDY signal (polygon ready) never becomes inactive (H) within 3 sec. after the polygon motor went OFF.
		• The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective • Polygon motor drive pulse cannot be output correctly. (Polygon controller) • XSCRDY signal observation failing (Polygon controller)
		• Turn the power off/on • Replace the laser unit or polygon motor • Replace the polygon harness • Replace the IPU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC204	D	Polygon Motor: XSCRDY Signal Error
		During polygon motor rotation, the XSCRDY signal was inactive (H) for longer than one rotation of the polygon.
		• The interface harness to the polygon motor driver damaged or not connected correctly. • Polygon motor or polygon motor driver defective
		• Turn the power off/on • Replace the laser unit or polygon motor • Replace the polygon harness • Replace the IPU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC220	D	Laser synchronization detection error: LD0
		The laser synchronizing detection signal for the start position of the LD was not output for 500 msec. after LDB unit turned on with the polygon motor rotating normally.
		• The interface harness to the synchronization detection unit damaged or not connected correctly. • Synchronization detection board defective • Beam does not enter photo detector. • Abnormality around GAVD • IDB (LED driver) defective • LDB defective • IPU defective
		• Turn the power off/on • Replace the laser unit or polygon motor • Replace the polygon harness • Replace the IPU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC230	D	FGATE ON error
		The FGATE signal did not turn ON within 1 sec. after the writing process started.
		• GAVD defective • Image processing ASIC defective • IPU, controller board not connected correctly or defective • Harness between IPU and LDB defective
		• Turn the power off/on • Replace the IPU board • Replace the controller board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC231	D	FGATE OFF error
		The FGATE signal did not turn OFF within 9 sec. after the writing procesended.
		• GAVD defective • Image processing ASIC defective • IPU, controller board not connected correctly or defective • Harness between IPU and LDB defective
		• Turn the power off/on. • Replace the IPU board. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC240	C	LD error:
		During LD lighting /During initialization of P-MAC
		• LD degradation (LD broken, shift of output characteristics etc.) • The interface harness damaged or not connected correctly. • LD driver defective
		• Cycle the main power off/on • Replace the LD unit • Replace the harness • Replace the IPU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC270	D	GAVD communication error
		When machine starts or cancels the energy saving
		• GAVD defective • CPU defective • BCU defective
		• Cycle the main power off/on • Replace the IPU board • Replace the controller board • Replace the BCU board • Set the FCC between BCU - IPU

SC300 (Engine: Image Processing1 (Charge, Development))

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC302	D	Charge level output error
		The PWM output level was detected higher than 50% after 10 consecutive samplings.
		• high voltage power supply board defective • Harness of the high voltage power supply board (power pack) is loose, broken. • PCU connection loose or broken
		• Cycle the main power off/on • Replace the high voltage power supply board • Replace the harness of the power pack. • Replace the harness of the PCU. • Replace the PCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC355	C	ID sensor error
		• One of the following conditions occurred when the ID sensor pattern was calibrated during printing: Vsp > 2.5V, Vsg < 2.5V, Vsp = 0V, Vsg = 0V • The following conditions occurred simultaneously when the ID sensor pattern was calibrated during printing: Vsg = 5V, PWM = 0 (LED current drop) • Error occurred during automatic adjustment of Vsg: Vsg output did not attain 4V, even with PWM = 1023 (maximum current for LED) Vsg output was greater than 4V, even with PWM=1 (no current for the LED)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• ID sensor dirty or defective • ID sensor harness disconnected, or connector damaged • BCU defective • High voltage power supply board (power pack) defective • Scanning system or image creation system malfunction
		• Replace the ID sensor harness. • Replace the ID sensor. • Replace the harness of the high voltage power supply board (power pack). • Replace the harness of the BCU. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC389	C	TD sensor error 1
		TD sensor output was less than 0.5V, or more than 0.5V 10 times in succession. If the fax unit is installed, this SC is issued immediately. If the fax unit is not installed, this SC is issued after the prescribed number of copies has printed.
		• TD sensor abnormal • Poor connection of the TD sensor harness
		• Replace the TD sensor. • Replace the harness of the TD sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC390	D	TD sensor error 2
		The TD sensor outputs less than 0.5V or more than 4.0V 10 times consecutively during copying. **Note**: If the fax option is installed, this SC is issued immediately. If the fax option is not installed, this SC is issued after the prescribed number of pages is copied.
		• TD sensor abnormal • Poor connection of the TD sensor harness
		• Replace the TD sensor. • Replace the harness of the TD sensor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC391	D	Development bias leak
		The PWM output level was detected higher than 50% after 10 consecutive samplings.
		• high voltage power supply board defective • High voltage power supply board (power pack) harness loose, broken. • PCU connection loose or broken
		• Cycle the main power off/on • Replace the harness of the high voltage power supply board (power pack). • Replace the PCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC392	D	TD sensor initial setting error
		Initialization of the new PCU unit failed (the drum and development roller did not start rotating)
		• ID sensor defective • TD sensor defective • Developing roller does not rotate • OPC drum does not rotate
		• Replace the the ID sensor. • Replace the TD sensor.

SC400 (Engine: Image Processing2 (Around the Drum))

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC401	D	Transfer positive electrode current error
		A transfer roller current leak signal is detected. (The current feedback signal for the transfer roller was not detected within the correct time.)
		• High voltage supply board set incorrectly or defective • Transfer roller set incorrectly or damaged • Transfer unit set incorrectly
		• Cycle the main power off/on • Check the high voltage supply board is set correctly. • Check the harness of the high voltage supply board. • Replace the high voltage supply board. • Check the transfer roller is set correctly. • Replace the transfer roller. • Check the transfer unit is set correctly.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC402	D	Transfer negative electrode current error
		A transfer roller current leak signal is detected. The current feedback signal for the transfer roller is not detected within the correct time.
		• Transfer roller set incorrectly or damaged • High voltage supply board set incorrectly or defective
		• Cycle the main power off/on • Check the high voltage supply board is set correctly. • Check the harness of the high voltage supply board. • Replace the high voltage supply board. • Check the transfer roller is set correctly. • Replace the transfer roller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC411	D	Separation bias leak error
		A separation bias leak signal was detected.
		• High voltage supply board set incorrectly or detective • Discharge plate set incorrectly or detective
		• Cycle the main power off/on • Check the harness of the high voltage supply board. • Replace the high voltage supply board. • Replace the harness. • Replace the discharge plate.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC490	D	Toner supply motor leak errorr
		More than 1 ampere supplied to the toner supply motor for longer than 200 ms.
		• Toner supply motor defective
		• Replace the toner transport motor.

SC500 (Engine: Paper Feed and Fusing)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC500	D	Main motor lock
		The machine detected motor lock (motor is not operating correctly)
		• An obstruction has blocked operation of the main motor • Main motor harness loose or broken • Main motor or main motor driver board defective • Overload on the main motor
		• Replace the harness of the main motor. • Replace the motor. • Replace the main motor driver board. • Check for the blockages in the main motor mechanism.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC501	B	Paper Tray1 error
		• 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.
		• Disconnected or defective paper lift sensor • Disconnected or defective tray lift motor • Defective bottom plate lift mechanism • Too much paper in the tray • Defective BCU
		• Check if the paper is not loaded too much. • Check if the bottom plate smoothly moves up and down manually. • Check and/or replace the tray lift motor/ paper lift sensor. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC502	B	Paper Tray2 error
		• 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.
		• Disconnected or defective paper lift sensor • Disconnected or defective tray lift motor • Defective bottom plate lift mechanism • Too much paper in the tray • Defective BCU
		• Check if the paper is not loaded too much. • Check if the bottom plate smoothly moves up and down manually. • Check and/or replace the tray lift motor/ paper lift sensor. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC503	B	Tray 3 error (Paper Feed Unit or LCT)
		This SC is generated if the following condition occurs 3 consecutive times. **For the paper feed unit:** • When the tray lowers, the tray lift sensor does not go off within 15 sec. **For the LCT:** • When the main switch is turned on or when the LCT is set, if the end fence is not in the home position (home position sensor ON), the tray lift motor stops. • If the upper limit does not go off for 8 seconds even the tray lift motor turns on to lower the tray after the upper limit has been detected at power on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		For the paper feed unit: • Defective tray lift motor or connector disconnection • Defective lift sensor or connector disconnection **For the LCT:** • Defective stack transport clutch or connector disconnection • Defective tray motor or connector disconnection • Defective end fence home position sensor or connector disconnection
		• Check the cable connections. • Check and/or replace the defective component. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC504	B	Tray 4 error (3 Tray Paper Feed Unit)
		This SC is generated if the following condition occurs 3 consecutive times. • When the tray lowers, the tray lift sensor does not go off within 1.5 sec.
		• Defective tray lift motor or connector disconnection • Defective lift sensor or connector disconnection
		• Check the cable connections. • Check and/or replace the defective component. • Replace the BCU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC508	B	By-pass bottom plate error
		The signal from the by-pass tray HP sensor does not change for 1.0 second after the by-pass motor has rotated counterclockwise. If this condition occurs three consecutive times, the SC is generated.
		• Disconnect or defective harness of the by-pass motor • Defective or disconnected connection for the by-pass motor. • Defective by-pass motor • Disconnect or defective harness of the by-pass HP sensor • Defective or disconnected connection for the by-pass HP sensor. • Defective by-pass HP sensor
		• Check the cable connections. • Check and/or replace the defective component. • Replace the BCU. • Cycle the main power off/on

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC530	D	Fusing exhaust fan motor error **Note** • This fan is located on the left side of the machine, next to the PSU.
		The machine does not detect the motor lock signal for 10 seconds while the motor is running.
		• An obstruction has blocked operation of the main motor • Main motor harness loose or broken
		• Turn the main power switch OFF and then ON again. • Replace the fan.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC531	D	Duplex fan motor error **Note** • This fan is located on the front of the machine, near the fusing unit.
		The machine does not detect the motor lock signal for 10 seconds while the motor is running.
		• An obstruction has blocked operation of the main motor • Main motor harness loose or broken
		• Turn the main power switch OFF and then ON again. • Replace the fan.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC532	D	CTL fan motor error
		The machine does not detect the motor lock signal for 10 seconds while the motor is running.
		• An obstruction has blocked operation of the main motor. • Main motor harness loose or broken
		• Turn the main power switch OFF and then ON again. • Replace the fan.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC541	A	Fusing thermistor open (center)
		The temperature of the hot roller remained below 0°C for 5 sec at the center of the hot roller.
		• Fusing thermistor out of its position because of incorrect installation • Fusing thermistor disconnected or defective • Power supply not within rated range (15% or more below rating)
		• Check the fusing thermistor is set correctly. • Replace the fusing thermistor. • Check the power supply source.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC542-01	A	Fusing central thermopile does not reload
		Temperature gradient detection:Temperature rise of 2 seconds is detected by five consecutive four degrees or less
		• Fusing thermistor defective or out of position • Fusing thermistor modification/float • Outside input voltage guarantee
		• Check the fusing thermistor is set correctly. • Replace the fusing thermistor. • Check that the input voltage is within acceptable limits. • Replace the fusing unit. • Repace the BCU. • Replace the fusing lamp in the case of disconnection.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC542-03	A	Fusing central thermopile does not reload
		• Time out (Non-rotating roller): Reload temperature not reached in 28 seconds after the fusing lamp control start • Time out (Rotating roller): Reload temperature not reached in 46 seconds after the fusing lamp control start
		• Disconnection of the fusing lamp • After excessive temperature rise prevention unit operation
		• Check the fusing thermistor is set correctly. • Replace the fusing thermistor. • Check that the input voltage is within acceptable limits. • Replace the fusing unit. • Repace the BCU. • Replace the fusing lamp in the case of disconnection.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC543	A	Fusing overheat error 1 (center)
		The fusing thermistor detected a fusing temperature over 230°C for 1 sec. at the center of the hot roller.
		• TRIAC short on PSU (PSU defective) • BCU defective • Power supply voltage unstable
		• Replace the PSU. • Replace the BCU. • Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC544	A	Fusing overheat error 2 (center)
		A fusing temperature over 250°C is detected at the center of the hot roller by the fusing temperature monitor circuit in the BCU board. The power was interrupted for more than 0.3 sec.
		• TRIAC short on PSU (PSU defective) • BCU defective • Fusing thermistor defective • Power supply voltage unstable
		• Replace the PSU. • Replace the BCU. • Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC545	A	Fusing overheat error 3 (center)
		After warmup, the center of the hot roller attained full operating temperature and maintained this temperature for 29 sec. without the hot roller rotating.
		• Center hot roller thermistor installed incorrectly, disconnected. • Center hot roller thermistor defective
		• Check the hot roller thermistor is set correctly. • Replace the hot roller thermistor. • Replace the BCU. • Check that the input voltage is within acceptable limits. • Replace the fusing unit. • Replace the fusing lamp in the case of disconnection.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-01	D	Zero cross error (relay-contact soldering)
		The zero cross signal is detected for 0.05 seconds three times even though the fusing lamp relay is off when turning on the main power.
		• Fusing relay damage (contact open) • Fusing relay drive circuit fault • PSU fuse (24VS) blowout
		• Turn the main power supply switch OFF/ON. • If the fusing relay is damaged, replace the PSU. • Check the connection between PSU and control board, and replace harness and board if necessary. • If the PSU fuse (24VS) blows out, replace the PSU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-02	D	Zero cross error (relay contact fault)
		The zero cross signal is not detected for 3 seconds even though the fusing lamp relay is on after turning on the main power or closing the front door.
		• Fusing relay damage (contact open) • Fusing relay drive circuit fault • PSU fuse (24VS) blowout
		• Turn the main power supply switch OFF/ON. • If the fusing relay is damaged, replace the PSU. • Check the connection between PSU and control board, and replace harness and board if necessary. • If the PSU fuse (24VS) blows out, replace the PSU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-03	D	Zero cross error (low-frequency error)
		• In the event of an error
		• Fusing relay damage (contact open) • Fusing relay drive circuit fault • PSU fuse (24VS) blowout
		• Turn the main power supply switch OFF/ON. • If the fusing relay is damaged, replace the PSU. • Check the connection between PSU and control board, and replace harness and board if necessary. • If the PSU fuse (24VS) blows out, replace the PSU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC547-04	D	Zero cross error (input signal error)
		• In the event of an error
		• Fusing relay damage (contact open) • Fusing relay drive circuit fault • PSU fuse (24VS) blowout
		• Turn the main power supply switch OFF/ON. • If the fusing relay is damaged, replace the PSU. • Check the connection between PSU and control board, and replace harness and board if necessary. • If the PSU fuse (24VS) blows out, replace the PSU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC551	A	Fusing thermistor open (end)
		The temperature of the hot roller remained below 0°C for 5 sec. at the end of the hot roller.
		• Fusing thermistor out of its position because of incorrect installation • Fusing thermistor disconnected or defective • Power supply not within rated range (15% or more below rating)
		• Check the fusing thermistor is set correctly. • Replace the fusing thermistor. • Check the power supply source.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC552-01	A	Fusing end thermopile does not reload
		Temperature gradient detection:Temperature rise of 2 seconds is detected by five consecutive four degrees or less
		• Fusing thermistor defective or out of position • Fusing thermistor modification/float • Outside input voltage guarantee
		• Check the fusing thermistor is set correctly. • Replace the fusing thermistor. • Check that the input voltage is within acceptable limits • Replace the fusing unit • Repace the BCU

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC552-03	A	Fusing end thermopile does not reload
		• Time out (Non-rotating roller): Reload temperature not reached in 28 seconds after the fusing lamp control start • Time out (Rotating roller): Reload temperature not reached in 46 seconds after the fusing lamp control start
		• Disconnection of the fusing lamp • After excessive temperature rise prevention unit operation
		• Check the fusing thermistor is set correctly. • Replace the fusing thermistor. • Check that the input voltage is within acceptable limits • Replace the fusing unit • Repace the BCU

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC553	A	Fusing overheat error 1 (end)
		The fusing thermistor detected a fusing temperature over 230°C for 1 sec. at the center of the hot roller.
		• TRIAC short on PSU (PSU defective) • BCU defective • Power supply voltage unstable
		• Replace the PSU. • Replace the BCU. • Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC554	A	Fusing overheat error 2 (end)
		A fusing temperature over 250°C is detected at the center of the hot roller by the fusing temperature monitor circuit in the BCU board. The power was interrupted for more than 0.3 sec.
		• TRIAC short on PSU (PSU defective) • BCU defective • Fusing thermistor defective • Power supply voltage unstable
		• Replace the PSU. • Replace the BCU. • Replace the fusing unit.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC555	A	Fusing overheat error 3 (end)
		After warmup, the center of the hot roller attained full operating temperature and maintained this temperature for 29 sec. without the hot roller rotating.
		• Center hot roller thermistor installed incorrectly, disconnected. • Center hot roller thermistor defective
		• Check the hot roller thermistor is set correctly. • Replace the hot roller thermistor. • Replace the BCU. • Check that the input voltage is within acceptable limits. • Replace the fusing unit. • Replace the fusing lamp in the case of disconnection.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC557	C	Zero Cross Frequency Exceeded
		The waveform of the zero cross signal was detected out of range.
		Electrical noise on the power supply line
		Check the power supply source.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC559	A	Fusing Jam Detected for 3 Times Consecutively
		Consecutive fusing unit paper jams
		Three consecutive paper jams occurred in the fusing unit. The paper jam counter for the fusing unit reaches 3 times. The paper jam counter clears after the paper feeds correctly. **Note**: This SC is issued only if SP1159 is set to "1".
		• Clean the fusing entrance/exit guides • Replace the fusing unit. • Replace the hot roller strippers

SC600 (Engine: Communication and Others)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC620-01	D	ADF Communication error
SC620-02	D	ADF Communication error
		SC620-01: After ADF connection was recognized on startup, an error is detected. (disconnection detection) SC620-02: After ADF connection was recognized on startup, an error is detected. (Retry out due to communication error)
		• ADF connection fault • ADF defection • IPU board defection • Noise contamination
		• Check the ADF cable connection • Replace the ADF • Replace the IPU board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC621	D	Finisher communication error
		• Detected an error when connecting the communication line. • Received a communication error notification from the URAT.
		• Finisher control board defective. • BCU defective • Connection fault between finisher and main machine.
		• Reconnect the Finisher interface cable • Replace the BCU • Replace the finisher • Turn the power off/on

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC622	D	Paper bank communication error
		• Detected an error when connecting the communication line. • Received a communication error notification from the URAT.
		• Paper bank control board defective • BCU defective • Paper bank-main machine connection fault
		• Reconnect the optional paper tray connection cable • Replace the BCU • Replace the optional paper tray • Turn the power off/on

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC669		EEPROM Communication Error
-01	D	EEPROM OPEN: ID error
-02	D	EEPROM OPEN: Channel error
-03	D	EEPROM OPEN: Device error
-04	D	EEPROM OPEN: Communication abort error
-05	D	EEPROM OPEN: Communication timeout error
-06	D	EEPROM OPEN: Operation stopped error
-07	D	EEPROM OPEN: Buffer full
-08	D	EEPROM OPEN: No error code
-09	D	EEPROM CLOSE: ID error
-10	D	EEPROM CLOSE: No error code
-11	D	EEPROM Data write: ID error
-12	D	EEPROM Data write: Channel error
-13	D	EEPROM Data write: Device error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
-14	D	EEPROM Data write: Communication abort error
-15	D	EEPROM Data write: Communication timeout error
-16	D	EEPROM Data write: Operation stopped error
-17	D	EEPROM Data write: Buffer full
-18	D	EEPROM Data write: No error code
-19	D	EEPROM Data read: ID error
-20	D	EEPROM Data read: Channel error
-21	D	EEPROM Data read: Device error
-22	D	EEPROM Data read: Communication abort error
-23	D	EEPROM Data read: Communication timeout error
-24	D	EEPROM Data read: Operation stopped error
-25	D	EEPROM Data read: Buffer full
-26	D	EEPROM Data read: No error code
-36	D	EEPROM SRAM OPEN: Verified error
		Received a error notification during EEPROM communication and doesnot resume after 3 retries.
		• Electrical noise • EEPROM not connected fully • EEPROM not installed • EEPROM damaged • BCU damaged
		• Turn the power off/on • Reconnect the EEPROM • Replace the EEPROM • Replace the BCU

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC687	D	PER Not Received Error
		Unable to receive the PER command from the controller.
		• Electrical noise • Controller board defective
		• Turn the power off/on • Replace the controller Board

SC600 (Controller)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC632-00	B	Counter device error 1
		After 3 attempts to send a data frame to the optional counter device via the serial communication line, no ACK signal was received within 100 ms.
		Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged.
		• Turn the main power off/on. • Check the serial communication line.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC633-00	B	Counter device error 2
		After communication was established, the controller received the brake signal from the accounting device.
		Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged.
		• Turn the main power off/on. • Check the serial communication line.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC634-00	B	Counter device error 3
		A backup RAM error was returned by the counter device.
		Counter device control board or the backup battery of counter device defective
		• Replace the counter device control board. • Replace the backup battery.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC635-00	B	Counter device error 4
		A backup battery error was returned by the counter device.
		Counter device control board or the backup battery of counter device defective
		• Replace the counter device control board. • Replace the backup battery.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC636-01	D	IC Card Error (Expanded authentication module error)
		Issued when expanded authentication management is set to "ON" but either of the following occur. • 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.
		• There is no DESS module in the machine (models on which the function is optional). • There is no expanded authentication module in the machine. • The SD card or the file of the expanded authentication module is broken.
		• Set a working SD card/expanded authentication module file. • Install the DESS module. • In the SSP mode set SP5-401-160 to 0. • In the SSP mode, set SP5-401-161 to 0. • Replace the NVRAM.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC636-02	D	IC Card Error (Version error)
		The version of the expanded authentication module is not correct.
		Incorrect module version
		Install the correct file of the expanded authentication module.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC636-11	D	IC Card Error (OSM user code file error)
		• The correct "usercode" file could not be found in the root folder of the SD card. • The "usercode" file on the SD card could not be read.
		• The "usercode" file does not exist on the SD card. • The "usercode" file on the SD card is an invalid file. • Data in the "usercode" file on the SD card is invalid. • "usercode" file was not moved when moving the application to another SD card
		Use the user code configuration tool for OSM users (Idissuer.exe) to create the "usercode" and store it in the root folder of the SD card containing the IC card module (eccm.mod).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC637-01	D	Tracking Information Notification Error (Tracking application error)
		Tracking information was lost.
		• Tracking SDK application error • Internal notification error
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC637-02	D	Tracking Information Notification Error (Management server error)
		Tracking information was lost.
		Communication with tracking management server failed. • Network error • tracking management server error • Tracking SDK application error
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-01	B	Remote Service Modem Communication Error (Dialup authentication failure)
		• An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Dialup authentication failure
		Check the following SPs. • SP5-816-156 • SP5-816-157

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-04	B	Remote Service Modem Communication Error (dialup failing because of incorrect modem configuration)
		• An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Dialup failing because of incorrect modem configuration
		Check if the setting of SP5-816-160 is correct. If it is correct, then there is a software bug.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-05	B	Remote Service Modem Communication Error (insufficient current or connection fault)
		• An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		Insufficient current or connection fault
		The line is not supported and nothing can be done.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-13	B	Remote Service Modem Communication Error (RC Gate Type Mwas installed but modem is not present (detected during operation))
		• An error related to communication (dialup connection, modem board etc.) using the RC Gate Type M was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		RC Gate Type Mwas installed but modem is not present (detected during operation)
		• If a modem board is not installed, install it. • Check again if the modem driver configurations (SP5-816-160, SP5-816-165 to 171, SP5-816-165 to 171) are correct. • If the problem is not solved, replace the modem.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC650-14	B	Remote Service Modem Communication Error (RC Gate Type N was installed but modem is present or wired/wireless LAN is not working correctly)
		• An error related to communication (dialup connection, modem board etc.) using the RC Gate was detected or an error that prevents RC Gate operation was detected at power on. • Displayed only when an error is detected while RC Gate is operating. • SC is not issued if an error occurs during RC Gate installation (because it can be referenced using SP).
		RC Gate Type N was installed but modem is present or wired/wireless LAN is not working correctly
		• If a modem board is attached, remove it. • Check if wired/wireless LAN works.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC651-01	C	Illegal Remote Service Dial-up (Chat program parameter error)
		An unexpected error occurred when RC Gate Type M dialed up the NRS Center.
		Software bug
		Logging only.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC651-02	C	Illegal Remote Service Dial-up (Chat program execution error)
		An unexpected error occurred when RC Gate dialed up the NRS Center.
		Software bug
		Logging only.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC652-00	D	Remote service ID2 mismatching
		There was an authentication mismatch between ID2 for @Remote, the controller board, and NVRAM.
		• Used controller board installed • Used NVRAM installed (such action is not allowed.)
		• If this occurs during RC Gate installation: Check the validity of the certificate and the NVRAM, check the machine serial number, write the common certificate, and then begin installation again. • If this occurs after RC Gate installation: Clear the RC Gate install status, check the validity of the certificate and the NVRAM, check the machine serial number, write the common certificate, and then begin installation again.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC653-00	D	Incorrect remote service ID2
		ID2 stored in the NVRAM has either of the following problems. • Number of characters is not 17. • Includes a character that cannot be printed. • All spaces • NULL
		Replace the NVRAM.
		Clear the RC Gate install status, write the common certificate, and then begin installation again.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC670-00	D	Engine start up error

		• Case 1
		  • /ENGRDY signal was not asserted when the machine was turned on or returned from energy saver mode.
		  • /IPURDY signal was not asserted when the machine was turned on or returned from energy saver mode.
		  • EC response was not received within specified time from power on.
		  • PC response was not received within specified time from power on.
		  • SC response was not received within specified time from power on.
		  • Writing to Rapi driver failed (the other party not found through PCI).
		• Case 2
		  • Unexpected down status was detected after /ENGRDY assertion.

		• Case 1
		  • Engine board does not start up.
		• Case 2
		  • Engine board reset unexpectedly.

		Check the connection between the engine board and the controller board. • If it is always reproduced, replace the engine board. If the problem persists, consider replacing the controller board or other boards between them. • If reproducibility is low, multiple causes are to be considered, such as software, engine board, controller board, and PSU.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-10	D	Controller start up error
		After the machine was powered on, communication between the controller and the operation panel was not established.
		• Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		• Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-11	D	Controller start up error
		After the machine was powered on, communication between the controller and the operation panel was not established, or communication with controller was interrupted after a normal startup.
		• Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		• Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-12	D	Controller start up error
		Communication with controller was interrupted after a normal startup.
		• Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		• Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-13	D	Controller start up error
		The operation panel detected that the controller is down.
		• Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		• Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC672-99	D	Controller start up error
		The operation panel software ended abnormally.
		• Controller stalled • Board installed incorrectly • Controller board defective • Operation panel connector loose, broken, or defective • Controller late
		• Turn the main power off/on. • Check the connection of the controller board. • Replace the controller board. • Check the control panel harness.

SC700 (Engine: Peripherals)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC701-03	D	Paper Feed Motor Driver Error (ARDF)
SC701-08	D	Paper Exit Motor Driver Error (ARDF)
		Detection of error signal from motor driver
		• Encoder disconnection • Encoder connector dropout • Encoder defective • Overload • Motor deterioration
		• Replace the harness • Check the harness connection • Replace the motor

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC702-01	D	Protection Device Intercept Error 1 (ARDF)
		When original source 5V power supply is ON, protection device intercept of 24V power supply system is detected.
		Any of feed motor, transport motor, reverse solenoid, paper feed solenoid, paper feed clutch and FAN motor defective, a harness short-circuit occurs, and the protection device of the 24V power supply system intercepts.
		• Replace the ARDF main board. • Replace the short-circuited parts.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC702-02	D	Protection Device Intercept Error 2 (ARDF)
		When original source 5V power supply is ON, protection device intercept of 24V OUT power supply system is detected.
		Solenoid defective or harness short-circuit occurs in 24VOUT power supply system.
		• Replace the ARDF main board. • Replace the short-circuited parts.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC702-03	D	Protection Device Intercept Error 3 (ARDF)
		When original source 5V power supply is ON, protection device intercept of 5VE power supply system is detected.
		Sensor defective or a harness short-circuit occur in 5VE power supply system.
		• Replace the ARDF main board. • Replace the short-circuited parts.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-03	B	Protection Device Intercept Error 1 (1000-sheet finisher)
		Fuse blowout is detected
		Over current (board defective, harness short-circuit, solenoid defective)
		• Replace the harness. • Replace the solenoid. • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-10	B	Transport Motor 1 Error (1000-sheet finisher)
		Motor driver detects an error state (DC motor control error) (1st time is jam notification, 2nd time is SC notification).
		• Motor defective • Connector disconnected • Overload • Encoder error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-11	B	Transport Motor 2 Error (1000-sheet finisher)
		Motor driver detects an error state (DC motor control error) (1st time is jam notification, 2nd time is SC notification).
		• Motor defective • Connector disconnected • Overload • Encoder error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-17	B	Paper Eject Motor 2 Error (1000-sheet finisher)
		Motor driver detects an error state (DC motor control error) (1st time is jam notification, 2nd time is SC notification).
		• Motor defective • Connector disconnected • Overload • Encoder error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-24	B	Paper Exit Guide Plate Open/Close motor Error (1000-sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). • The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
		• Motor defective • Connector disconnected • Overload • Encoder error • Home position sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-25	B	Punch Drive Motor Error (1000-sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined time (t0 sec) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined time (t1 sec) elapsed (1st time is jam notification, 2nd time is SC notification). • Output from the encoder could not be counted for a predetermined number of times within a predetermined time (t0 sec) (1st time is jam notification, 2nd time is SC notification). • The time to return to home without fail, the time coming from home, and the time for which the encoder output can be counted during normal operation, are taken as t0, t1 and t2.
		• Motor defective • Connector disconnected • Overload • Encoder error • Home position sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-27	B	Punch Displacement Motor Error (1000-sheet finisher)
SC721-28	B	Punch Horizontal Registration Detection Error (1000-sheet finisher)
SC721-30	B	Jogger Motor 1 Error (1000-sheet finisher)
SC721-33	B	Strike Roller Motor Error (1000-sheet finisher)
SC721-41	B	Release Motor Error (1000-sheet finisher)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined pulse (p1 pulse) elapsed (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
		• Motor defective • Connector disconnected • Overload • Home position sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-42	B	Stapler Displacement Motor Error (1000-sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined pulse (p1 pulse) elapsed (1st time is jam notification, 2nd time is SC notification). • During movement from home, retreat sensor ON could not be detected even after a predetermined pulse (p2 pulse) elapsed (1st time is jam notification, 2nd time is SC notification). • During initialization, retreat sensor ON was detected simultaneously when the home position is detected (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0, p1 and p2.
		• Motor defective • Connector disconnected • Overload • Home position sensor error • Retreat sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-44	B	Stapler Motor Error (1000-sheet finisher)
		• During movement to home, the home position could not be detected even after a predetermined time (t0 sec) elapsed (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected even after a predetermined time (t1 sec) elapsed (1st time is jam notification, 2nd time is SC notification). • During motor drive, the output from the encoder could not be counted for a predetermined number of times within a predetermined time (t0 sec) (1st time is jam notification, 2nd time is SC notification). The time to return to home without fail, the time coming from home, and the time for which the encoder output can be counted during normal operation, are taken as t0, t1 and t2.
		• Needle jam • Motor defective • Connector disconnected • Overload • Home position sensor error • Encoder error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-52	B	Folding Plate Drive Motor Error (1000-sheet finisher)
		• Motor driver detects an error (short-circuit and overheating) (1st time is SC). • During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
		• Motor defective • Connector disconnected • Overload • Home position sensor (folding blade HP) error • Home position sensor (folding cam HP) error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-53	B	Rear End Fence Displacement Motor Error (1000-sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
		• Motor defective • Reset the connector. • Overload • Home position sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-58	B	Bundle Transport 1 Release Motor Error (1000-sheet finisher)
SC721-59	B	Bundle Transport 2 Release Motor Error (1000-sheet finisher)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
		• Motor defective • Reset the connector. • Overload • Home position sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

721-70
RTB 53
(D197)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-70	B	Tray 1 Lift Motor Error (1000-sheet finisher)
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC). • During descent, the paper surface sensor still detects paper even after a predetermined time (t0sec) elapses (1st time is jam notification, 2nd time is SC notification). • During ascent, the paper surface sensor could not detect the paper surface even after a predetermined time (t0sec) elapses (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
		• Motor defective • Reset the connector. • Overload • Paper surface sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

6

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-71	B	Shift Motor 1 Error (1000-sheet finisher)
		• During movement to home, the home position could not be detected within a predetermined pulse (p0 pulse) (1st time is jam notification, 2nd time is SC notification). • During movement from home, the home position was detected for longer than a predetermined pulse (p1 pulse) (1st time is jam notification, 2nd time is SC notification). The return pulse to home and pulse coming from home during normal operation are calculated and measured. The pulses which are 1.5-2 times the normal operation pulse are taken as p0 and p1.
		• Motor defective • Reset the connector. • Overload • Home position sensor error
		• Replace the motor. • Reset the connector. • Replace the harness. • Replace the home position sensor • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC721-80	B	Folding Transport Motor Error (1000-sheet finisher)
		• Motor driver detects an error (short-circuit or overheating) (1st time is SC)
		• Motor defective • Connector disconnected • Overload
		• Replace the motor • Reset the connector • Replace the solenoid • Replace the finisher main board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC770	B	Shift motor error (D583)
		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
		• Replace the shift motor • Replace the shift motor HP sensor

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC791	D	No bridge unit when finisher is present
		When power supply is switched on or paper is transported, finisher set is detected but bridge unit set is not detected. (during internal finisher connection, not detected)
		• Bridge unit not attached • Bridge unit defective
		• Reset the bridge unit • Turn the power off/on

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC792	B	No finisher, bridge unit provided
		When power supply is switched on, it is recognized there is no finisher, and a bridge unit is fitted.
		• Finisher connector set fault • In a machine which has a bridge unit connected, a finisher is not fitted • Finisher defective
		Connect finisher or disconnect bridge unit, and turn the power off/on

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-01	B	Front jogger motor error with 1-bin tray (D586)
		The machine does not detect a correct signal from the front jogger fence HP sensor while the front jogger motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective front jogger motor • Loosen connection • Motor overload • Defective front jogger fence HP sensor
		• Reset the connector • Replace the front jogger fence HP sensor. • Replace the front jogger motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-02	B	Rear jogger motor error with 1-bin tray (D586)
		The machine does not detect a correct signal from the rear jogger fence HP sensor while the rear jogger motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective front jogger motor • Loosen connection • Motor overload • Defective front jogger fence HP sensor
		• Reset the connector • Replace the front jogger fence HP sensor. • Replace the front jogger motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-03	B	Pick-up roller contact motor error with 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the pick-up roller HP sensor while the pick-up roller contact motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective pick-up roller contact motor • Loosen connection • Motor overload • Defective pick-up roller HP sensor
		• Reset the connector • Replace the pick-up roller HP sensor. • Replace the pick-up roller contact motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-04	B	Exit guide plate motor error with 1-bin tray (D586)
		The machine does not detect a correct signal from the exit guide plate HP sensor while the exit guide plate motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective exit guide plate motor • Loosen connection • Motor overload • Defective exit guide plate HP sensor
		• Reset the connector • Replace the exit guide plate HP sensor. • Replace the exit guide plate motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-05	B	Output tray motor error with 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the stack height detection lever sensor while the output tray motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective output tray motor • Loosen connection • Motor overload • Defective stack height detection lever sensor
		• Reset the connector • Replace the stack height detection lever sensor. • Replace the output tray motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-06	B	Stack height detection lever motor error with 1-bin tray (D586)
		The machine does not detect a correct signal from the stack height detection lever HP sensor while the stack height detection lever motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective stack height detection lever motor • Loosen connection • Motor overload • Defective stack height detection lever HP sensor • Defective stack height detection lever sensor
		• Reset the connector • Replace the stack height detection lever sensor. • Replace the output tray motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-07	B	Punch drive motor error with 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the punch position sensor while the punch drive motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective punch drive motor • Loosen connection • Motor overload • Defective punch position sensor
		• Reset the connector • Replace the punch position sensor. • Replace the punch drive motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-08	B	Punch movement motor error with 1-bin tray (D586)
		The machine does not detect a correct signal from the punch position sensor while the punch movement motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective punch movement motor • Loosen connection • Motor overload • Defective punch position sensor
		• Reset the connector • Replace the punch position sensor. • Replace the punch movement motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-09	B	Paper position sensor unit motor error with 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the paper position detection unit HP sensor while paper position sensor unit motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective paper position sensor unit motor • Loosen connection • Motor overload • Defective paper position detection unit HP sensor
		• Reset the connector • Replace the paper position detection unit HP sensor. • Replace the paper position sensor unit motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-11	B	Stapler unit motor error with 1-bin tray (D586)
		The machine does not detect a correct signal from the stapler unit motor HP sensor while the stapler unit motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective stapler unit motor • Loosen connection • Motor overload • Defective stapler unit motor HP sensor
		• Reset the connector • Replace the stapler unit HP sensor. • Replace the stapler unit motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC793-12	B	Shift roller motor error with 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the shift roller HP sensor while the shift roller motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective shift roller motor • Loosen connection • Motor overload • Defective shift roller HP sensor
		• Reset the connector • Replace the shift roller HP sensor. • Replace the shift roller motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-01	D	Front jogger motor error without 1-bin tray (D586)
		The machine does not detect a correct signal from the front jogger fence HP sensor while the front jogger motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective front jogger motor • Loosen connection • Motor overload • Defective front jogger fence HP sensor
		• Reset the connector • Replace the front jogger fence HP sensor. • Replace the front jogger motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-02	D	Rear jogger motor error without 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the rear jogger fence HP sensor while the rear jogger motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective front jogger motor • Loosen connection • Motor overload • Defective front jogger fence HP sensor
		• Reset the connector • Replace the front jogger fence HP sensor. • Replace the front jogger motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-03	D	Pick-up roller contact motor error without 1-bin tray (D586)
		The machine does not detect a correct signal from the pick-up roller HP sensor while the pick-up roller contact motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective pick-up roller contact motor • Loosen connection • Motor overload • Defective pick-up roller HP sensor
		• Reset the connector • Replace the pick-up roller HP sensor. • Replace the pick-up roller contact motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-04	D	Exit guide plate motor error without 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the exit guide plate HP sensor while the exit guide plate motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective exit guide plate motor • Loosen connection • Motor overload • Defective exit guide plate HP sensor
		• Reset the connector • Replace the exit guide plate HP sensor. • Replace the exit guide plate motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-05	D	Output tray motor error without 1-bin tray (D586)
		The machine does not detect a correct signal from the stack height detection lever sensor while the output tray motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective output tray motor • Loosen connection • Motor overload • Defective stack height detection lever sensor
		• Reset the connector • Replace the stack height detection lever sensor. • Replace the output tray motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-06	D	Stack height detection lever motor error without 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the stack height detection lever HP sensor while the stack height detection lever motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective stack height detection lever motor • Loosen connection • Motor overload • Defective stack height detection lever HP sensor • Defective stack height detection lever sensor
		• Reset the connector • Replace the stack height detection lever sensor. • Replace the output tray motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-07	D	Punch drive motor error without 1-bin tray (D586)
		The machine does not detect a correct signal from the punch position sensor while the punch drive motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective punch drive motor • Loosen connection • Motor overload • Defective punch position sensor
		• Reset the connector • Replace the punch position sensor. • Replace the punch drive motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-08	D	Punch movement motor error without 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the punch position sensor while the punch movement motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective punch movement motor • Loosen connection • Motor overload • Defective punch position sensor
		• Reset the connector • Replace the punch position sensor. • Replace the punch movement motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-09	D	Paper position sensor unit motor error without 1-bin tray (D586)
		The machine does not detect a correct signal from the paper position detection unit HP sensor while paper position sensor unit motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective paper position sensor unit motor • Loosen connection • Motor overload • Defective paper position detection unit HP sensor
		• Reset the connector • Replace the paper position detection unit HP sensor. • Replace the paper position sensor unit motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-10	D	Stapler motor error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the stapler motor HP sensor while thestapler motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Staple jam • Defective stapler motor • Loosen connection • Motor overload • Defective stapler motor HP sensor
		• Remove the jammed staple. • Reset the connector • Replace the stapler motor HP sensor. • Replace the stapler motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-11	D	Stapler unit motor error without 1-bin tray (D586)
		The machine does not detect a correct signal from the stapler unit motor HP sensor while the stapler unit motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective stapler unit motor • Loosen connection • Motor overload • Defective stapler unit motor HP sensor
		• Reset the connector • Replace the stapler unit HP sensor. • Replace the stapler unit motor.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC794-12	D	Shift roller motor error without 1-bin tray (D586)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		The machine does not detect a correct signal from the shift roller HP sensor while the shift roller motor is operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		• Defective shift roller motor • Loosen connection • Motor overload • Defective shift roller HP sensor
		• Reset the connector • Replace the shift roller HP sensor. • Replace the shift roller motor.

SC800 (Controller)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC816	[0x0000]	Energy save I/O subsystem error
SC816-01	D	Subsystem error
SC816-02	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-03	D	Transition to STR was denied.
SC816-04	D	Interrupt in kernel communication driver
SC816-05	D	Preparation for transition to STR failed.
SC816-07	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-08	D	Sysarch (LPUX_ENGINE_TIMERCTRL) error
SC816-09	D	Sysarch (LPUX_RETURN_FACTOR_STR) error
SC816-10 to 12	D	Sysarch (LPUX_GET_PORT_INFO) error
SC816-13	D	open() error
SC816-14	D	Memory address error
SC816-15 to 18	D	open() error

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC816-19	D	Double open() error
SC816-20	D	open() error
SC816-22	D	Parameter error
SC816-23, 24	D	read() error
SC816-25	D	write () error
SC816-26 to 28	D	write() communication retry error
SC816-29, 30	D	read() communication retry error
SC816-35	D	read() error
SC816-36 to 94	D	Subsystem error
		Energy save I/O subsystem detected some abnormality.
		• Energy save I/O subsystem defective • Energy save I/O subsystem detected a controller board error (non-response). • Error was detected during preparation for transition to STR.
		• Turn the main power off/on. • Replace the controller board.

SC818
RTB 69

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC841-00	D	EEPROM read data error
		Compared the data from 3 areas of the EEPROM mirror data with the original data and all 3 of them were different from the original data.
		Data in the specific area of the EEPROM has been modified.
		-

SC842
RTB 38

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-00	C	Nand-Flash updating verification error
		During remote ROM update or ROM update, the SCS detected a write error (verify error) regarding the data written to the Nand-Flash.
		Nand-Flash damaged
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-01	B	Nand-Flash bad block number exceeding the threshold
		When the status of the Nand-Flash was checked at power-on or when returning from energy saver mode, the number of bad blocks exceeded the threshold.
		Nand-Flash bad block number exceeding the threshold
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC842-02	B	Number of times of Nand-Flash block erase exceeding the threshold
		When the status of the Nand-Flash was checked at power-on or when returning from energy saver mode, the number of times the block was erased exceeded the threshold.
		Number of times of Nand-Flash block erase exceeding the threshold
		Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC853-00	B	Bluetooth device connection error
		The Bluetooth hardware (USB type) was connected after the machine was turned on.
		The Bluetooth hardware (USB type) was connected after the machine was turned on.
		Turn the main power with the Bluetooth hardware (USB type) connected.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC854-00	B	Bluetooth device disconnected
		The Bluetooth hardware (USB type) was disconnected after the machine was turned on.
		The Bluetooth hardware (USB type) was disconnected after the machine was turned on.
		Turn the main power with the Bluetooth hardware (USB type) connected.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC855-01	B	Wireless LAN board error (driver attachment failure)
		Wireless LAN board error (wireless LAN card: 802.11 is covered)
		• Defective wireless LAN board • Loose connection
		• Turn the main power off/on. • Replace wireless LAN board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC855-02	B	Wireless LAN board error (driver initialization failure)
		Wireless LAN board error (wireless LAN card: 802.11 is covered)
		• Defective wireless LAN board • Loose connection
		• Turn the main power off/on. • Replace wireless LAN board

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC857-00	B	USB I/F Error
		The USB interface is unusable because of a driver error.
		USB driver error (There are three causes of USB error: RX error/CRC error/STALL. SC is issued only in the case of STALL.)
		• Check USB connection. • Replace the controller board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-01	-	Data encryption conversion error (HDD Key Setting Error)
		A serious error occurred during an attempt to update the encryption key.
		• Data in the USB Flash etc. corrupted • Communication error because of electromagnetic interference etc. • Controller board defective
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-02	A	Data encryption conversion error (NVRAM read/write error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		NVRAM defective
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-30	A	Data encryption conversion error (NVRAM Before Replace error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		Software error such as conversion parameters being invalid.
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC858-31	A	Data encryption conversion error (Other Error)
		A serious error occurred after data conversion during an attempt to update the encryption key.
		Controller board defective
		Replace the board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-01	B	Data encryption conversion HDD conversion error (HDD check error)
		HDD was not converted correctly during an attempt to update the encryption key. Only an error screen is displayed and no SC is issued during conversion. This SC is issued after machine restart.
		• HDD conversion was selected in the Encryption key update function but the machine was turned on with the HDD removed. • Power failure occurred during encryption key update. • HDD was not successfully converted during encryption key update due to HDD errors or cable noises.
		• Check HDD connection. • Format the HDD. • If there is a problem with the HDD, it has to be replaced.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-02	B	Data encryption conversion HDD conversion error (Power failure during conversion)
		HDD was not converted correctly during an attempt to update the encryption key. Only an error screen is displayed and no SC is issued during conversion. This SC is issued after machine restart. Details: NVRAM/HDD conversion is incomplete.
		Power failure occurred during encryption key update.
		None The display after restart instructs the user to format the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC859-10	B	Data encryption conversion HDD conversion error (Data read/write command error)
		HDD was not converted correctly during an attempt to update the encryption key. Only an error screen is displayed and no SC is issued during conversion. This SC is issued after machine restart. Details: Abnormal DMAC return value has been received two or more times (DMAC timeout, serial communication error etc.)
		HDD was not successfully converted during encryption key update due to HDD errors or cable noises.
		• Check HDD connection. • Format the HDD. • If there is a problem with the HDD, it has to be replaced.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC860-00	B	HDD startup error at main power on (HDD error)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution

		• The HDD is connected but the driver detected the following errors.
		  • SS_NOT_READY:/* (-2)HDD does not become READY*/
		  • SS_BAD_LABEL:/* (-4)Wrong partition type*/
		  • SS_READ_ERROR:/* (-5)Error occurred while reading or checking the label*/
		  • SS_WRITE_ERROR:/* (-6)Error occurred while writing or checking the label*/
		  • SS_FS_ERROR:/* (-7)Failed to repair the filesystem*/
		  • SS_MOUNT_ERROR:/* (-8)Failed to mount the filesystem*/
		  • SS_COMMAND_ERROR:/* (-9)Drive not responding to command*/
		  • SS_KERNEL_ERROR:/* (-10)Internal kernel error*/
		  • SS_SIZE_ERROR:/* (-11)Drive size too small*/
		  • SS_NO_PARTITION:/* (-12)The specified partition does not exist*/
		  • SS_NO_FILE:/* (-13)Device file does not exist*/
		• Attempted to acquire HDD status through the driver but there has been no response for 30 seconds or more.

		• Unformatted HDD • Label data corrupted • HDD defective
		Format the HDD through SP mode.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC865-00	D	HDD access error
		During HDD operation, the HDD returned an error.
		The HDD returned an error that does not constitute SC863 (bad sector) or SC864 (CRC error).
		Replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC866-00	B	SD card authentication error
		A license error of an application that is started from the SD card was detected.
		Invalid program data is stored on the SD card.
		Store a valid program data on the SD card.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC867-00	D	SD card removed
		The SD card that starts an application was removed from the slot.
		The SD card that starts an application was removed from the slot (mount point of /mnt/sd0).
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-00	D	SD card access error
		The SD controller returned an error during operation. (Error occurred at the mount point of /mnt/sd0)
		• SD card defective • SD controller defective
		• Reformat the SD card (using the "SD Formatter" made by Panasonic).* • Check the SD card insertion status. • Replace the SD card. • Replace the controller board.

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-01	D	SD card access error
		The SD controller returned an error during operation. (Error occurred at the mount point of /mnt/sd1)
		• SD card defective • SD controller defective

		SD card that starts an application
		• Turn the main power off and check the SD card insertion status.
		  • If no problem is found, insert the SD card and turn the main power on.
		  • If an error occurs, replace the SD card.
		• SD card for users
		  • In case of a file system error, reformat the SD card (using the "SD Formatter" made by Panasonic).*
		  • In case of a device access error, turn the main power off and check the SD card insertion status.
		  • If no problem is found, insert the SD card and turn the main power on.
		  • If an error occurs, use another SD card.
		• If the error persists

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC868-02	D	SD card access error
		The SD controller returned an error during operation. (Error occurred at the mount point of /mnt/sd1)
		• SD card defective • SD controller defective

		SD card that starts an application
		• Turn the main power off and check the SD card insertion status.
		  • If no problem is found, insert the SD card and turn the main power on.
		  • If an error occurs, replace the SD card.
		• SD card for users
		  • In case of a file system error, reformat the SD card (using the "SD Formatter" made by Panasonic).*
		  • In case of a device access error, turn the main power off and check the SD card insertion status.
		  • If no problem is found, insert the SD card and turn the main power on.
		  • If an error occurs, use another SD card.
		• If the error persists

* Do not format an SD card supplied with the main machine or sold as an option. You may only format SD cards used for Firmware Update by a Customer Engineer.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-00	B	Address Book data error (Anytime: Address Book Error.)
SC870-01	B	Address Book data error (On startup: Media required for storing the Address Book is missing.)
SC870-02	B	Address Book data error (On startup: encryption is configured but the module required for encryption (DESS) is missing.)
SC870-03	B	Address Book data error (Initialization: Failed to generate a file to store internal Address Book.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-04	B	Address Book data error (Initialization: Failed to generate a file to store delivery sender.)
SC870-05	B	Address Book data error (Initialization: Failed to generate a file to store delivery destination.)
SC870-06	B	Address Book data error (Initialization: Failed to generate a file to store information required for LDAP search.)
SC870-07	B	Address Book data error (Initialization: Failed to initialize entries required for machine operation.)
SC870-08	B	Address Book data error (Machine configuration: HDD is present but the space for storing the Address Book is unusable.)
SC870-09	B	Address Book data error (Machine configuration: Inconsistency in the NVRAM area used for storing settings required for Address Book configuration.)
SC870-10	B	Address Book data error (Machine configuration: Cannot make a directory for storing the Address Book in the SD/USB FlashROM.)
SC870-11	B	Address Book data error(On startup: Inconsistency in Address Book entry number.)
SC870-20	B	Address Book data error (File I/O: Failed to initialize file.)
SC870-21	B	Address Book data error (File I/O: Failed to generate file.)
SC870-22	B	Address Book data error (File I/O: Failed to open file.)
SC870-23	B	Address Book data error (File I/O: Failed to write to file.)
SC870-24	B	Address Book data error (File I/O: Failed to read file.)
SC870-25	B	Address Book data error (File I/O: Failed to check file size.)
SC870-26	B	Address Book data error (File I/O: Failed to delete data.)
SC870-27	B	Address Book data error (File I/O: Failed to add data.)
SC870-30	B	Address Book data error (Search: Failed to obtain data from cache when searching in the machine Address Book. delivery destination/sender.)
SC870-31	B	Address Book data error (Search:Failed to obtain data from cache during LDAP search.)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC870-32	B	Address Book data error (Search:Failed to obtain data from cache while searching the WS-Scanner Address Book.)
SC870-41	B	Address Book data error (Cache: failed to obtain data from cache.)
SC870-50	B	Address Book data error (On startup: Detected abnormality of the Address Book encryption status.)
SC870-51	B	Address Book data error (Encryption settings: Failed to create directory required for conversion between plaintext and encrypted text.)
SC870-52	B	Address Book data error (Encryption settings: Failed to convert from plaintext to encrypted text.)
SC870-53	B	Address Book data error (Encryption settings: Failed to convert from encrypted text to plaintext.)
SC870-54	B	Address Book data error (Encryption settings: Detected data inconsistency when reading the encrypted Address Book.)
SC870-55	B	Address Book data error (Encryption settings: Failed to delete file when changing encryption setting.)
SC870-56	B	Address Book data error (Encryption settings: Failed to erase the file that records the encryption key during an attempt to change the encryption setting.)
SC870-57	B	Address Book data error (Encryption settings: Failed to move a file during an attempt to change the encryption setting.)
SC870-58	B	Address Book data error (Encryption settings: Failed to delete a directory during an attempt to change the encryption setting.)
SC870-59	B	Address Book data error (Encryption settings: Detected a resource shortage during an attempt to change the encryption setting.)
SC870-60	B	Address Book data error (Unable to obtain the on/off setting for administrator authentication (06A and later).)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		When an error related to the Address Book is detected during startup or operation.
		• Software bug • Inconsistency of Address Book source location (machine/delivery server/LDAP server) • Inconsistency of Address Book encryption setting or encryption key (NVRAM or HDD was replaced individually without formatting the Address Book) • Address Book storage device (SD/HDD) was temporarily removed or hardware configuration does not match the application configuration. • Address Book data corruption was detected.
		• Check the HDD connection. • Initialize all UCS settings and address/authentication information (SP5-846-046). • Initialize the Address Book partition (SP5-832-006).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC872-00	B	HDD mail reception error
		An error was detected on the HDD immediately after the machine was turned on.
		• HDD defective • Power was turned of while the machine used the HDD.
		• Format the HDD (SP5-832-007). • Replace the HDD. When you do the above, the following information will be initialized. • Partly received partial mail messages. • Already-read statuses of POP3-received messages (All messages on the mail server are handled as new messages).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC873-00	B	HDD mail reception error
		An error was detected on the HDD immediately after the machine was turned on.
		• HDD defective • Power was turned of while the machine used the HDD.
		• Format the HDD (SP5-832-007). • Replace the HDD. When you do the above, the following information will be initialized. • Default sender name/password (SMB/FTP/NCP) • Administrator mail address • Scanner delivery history

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC875-01	D	Delete all error (HDD erasure) (hddchack –i error)
SC875-02	D	Delete all error (HDD erasure) (Data deletion failure)
		An error was detected before HDD/data erasure starts. (Failed to erase data/failed to logically format HDD)
		• HDD logical formatting failed. • The modules failed to erase data.
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-01	D	Log Data Error 1
		An error was detected in the handling of the log data at power on or during machine operation.
		Damaged log data file
		Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-02	D	Log Data Error 2
		An error was detected in the handling of the log data at power on or during machine operation.
		Log encryption is enabled but encryption module is not installed.
		• Replace or set again the encryption module. • Disable the log encryption setting.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-03	D	Log Data Error 3
		An error was detected in the handling of the log data at power on or during machine operation.
		Inconsistency of encryption key between NV-RAM and HDD.
		• Disable the log encryption setting. • Initialize LCS memory (SP5801-019). • Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-04	D	Log Data Error 4
		An error was detected in the handling of the log data at power on or during machine operation.
		• Log encryption key is disabled but the log data file is encrypted. (NVRAM data corruption) • Log encryption key is enabled but the log data file is not encrypted. (NVRAM data corruption)
		Initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-05	D	Log Data Error 5
		An error was detected in the handling of the log data at power on or during machine operation.
		• Only the NV-RAM has been replaced with one previously used in another machine. • Only the HDD has been replaced with one previously used in another machine.
		• Attach the original NV-RAM. • Attach the original HDD. • With the configuration that caused the SC, initialize the HDD (SP5-832-004).

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC876-99	D	Log Data Error 99
		An error was detected in the handling of the log data at power on or during machine operation.
		Other causes
		-

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC877-00	B	Data Overwrite Security card error
		The "Auto Erase Memory" function of the Data Overwrite Security is set to on but it cannot be done.
		• Data Overwrite Security option SD card is broken. • Data Overwrite Security option SD card has been removed.
		• If the SD card is broken, prepare a new Data Overwrite Security option SD card and replace the NVRAM. • If the SD card has been removed, turn the main power off and reinstall a working Data Overwrite Security option SD card.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC880-00	D	MLB error
		Reply to MLB access was not returned within a specified time.
		MLB defective
		• Replace the MLB. • Remove the MLB.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC881-01	D	Authentication area error
		• Software error detected. • This error may occur even if IC card option (ERIE/AYU/Greenland etc.) is not installed.
		• This is caused by accumulation of abnormal authentication information in the software. (User operation will not directly cause it.) • Occurs when authentication is done. Example: When a job is sent to the printer/when logged on from the operation panel/when logged on from a Web browser
		Turn the main power off/on.

SC899
RTB 24

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC899-00	D	Software performance error (signal reception end)
		-
		Occurs when an internal program behaves abnormally.
		In case of a hardware defect • Replace the hardware. In case of a software error • Turn the main power off/on. • Try updating the firmware.

SC900 (Engine: Others)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC901	D	Mechanical total counter error
		The counter was moved during standby or while it is operating, possibly damaging the connector.
		Counter defective
		Check the connection of the mechanical counter

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-01	D	CPM setting error 1
		Comparison of machine serial number (11 digits) and machine identification code. Details: • Machine serial number cannot be identified because of BICU replacement or malfunctioning. • Machine serial number cannot be identified because of NV-RAM replacement
		Machine serial number (11 digits) or machine identification code does not match.
		Enter the machine serial number using SP5-811, and then turn the power on/off. Attach the NV-RAM that was installed previously.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-02	D	CPM setting error 2
		Comparison of machine serial number (11 digits) and machine identification code. Details: Machine serial number cannot be identified because of NV-RAM replacement or malfunctioning.
		Machine serial number (11 digits) or machine identification code does not match.
		• Attach the NV-RAM that was installed previously. • Download data on the NV-RAM using SP5-825.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-03	D	CPM setting error 3
		Comparison of machine serial number (11 digits) and machine identification code. Details: Unable to recognize machine identification code because the controller was replaced incorrectly or is malfunctioning.
		Machine serial number (11 digits) or machine identification code does not match.
		Replace it with a specified controller.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC995-04	D	CPM setting error 4
		Comparison of machine serial number (11 digits) and machine identification code.
		Machine serial number (11 digits) or machine identification code does not match.
		Return the parts to the original configuration, and then replace them according to the manual.

SC900 (Controller)

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC900-00	D	Electric counter error
		The electric total counter value is out of specification. Error is detected when increasing the total counter.
		• Unexpected NVRAM is attached. • NVRAM defective • NV-RAM data corrupted. • Data written to unexpected area because of external factor etc. • The count requested by the SRM on receiving PRT is not completed.
		Replace the NVRAM.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC920-00	B	Printer application error (No response at PM startup)
SC920-01	B	Printer application error (Timeout during PM operation)
SC920-02	B	Printer application error (Unable to obtain work memory)
SC920-03	B	Printer application error (Unable to start filter process)
SC920-04	B	Printer application error (Abnormal termination of filter process)
		When an error is detected in the application, which makes continued operation impossible.
		• Software bug • Unexpected hardware configuration (such as insufficient memory)
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC921-00	B	Printer application error (Resident font not found)
		Resident font was not found at printer startup.
		Preinstalled font files not found.
		Turn the main power off/on.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC925-00	B	NetFile function error
SC925-01	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.
		• HDD defective • HDD inconsistency caused by power failure during HDD access, etc. • Software bug

		If another SC related to HDD errors (SC860 to SC865) is issued at the same time, the HDD is the cause. Solve the other SC.
		• If SC860 to SC865 is not issued
		  • Turn the main power off/on.
		  • If this does not work, initialize the HDD NetFile partition (SP5-832-011). Approval by the customer is required because received fax message waiting to be delivered and documents waiting to be captured will be lost.
		  Procedure:
		  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.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
		• If this does not solve the problem, initialize all partitions of the HDD (SP5-832-001), then turn the machine power off and on. Approval by the customer is required because documents and Address Book information in the HDD will be lost. Received fax messages stored are protected but the order may be changed. • If this does not solve the problem, replace the HDD.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC990-00	D	Software operation error
		Software attempted an unexpected operation.
		• Parameter error • Internal parameter error • Insufficient work memory • Operation error caused by abnormalities that are normally undetectable.
		• Turn the main power off/on. • Reinstall the software of the controller and BICU board.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC991-00	C	Recoverable software operation error
		Software attempted an unexpected operation. SC991 covers recoverable errors as opposed toCS990.
		• Parameter error • Internal parameter error • Insufficient work memory • Operation error caused by abnormalities that are normally undetectable.
		Logging only

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC992-00	D	Undefined SC issued.
		An SC, that is not controlled by the system, occurred.
		• An SC for the previous model was used mistakenly, etc. • Basically a software bug.
		Turn the main power off/on.

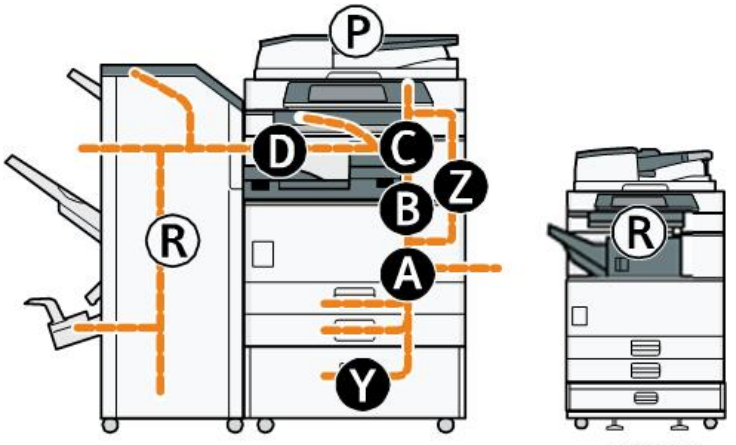
SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC997-00	D	Application function selection error
		The application selected by the operation panel key operated abnormally (No response, abnormal ending).
		Software bug (mainly the application)
		• Check the optional RAM, DIMM, boards required by the application program. • Check if the combination of downloaded programs are correct.

SC No.	Level	Error Name/Error Condition/Major Cause/Solution
SC998-00	D	Application start error
		• No application was registered to system within a specified time after the main power was turned on. (No application starts/All applications have been terminated abnormally) • Application started but cannot be drawn now for some reason.
		• Software bug (mainly the application) • The optional RAM, DIMM, boards required by the application program. Are not installed correctly.
		• Turn the main power off/on. • Check the optional RAM, DIMM, boards • Check the combination of programs • Replace the controller board.

Jam Detection

Paper Jam Display

When a jam occurs, the location is displayed on the operation panel.



d1826008

SP7-507 shows the paper jam history.

```
CODE :011
SIZE  :05h
TOTAL:000034
DATE  :Fri Feb 15 11:44:50 2006
```

- **CODE**: Indicates the jam code.
- **SIZE**: Indicates the paper Size Code.
- **TOTAL**: Indicates the total counter (SP7-502-001).
- **DATE**: indicates the date when the jam occurred.

Note

- The 10 latest printer jams are displayed.
- Initial jams are not recorded.

Jam Codes and Display Codes

Note

- Jam code: Shows the cause of a jam. Appears in the log data.
- Position code: Shows the location of a jam. Appears on the operation panel.

These are lists of jam codes for the main machine and peripheral devices. Please note:

- **Late jam.** The paper has failed to arrive within the prescribed time due to a jam that has occurred upstream of the referenced sensor.
- **Lag jam.** The paper has failed to leave the location of the referenced sensor within the prescribed time due to a jam downstream of the referenced sensor.

Main Machine

Jam code	Jam description	Position code
1	Initial jam	*1
3	Tray 1 No Feed	A
4	Tray 2 No Feed	A
5	Tray 3 No Feed	Y
6	Tray 4 No Feed	Y
8	Bypass Paper Feed Sensor	A
9	Duplex No Feed	Z
11	1st Vertical Transport Sensor: Late Jam	A
12	2nd Vertical Transport Sensor: Late Jam	A
13	3rd Vertical Transport Sensor: Late Jam	Y
17	Registration Sensor: Late Jam	A
20	Exit Sensor: Late Jam	C
21	Relay Exit Sensor: Late Jam	D
22	Relay Transport Sensor: Late Jam	D
24	Invert Sensor: Late Jam	C

Jam code	Jam description	Position code
25	Duplex Exit Sensor: Late Jam	Z
27	Duplex Entrance Sensor: Late Jam	Z
51	1st Vertical Transport Sensor: Lag Jam	A
52	2nd Vertical Transport Sensor: Lag Jam	A
53	3rd Vertical Transport Sensor: Lag Jam	Y
54	4th Vertical Transport Sensor: Lag Jam	Y
57	Registration Sensor: Lag Jam	B
60	Exit Sensor: Lag Jam	C
61	Relay Exit Sensor: Lag Jam	D
62	Relay Transport Sensor: Lag Jam	D
64	Invert Sensor: Lag Jam	C
65	Duplex Exit Sensor: Lag Jam	Z
67	Duplex Entrance Sensor: Lag Jam	Z

***1 Initial Jam**

Jam description	Position code
Main Machine	
1st Vertical Transport Sensor	A
2nd Vertical Transport Sensor	A
3rd Vertical Transport Sensor	Y
4th Vertical Transport Sensor	Y
Registration Sensor	B
Exit Sensor	C
Relay Exit Sensor	D
Relay Transport Sensor	D

Jam description	Position code
Invert Sensor	C
Duplex Exit Sensor	Z
Duplex Entrance Sensor:	Z
Booklet Finisher SR3150/Finisher SR3140	
Entrance Sensor	R1-R4
Proof Tray Paper Exit Sensor	R1-R4
Middle Transport (right) Sensor	R1-R4
Middle Transport (left) Sensor	R1-R4
Shift Tray Paper Exit Sensor	R1-R4
Stapler tray jam detection sensor	R1-R4
Stuck Transport Sensor	R5-R10
Trailing Edge Stopper Transport Sensor	R5-R10
Fold Exit Sensor	R5-R10
Internal Finisher Type 3352	
Entrance Sensor	R1-R2
Transport Sensor	R1-R2
Paper Exit Sensor	R1-R2

ARDF DF3090

Jam code	Jam description	Position code
001	Initial jam	P
014	Skew Correction Sensor: Late Jam	P
064	Skew Correction Sensor: Lag Jam	P
016	Original Registration Sensor: Late Jam	P

Jam code	Jam description	Position code
066	Original Registration Sensor: Lag Jam	P
017	Original Exit Sensor: Late Jam	P
067	Original Exit Sensor: Lag Jam	P
239	Misfeed:Original Removed	P

Booklet Finisher SR3150/ Finisher SR3140

Jam code	Jam description	Position code
200	Entrance Sensor: Late Jam	R1-R4
201	Entrance Sensor: Lag Jam	R1-R4
202	Proof Tray Paper Exit: Late Jam	R1-R4
203	Proof Tray Paper Exit: Lag Jam	R1-R4
204	Middle Transport (right): Late Jam	R1-R4
205	Middle Transport (left): Late Jam	R1-R4
206	Middle Transport (left): Lag Jam	R1-R4
207	Shift Tray Paper Exit: Late Jam	R1-R4
208	Shift Tray Paper Exit: Lag Jam	R1-R4
209	Stapler Exit: Late Jam	R5-R10
210	Trailing Edge Stopper Transport: Late Jam	R5-R10
211	Trailing Edge Stopper Transport: Lag Jam	R5-R10
212	Fold Exit: Late Jam	R5-R10
213	Fold Exit: Lag Jam	R5-R10
220	Entrance Transport Motor Jam	R1-R4
221	Proof Transport Motor Jam	R1-R4
222	Output Transport/ Positioning, Stacking Roller Motor Jam	R1-R4

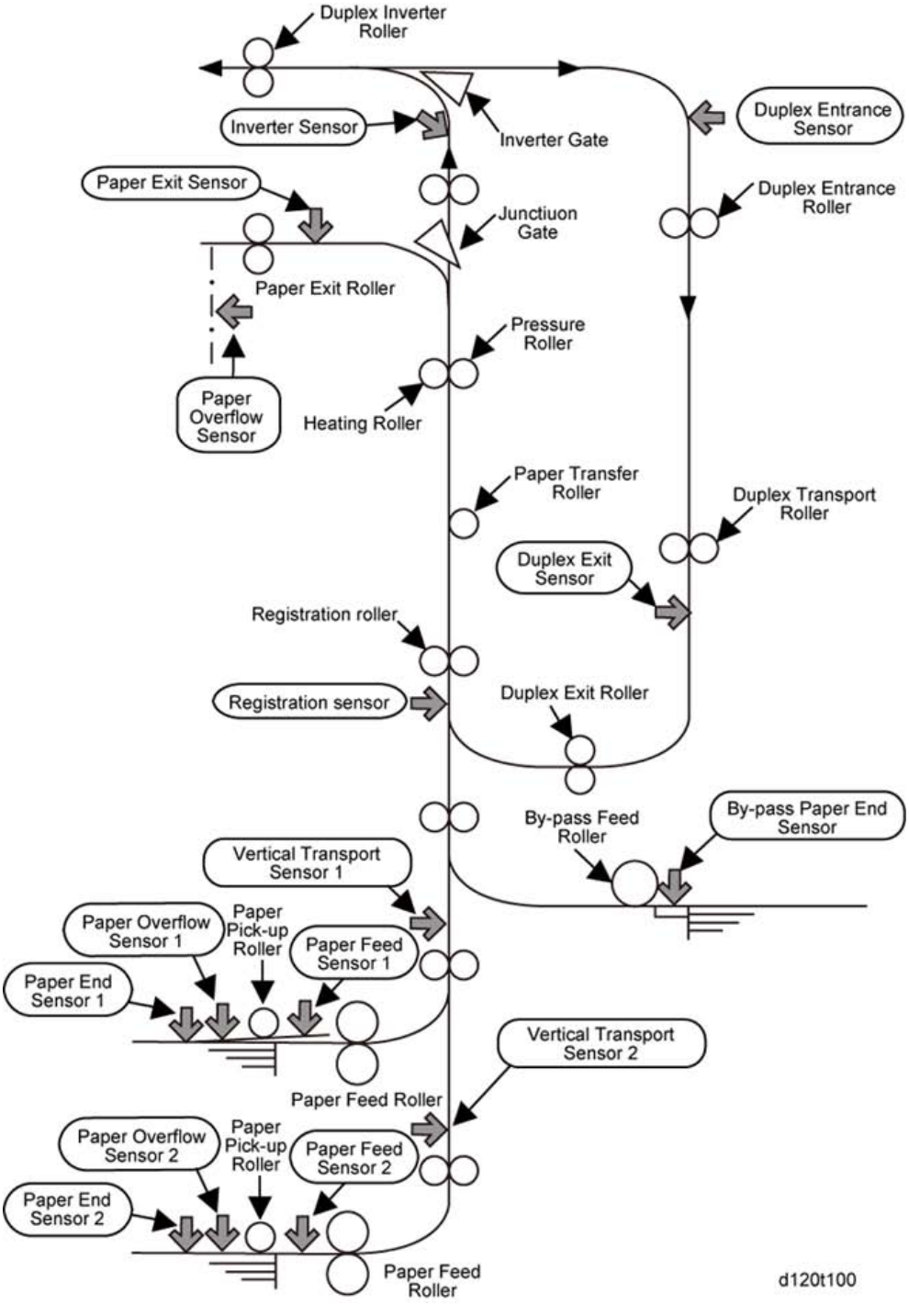
Jam code	Jam description	Position code
223	Shift Motor Jam	R1-R4
224	Jogger Motor Jam	R1-R4
225	Paper Exit Gate Motor Jam	R1-R4
226	Feed Out Motor Jam	R1-R4
227	Tray Lift Motor Jam	R1-R4
228	Positioning Roller Motor Jam	R1-R4
229	Stapler Movement Motor Jam	R1-R4
230	Stapling Motor Jam	R1-R4
231	Punch Motor Jam	R1-R4
232	Stuck Transport Motor Jam	R5-R10
233	Trailing Edge Stopper Motor Jam	R5-R10
234	Folding Blade Motor Jam	R5-R10
248	No Response for Paper Output Complete	R1-R4
249	Main Machine Data Corrupt	R1-R4

Internal Finisher Type 3352

Jam code	Jam description	Position code
100	Entrance Sensor: Late Jam	R1-R2
101	Entrance Sensor: Lag Jam	R1-R2
102	Transport Sensor: Late Jam	R1-R2
103	Transport Sensor: Lag Jam	R1-R2
104	Paper Exit Jam	R1-R2
105	Front Jogger Motor Jam	R1-R2
106	Rear Jogger Motor Jam	R1-R2

Jam code	Jam description	Position code
107	Shift Roller Motor Jam	R1-R2
108	Positioning Roller Motor Jam	R1-R2
109	Paper Exit Gate Motor Jam	R1-R2
110	Stapler Movement Motor Jam	R1-R2
111	Shift Tray Lift Motor Jam	R1-R2
112	Stapling Motor Jam	R1-R2
113	Paper Press Motor Jam	R1-R2
114	Punch Motor Jam	R1-R2
115	Punch Movement Motor	R1-R2
116	Registration Motor	R1-R2
148	No Response for Paper Output Complete	R1-R2
149	Main Machine Data Corrupt	R1-R2

Sensor Locations



Paper Size Codes

Paper size codes are as follows.

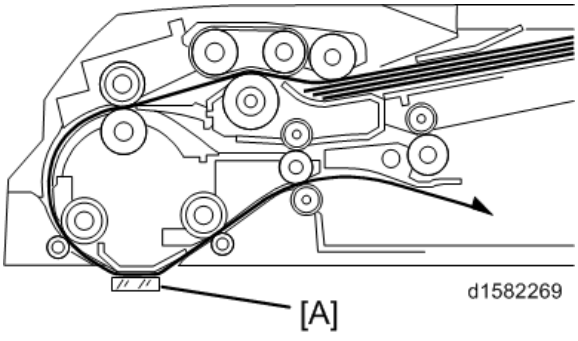
* The unit of Main Scan/Sub Scan Length is 0.1 mm.

Size Code	Paper Size Name	Orientation	Main Scan Length	Sub Scan Length
132(84H)	A3	SEF	2970	4200
005(05H)	A4	LEF	2970	2100
133(85H)	A4	SEF	2100	2970
141(8DH)	B4	SEF	2570	3640
006(06H)	A5	LEF	2100	1480
134(86H)	A5	SEF	1480	2100
014(0EH)	B5	LEF	2570	1820
142(8EH)	B5	SEF	1820	2570
135(87H)	A6	SEF	1050	1480
143(8FH)	B6	SEF	1280	1820
160(A0H)	11"x17"(DLT)	SEF	2794	4318
164(A4H)	8 1/2"x14"(LG)	SEF	2159	3556
166(A6H)	8 1/2"x11"(LT)	SEF	2159	2794
038(26H)	8 1/2"x11"(LT)	LEF	2794	2159
172(ACH)	5 1/2"x8 1/2"(HLT)	SEF	1397	2159
175(AFH)	12" x 18"	SEF	3048	4572

Other Problems

Marks (Vertical Streaks) on Prints and Copies due to Scanning Problems

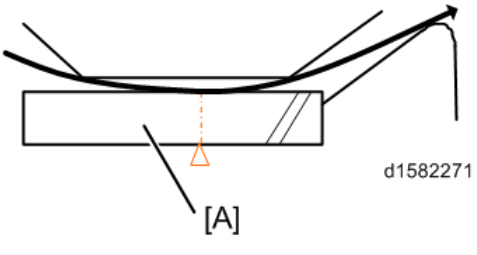
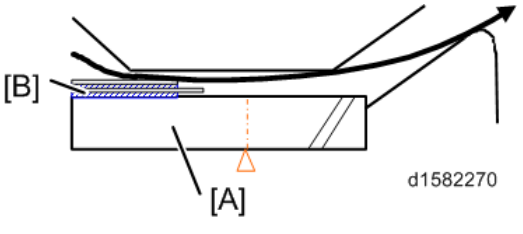
Marks on prints and copies are mostly due to dirt on the DF exposure glass [A], generally caused by adhesive contaminants (such as ball point pen ink and correction fluid).



Compared to non-adhesive contaminants (such as paper fragments and eraser dust), adhesive contaminants are more likely to lead to complaints from customers because of the following:

- Vertical streaks caused by adhesive contaminants are more visible in terms of image quality.
- Unless removed by cleaning, adhesive contaminants continue to produce vertical streaks, while non-adhesive contaminants stop producing streaks after they are dislodged.
- Many adhesive contaminants are difficult to remove by cleaning.

The ARDF DF3090 (D779) features a system (non-contact scanning) to reduce vertical streaks caused by adhesive contaminants.

Contact scanning: Other ADFs/ARDFs	Non-contact scanning: DF3090 (D779)
In contact scanning, the whole of the original comes into contact with the DF exposure glass [A] so that non-adhesive contaminants can be removed. 	By means of the Mylar sheet [B], originals are kept slightly above the DF exposure glass [A], preventing adhesive contaminants from adhering to the glass. 

The ARDF DF3090 (D779) can be converted from non-contact scanning to contact scanning for users who wish to reduce vertical streaks caused by non-adhesive contaminants.

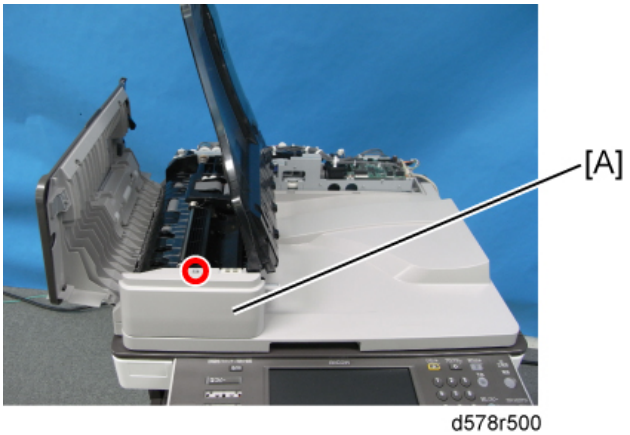
SP No.	Contact scanning	Non-contact scanning
SP4-688-001 (DF Density Adjustment ARDF)	97%	102%

Converting the ARDF DF3090 (D779) to Contact Scanning

Important

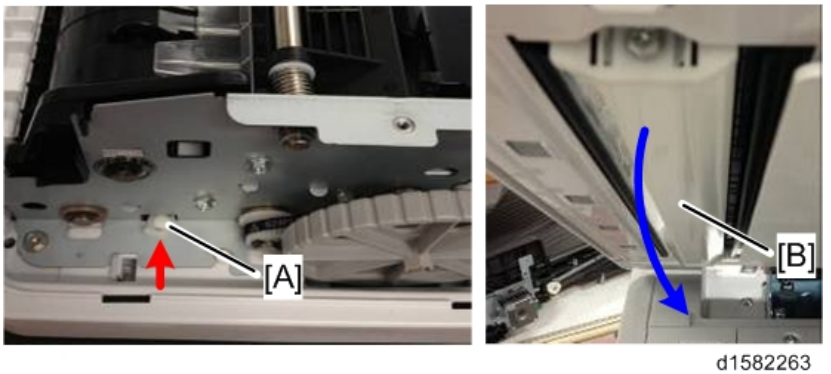
- **Unplug the machine power cord before starting the following procedure.**

1. Remove the ARDF front cover [A] (x1).



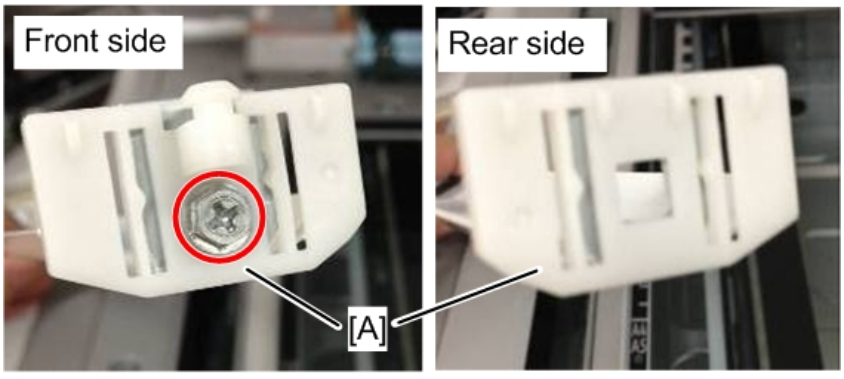
d578r500

2. Remove the Scanning guide plate [B] ([A]x1).



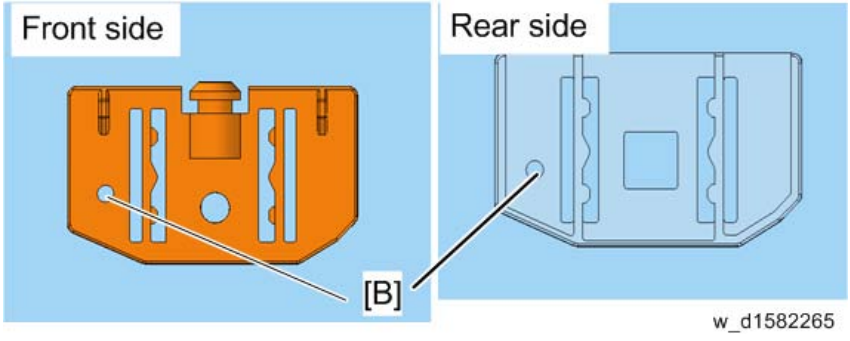
d1582263

3. Remove the plastic guides [A] on the sides of the scanning guide plate(x1).



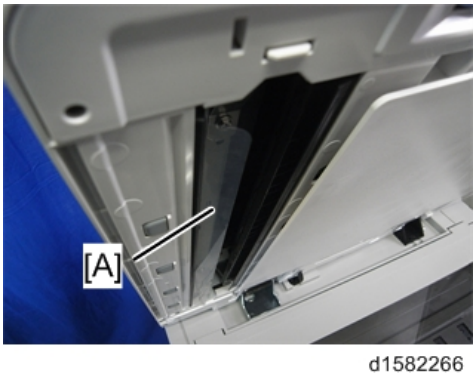
w_d1582264

4. Attach the guides for contact scanning. Each guide has a hole [B].



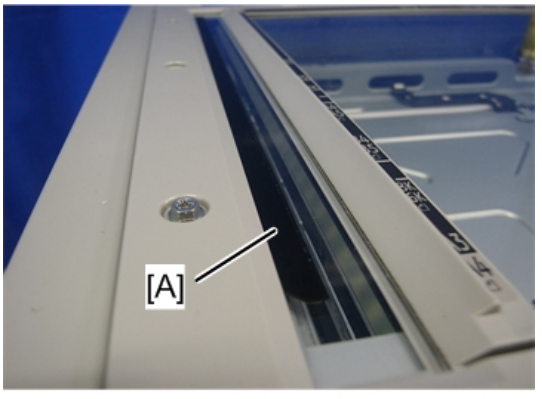
w_d1582265

5. Mount the scanning guide plate, taking care not to damage the sheet [A].



d1582266

6. Peel off the gap sheet [A] from the DF exposure glass with your hands.

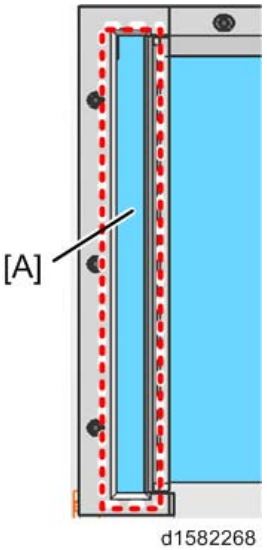


d1582267

7. Clean the DF exposure glass [A] with alcohol.

Note

- To avoid paper jams, make sure adhesive is completely removed.



d1582268

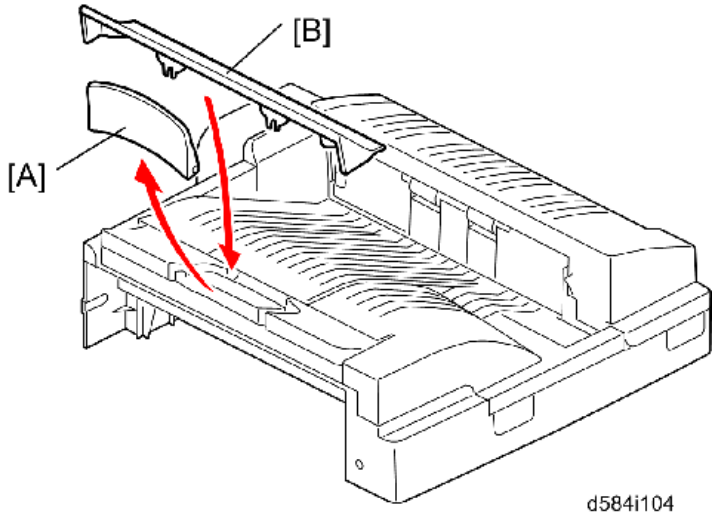
8. Turn the main switch on.
9. Start the SP mode.
10. Select SP4-688-001 (DF Density Adjustment ARDF) and change the setting to "97%" for the contact scanning.

Jammed Paper at the Bridge Unit

RTB 25
Modified

Paper jam may occur when A3 paper or larger is output from the internal finisher. This is because the paper is caught in the step between the bridge unit and internal finisher. In this case, it is possible to avoid the jam by attaching the wide extension tray.

1. Remove the extension tray [A] and attach the wide extension tray at the bridge unit.



d584i104

Stacking Problem at the 1000-sheet Finisher

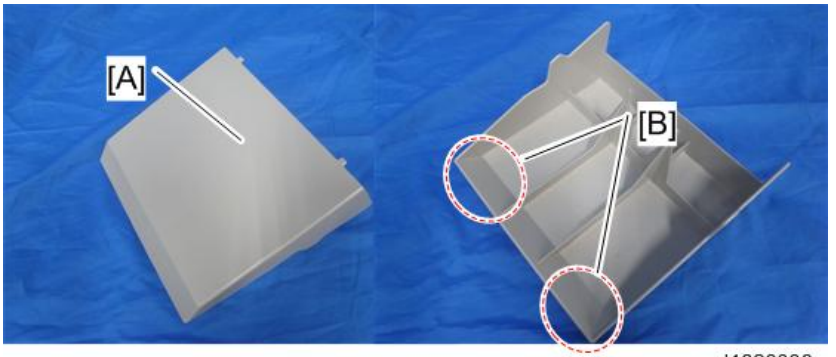
Stacking problem may occur due to paper curl depending on the paper type / size. In this case, it is possible to avoid the problem by attaching the auxiliary tray.



d1826011

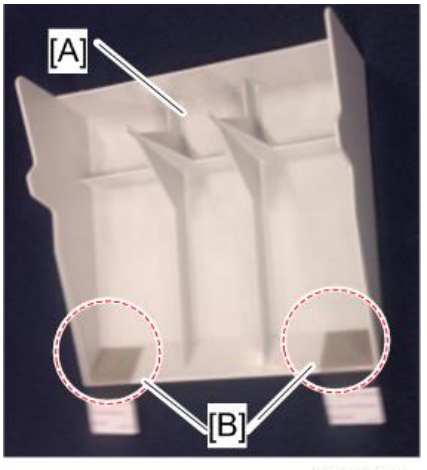
Installation procedure for attaching the sheet

1. Clean the back [B] of the auxiliary tray [A] with alcohol



d1826006

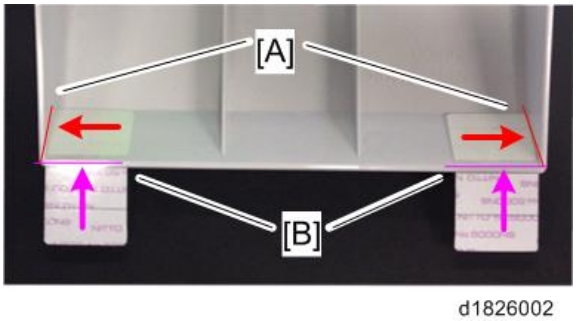
2. Attach the fixing sheet [B] to the auxiliary tray [A].



d1826001

Note

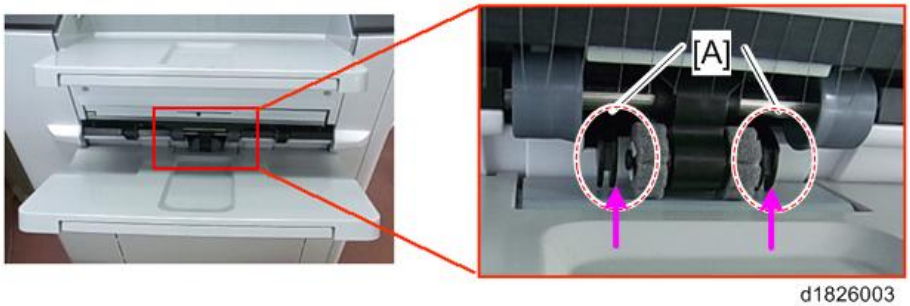
- Place the sheet on the outer end [A] of the auxiliary tray and hook the bent portion [B] at the edge of the tray.



d1826002

Installation procedure for attaching the auxiliary tray to the 1000-sheet finisher

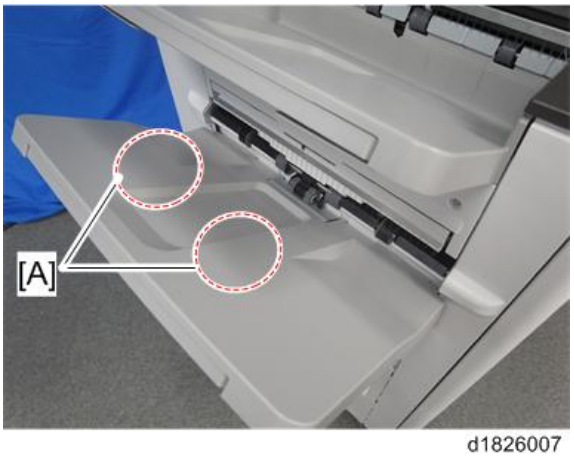
1. Turn on the machine.
2. Manually lift the paper surface detection feeler [A] to keep the sensor "ON".
   Keep lifting the feeler until step 4.



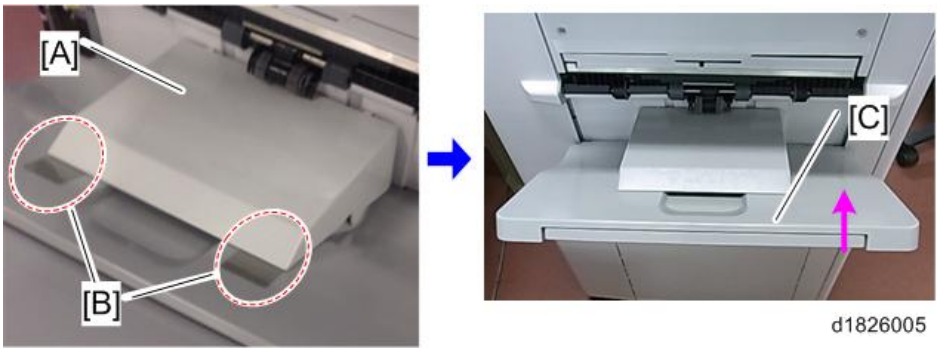
3. Open and close the upper cover [A] or the front cover [B]. The shift tray [C] starts to descend.



4. "JAM227" is displayed about 3 seconds later. The shift tray descent is stopped. Release your hand from the feeler.
5. Clean the place [A] to attach the fixing sheet with alcohol.



6. Place the auxiliary tray [A] on the shift tray.
7. Attach the fixing sheet [B] on the shift tray and fasten the auxiliary tray.
8. Open and close the front cover or the upper cover. The shift tray starts to rise [C], and "JAM227" is cleared.



d1826005

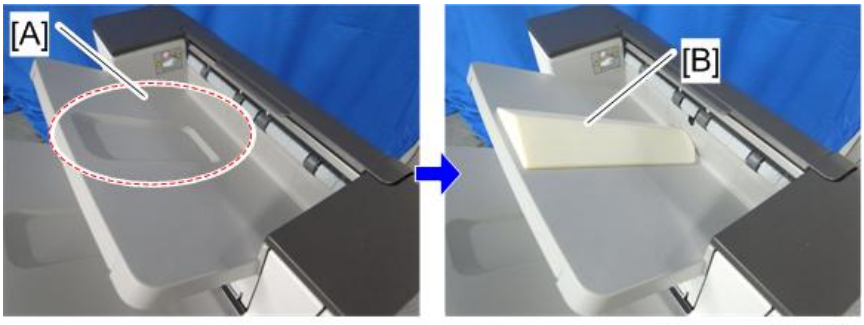
Early Paper Full Detection at the 1000-sheet Finisher

Early paper full detection may occur due to paper stacking depending on the paper type / size. In this case, it is possible to avoid the early detection by attaching the auxiliary tray


d1826009

Installation procedure

1. Place the auxiliary tray [B] into the dent in the proof tray [A].



d1826010

Blown Fuse Conditions

⚠CAUTION

- Use a correct rating fuse for the fuse replacement. Never use a wrong rating fuse. If do so, the machine may be damaged.

Fuse	Rating		Symptom when turning on the main switch
	115 V	220 to 240 V	
PSU			
FU1	15 A/250 V	8 A/250V	No response.
FU2	10 A/250 V	5 A/250 V	No response
FU3	2 A/250 V	2 A/250V	Anti-condensation/Tray Heater does not turn on.
FU4	5 A/250 V	5 A/250V	Optional finisher does not work then SC792 is displayed. Paper reaches the bridge unit and stays.
FU5	5 A/250 V	5 A/250 V	All motors do not rotate. "Cover Open" appears.
FU6	5 A/250 V	5 A /250V	SC is displayed.
FU7	5 A/250 V	5 A/250 V	The touch panel does not turn on and all motors do not rotate.
FU8	6.3 A/250 V	6.3 A/250 V	No response

7. Energy Saving

Energy Saving

Energy Save

If the Energy Saver button is pressed during machine operation

Previous models:

The job in progress is cancelled and the machine switches to Energy Saver mode immediately.

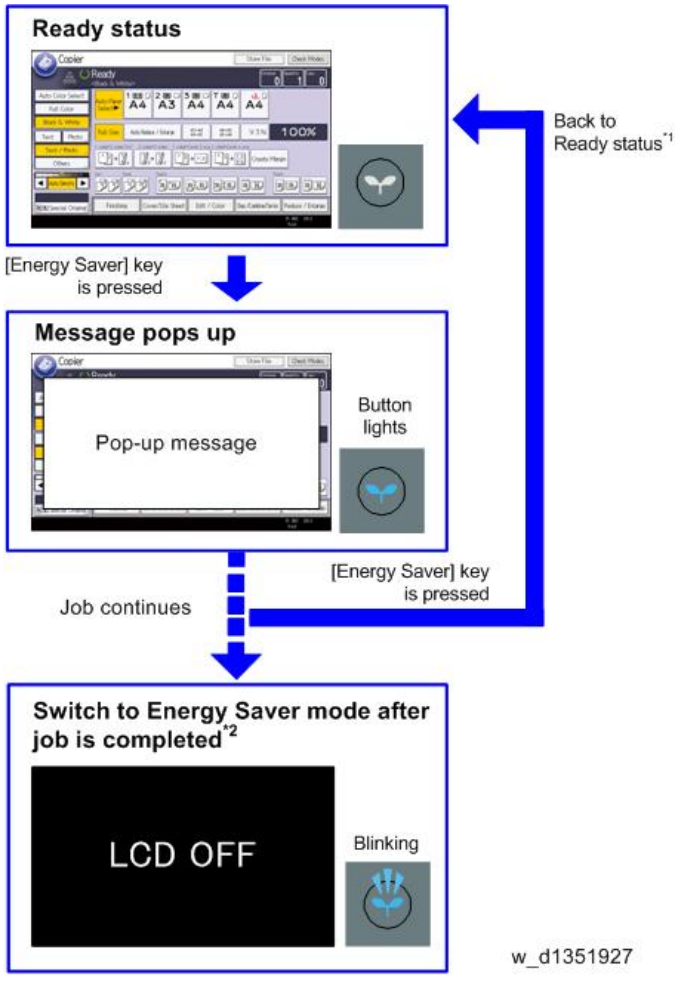
This model:

The following sequence is followed.

1. The [Energy Saver] key lights up and a pop-up message is displayed informing the user that the machine will switch to Energy Saver mode as soon as the current job is completed. The job continues until the end.
2. When the job has been completed, the machine enters Energy Saver mode.

Note

- If the [Energy Saver] key is pressed again during the job, the machine returns to the Ready condition.



*1: The machine return to ready status by doing one of the following,

- Press the [Energy Saver] key
- Open the platen cover
- Set an original in the ADF

*2: Recovering from the Energy Saver mode is the same. Do one of the following.

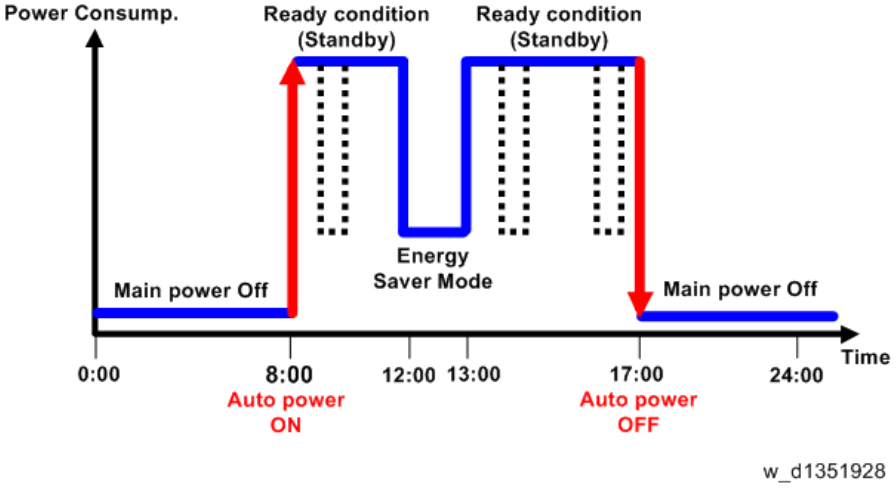
- Press the [Energy Saver] key
- Open the platen cover
- Set an original in the ADF

Energy Saver Timer

- With this timer, the user can choose when the machine will automatically enter and recover from Energy Saver mode, as well as when it will turn on and off. The user does not need to worry about turning the machine on or off in the morning, during lunchtime, or when leaving the office. As a result, the machine contributes to overall energy saving in the user's office environment, while at the same time helping to improve work efficiency.
- The user is able to control how far the machine will power down, i.e. only to Energy Saver mode or all the way off.
- With auto power ON and OFF, the user need not remember to turn the machine on and off every day.
  - Auto power ON:

    Improves work efficiency, as machine warm-up is already completed by the time the user is ready to begin work (the user is not made to wait).
  - Auto power OFF:

    Prevents unnecessary power consumption during after-work hours, saving power.



w_d1351928

- The user can disable the Weekly Timer, so that the machine power is not turned on automatically during extended periods of inactivity (Ex. Summer holiday).
- A password can be set so that the machine can be used during this period if necessary, but only by the select group who know this password.

Note

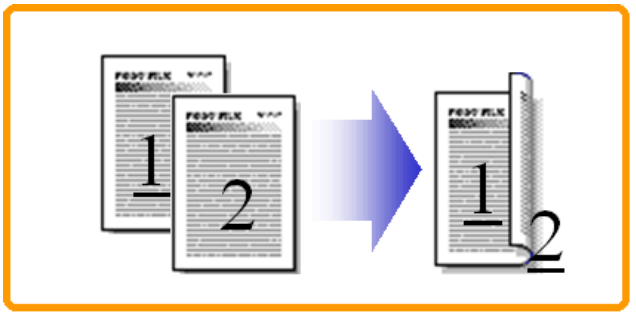
- You can set the energy saver timer setting on "Weekly Timer" in "Timer Settings" menu under "System Settings".

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.

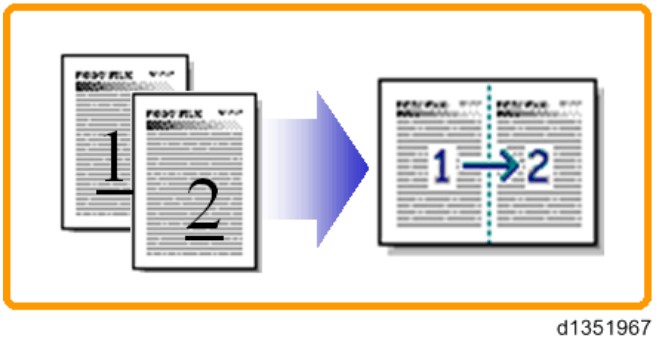
1. Duplex:



d1351966

Reduce paper volume in half!

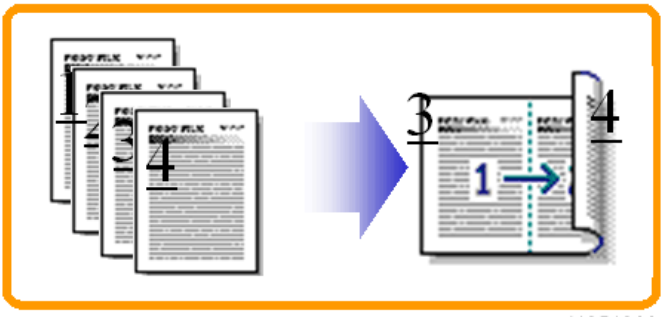
2. Combine mode:



d1351967

Reduce paper volume in half!

3. Duplex + Combine:



d1351968

Using both features together can further reduce paper volume by 3/4!

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.

Paper Savings and Counter

- Total counter: SP 8581-001
- Duplex counter: SP 8411-001
- Single-sided with combine mode: SP 8421-004
- Duplex with combine mode: SP 8421-005

The following table shows paper savings and how the counters increase for some simple examples of single-sided and duplex jobs.

Duplex mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
1	1	1	0	1	0
2	2	1	1	2	1

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
3	3	2	1	3	1
4	4	2	2	4	2
5	5	3	2	5	2
10	10	5	5	10	5
20	20	10	10	20	10

If combine mode is used, the total and duplex counters work in the same way as explained previously. The following table shows paper savings and how the counters increase for some simple examples of duplex/combine jobs.

2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
1	1	1	0	1	1
2	2	1	1	1	1
3	3	2	1	2	2
4	4	2	2	2	2
5	5	3	2	3	2
10	10	5	5	5	5
20	20	10	10	10	10

Duplex + 2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
1	1	1	0	1	1
2	2	1	1	1	1

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
3	3	1	**2**	2	2
4	4	1	**3**	2	2
5	5	2	**3**	3	3
6	6	2	**4**	3	3
7	7	2	**5**	4	4
8	8	2	**6**	4	4
9	9	3	**6**	5	5
10	10	3	**7**	5	5
11	11	3	**8**	6	6
12	12	3	**9**	6	6

MEMO

Model OR-C2
Machine Code:
D182/D183/D184

Appendices

August, 2013
Subject to change

TABLE OF CONTENTS

1. Appendices:Specifications

General Specifications....5
Main Machine....5
Printer....7
Scanner....8
Supported Paper Sizes....11
Paper Feed (North America)....11
Paper Feed (Europe/ Asia)....13
Paper Exit (Mainframe and optional trays)....14
Paper Exit (Finisher SR3140/Booklet Finisher SR3150)....17
Paper Exit (Internal Finisher)....23
Platen/ARDF Original Size Detection....27
Software Accessories....29
Printer Drivers....29
Scanner and LAN Fax drivers....29
Utility Software....30
Optional Equipment....31
ARDF DF3090 (D779)....31
Paper Feed Unit (D579)....31
Paper Feed Unit (D746)....32
LCIT PB3190 (D747)....32
1-Bin Tray (D582)....33
Shift Tray Unit (D583)....34
Bridge Unit (D584)....34
Finisher SR3140 (D687)....35
Booklet Finisher SR3150 (D686)....37
Internal Finisher (D586) and Punch Unit (D587)....40
Smart Operation Panel....41

2. Appendices:Preventive Maintenance Tables

Maintenance Tables....43
Preventive Maintenance Items....43
Mainframe....43
ARDF DF3090 (D779)....45

Paper Feed Unit (D579)....46
Paper Feed Unit (D746)....46
LCIT BP3190 (D747)....46
1 Bin Tray (D582)....47
Internal Finisher (D586)....47
Booklet Finisher SR3150 (D686) / Finisher SR3140 (D687)....47
Others Yield Parts....48

3. Appendices:SP Mode Tables

Main SP Tables-1....49
SP1-XXX (Feed)....49
Main SP Tables-2....65
SP2-XXX (Drum)....65
Main SP Tables-3....82
SP3-XXX (Process)....82
Main SP Tables-4....83
SP4-XXX (Scanner)....83
Main SP Tables-5....121
SP5-XXX (Mode)....121
Main SP Tables-6....208
SP6-XXX (Peripherals)....208
Main SP Tables-7....221
SP7-XXX (Data Log)....221
Main SP Tables-8....239
SP8-XXX (Data Log 2)....239
Keys and abbreviations in Data Log 2....240
Input and Output Check....288
Input Check....288
Output Check....301
Printer Service Mode....307
SP1-XXX (Service Mode)....307
Scanner SP Mode....322
SP1-XXX (System and Others)....322
Test Pattern Printing....328

Test Pattern Printing.....328

1. Appendices:Specifications

General Specifications

Main Machine

Configuration:	Desktop
Copy Process:	Laser Dry electrostatic transfer system
Originals:	Sheet, Book, Solid object
Original Size:	Platen: Max. 297 x 432 mm ARDF: Max. 297 x 1260 mm
Copy Paper Size	Tray 1: A6 SEF to A3/DLT, Custom, Postcard Tray 2: A5 to A3, DLT, Custom Bypass: A6 SEF to A3/DLT, Postcard, Custom, Long
Custom Sizes (W x L)	Tray 1: 100 to 297 mm x 148 to 432 mm Tray 2: 182 to 297 mm x 148 to 432 mm Bypass: 90 to 305 mm x 148 to 1260 mm
Duplexing	A5/HLT to A3/DLT
Paper Weight	Tray 1 and Tray 2: 52 to 157 g/m^2 (14 to 42 lbs.) Bypass: 52 to 157 g/m^2 (14 to 42 lbs.) Duplex: 52 to 105 g/m^2 (14 to 28 lbs.)
Copy Speed	D182: 25 cpm (A4 LEF/Letter LEF) D183: 30 cpm (A4 LEF/Letter LEF) D184: 33 cpm (A4 LEF/Letter LEF)
Resolution	600 dpi
Gradation	Read: 256-level (RGB each color 10 bit input / 8 bit output) Write: 3 or 4-level (2 bit), 2 level (1 bit, w/o HDD) *Print: 600/300/200dpi (1 bit)
1st Copy Print Time	Less than 4.5 second.

Warm-up Time	Less than 10 sec.	
Continuous Copies	1 to 999 Sheets	
Zoom	25% to 400%, in 1% step	
Paper Supply	Tray 1: 500 Sheets Tray 2: 550 Sheets Bypass: 100 Sheets	
Output Capacity	A4, smaller: 500 Sheets face-down B4/LG, larger: 125 Sheets face-down	
Power Source	NA: 120 to 127 V, 60 Hz EU, Asia, China, Korea: 220 to 240V 50/60 Hz Taiwan: 110V 60 Hz	
Power Consumption	Full System (Operating)	Less than 1.6 KW
	Off Sleep	Less than 0.8W
Dimensions (W x D x H)	Standard	No PTU: 587 x 675 x 710 mm (23.1" x 26.5" x 27.9") With PTU: 587 x 673 x 966 mm (23.1" x 26.9" x 38.0")
	Full System	All Options: 1178 x 673 x 1091 mm (46.3" x 26.5" x 42.9")
Weight	Less than 65 kg (143 lbs.) (basic model), With ADF: 75kg (165 lbs)	

Noise Emission (Sound Power Level)	Stand-by (Mainframe only):	40 dB
	Operating (Mainframe only):	D182: 64.8 dB D183: 66.5 dB D184: 67.6 dB
	Operating (Full-System):	TBD

Printer

Printing Speed:	D182: 25 cpm (A4 LEF/Letter LEF) D183: 30 cpm (A4 LEF/Letter LEF) D184: 33 cpm (A4 LEF/Letter LEF)
Printer Languages:	PCL 6/5e PDF Direct Adobe PostScript 3 (optional) IPDS (optional) MediaPrint: JPEG/TIFF (optional)
Resolution and Gradation:	PCL 5e: 300 x 300 dpi 600 x 600 dpi : Fast (1-bit) PCL 6: 600 x 600 dpi : Fast (1-bit) PDF Direct: 300 x 300 dpi/600 x 600 dpi PS3: 300 x 300 dpi/600 x 600 dpi XPS: 600 x 600 dpi : Fast (1-bit) IPDS: 300 x 300 dpi/ 600 x 600 dpi

Resident Fonts:	PCL 6/5e (Standard): 45 Compatible fonts 13 International fonts 6 Bitmap fonts Adobe PostScript 3 (Optional): 136 fonts IPDS (Optional): 108 fonts
Host Interfaces:	USB2.0 Type A and Type B: Standard Ethernet (100 Base-TX/10 Base-T/1000 Base-T): Standard IEEE1284: Optional IEEE802.11a/b/g/n (Wireless LAN): Optional Bluetooth Ver2.0+EDR: Optional
Network Protocols:	TCP/IP (IPv4, IPv6), IPX/SPX
RAM	Maximum Basic model: 512 MB SP/SPF model: 1.5GB

Scanner

Originals:	Sheet, Book, Object
Available Original Size for Scanning:	SEF (10 to 297mm) x LEF (10 to 432mm)
Auto Detectable Size for Originals Set to Book scanner:	A3SEF, B4SEF, A4LEF, A4SEF, B5LEF, B5SEF, A5LEF
Auto Detectable Size for Originals Set to ADF:	A3SEF, B4SEF, A4LEF, A4SEF, B5LEF, B5SEF, A5LEF, A5SEF, B6LEF, B6SEF, 11 x 17SEF, $8\frac{1}{2}$" x 11"LEF, $8\frac{1}{2}$" x 11"SEF

Original Scanning Speed:	Send email/Send to folder/Send email with using network delivery scanner/Send to folder/WSD scanner (Push type)/When using network delivery scanner (original size: A4 LEF, resolution: 200 dpi/300 dpi, scanning simplex), Original scanning speed will be as following: Black & White: 67 sheets / Min. (Original type: Text/Chart, Compress setting (MH): Do so (Compress), ITU-T No.1 Chart) Color: 67 sheets / Min. (Original type: Text/photo, Compress setting (Gray scale / Color): Compress level initial value (JPEG Standard), our company's Chart) Depending on: machine operating conditions, PC use environment, scanning conditions, original content, the scan speed might change.
Gradation:	Black & White: 2 Color/Gray scale: 256
Basic Scanning Resolution:	200 dpi
Compress Format for Binary B&W Image:	MH/MR/MMR/JBIG
Compress Format for Gray Scale / Full Color:	JPEG
Interface:	• Ethernet (1000BASE-T/100BASE-TX/10BASE-T) • Wireless LAN (IEEE802.11a/b/g/n) • USB2.0 Type A • SD Card Slot
Protocol for Network Connection:	TCP/IP
Scanning Resolution for Sending email:	100dpi, 200dpi, 300dpi, 400dpi, 600dpi
Available Protocol for Sending email:	POP, SMTP, IMAP4
Output Format for Sending email*1:	TIFF, JPEG, PDF, Clear Light PDF, PDF/A

Scanning Resolution for Scan to Folder:	100 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi
Available Protocol for Send to Folder:	SMB, FTP, NCP
Output Format for Send to Folder*1:	TIFF, JPEG, PDF, Clear Light PDF, PDF/A
Available Protocol for WSD Scanner Sending:	Web Services on Devices for Scanning
Scan Resolution for Network TWAIN Scanner:	100 to 1200 dpi
Available Protocol for Network TWAIN Scanner:	TCP/IP
Available Operating Systems for Network TWAIN Scanner:	WindowsXP/Server2003/Vista/Server2008/7 (Network TWAIN Scanner does not work with 64 bit operating systems)
Scanning Resolution for Scan to Network (Main Scan x Sub Scan):	100 dpi, 200 dpi, 300 dpi, 400 dpi, 600 dpi
Scan Resolution for when Using WIA Scanner (main Scan x Sub Scan):	100 to 1200dpi
Available Protocol for when Using WIA Scanner:	TCP/IP
Available Operating Systems for WIA Scanner:	Windows Vista (SP1 or later) / 7, Windows Server 2008 /2008 R2 (WIA Scanner does work with 64 bit operating Systems)

*1 Electric certificate can be attached when selecting [PDF], [Clear light PDF], or [PDF/A] as file format. For [PDF] or [Clear light PDF], Security Settings are available.

Supported Paper Sizes

Paper Feed (North America)

BT: By-pass Tray, T1: Tray 1, T2/3/4: Tray 2/3/4, LCT: Large Capacity Tray: 2000-sheet, DU: Duplex Unit

Paper	Size (W x L)	BT	T1	T2/3/4	LCT	DU
A3 W	12" x 18"	M	-	-	-	-
A3 SEF	297 x 420mm	M	S	S	-	M
A4 SEF	210 x 297mm	M	A	A	-	M
A4 LEF	297 x 210mm	M	S	S	S	M
A5 SEF	148 x 210mm	M	M	-	-	M
A5 LEF	210 x 148mm	M	S	A	-	M
A6 SEF	105 x 148mm	M	A	-	-	-
B4 SEF	257 x 364mm	M	S	S	-	M
B5 SEF	182 x 257mm	M	A	A	-	M
B5 LEF	257 x 182mm	M	S	S	-	M
B6 SEF	128 x 182mm	M	M	-	-	-
Ledger	11" x 17"	A	A	A	-	M
Letter SEF	8.5" x 11"	A	A	A	-	M
Letter LEF	11" x 8.5"	A	A	A	M	M
Legal SEF	8.5" x 14"	M	A	A	-	M
Government Legal SEF	8.25" x 14"	M	M	M	-	M
Half Letter SEF	5.5" x 8.5"	A	A	-	-	M
Executive SEF	7.25" x 10.5"	M	M	M	-	M

Paper	Size (W x L)	BT	T1	T2/3/4	LCT	DU
Executive LEF	10.5" x 7.25"	M	A	A	-	M
F SEF	8" x 13"	M	M	M	-	M
Foolscap SEF	8.5" x 13"	M	M	M	-	M
Folio SEF	8.25" x 13"	M	M	M	-	M
	11" x 15"	M	M	M	-	M
	10" x 14"	M	M	M	-	M
	8" x 10"	M	M	M	-	M
8K	267 x 390mm	M	M	M	-	M
16K SEF	195 x 267mm	M	M	M	-	M
16K LEF	267 x 195mm	M	M	M	-	M
Custom		M	M	M	-	-
Com10 Env.	4.125" x 9.5"	M	M	-	-	-
Monarch Env.	3.875" x 7.5"	M	M	-	-	-
C6 Env.	114 x 162mm	M	M	-	-	-
C5 Env.	162 x 229mm	M	M	-	-	-
DL Env.	110 x 220mm	M	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 Feed (Europe/ Asia)

BT: By-pass Tray, T1: Tray 1, T2/3/4: Tray 2/3/4, LCT: Large Capacity Tray: 2000-sheet, DU: Duplex Unit

Paper	Size (W x L)	BT	T1	T2/3/4	LCT	DU
A3 W	12" x 18"	M	-	-	-	-
A3 SEF	297 x 420mm	A	A	A	-	M
A4 SEF	210 x 297mm	A	A	A	-	M
A4 LEF	297 x 210mm	A	A	A	M	M
A5 SEF	148 x 210mm	A	M	-	-	M
A5 LEF	210 x 148mm	A	A	A	-	M
A6 SEF	105 x 148mm	M	M	-	-	-
B4 SEF	257 x 364mm	A	A	A	-	M
B5 SEF	182 x 257mm	A	A	A	-	M
B5 LEF	257 x 182mm	A	A	A	-	M
B6 SEF	128 x 182mm	A	M	-	-	-
Ledger	11" x 17"	M	S	S	-	M
Letter SEF	8.5" x 11"	M	A	A	-	M
Letter LEF	11" x 8.5"	M	S	S	S	M
Legal SEF	8.5" x 14"	M	S	S	-	M
Government Legal SEF	8.25" x 14"	M	M	M	-	M
Half Letter SEF	5.5" x 8.5"	M	S	-	-	M
Executive SEF	7.25" x 10.5"	M	M	M	-	M
Executive LEF	10.5" x 7.25"	M	S	S	-	M
F SEF	8" x 13"	M	M	M	-	M

Paper	Size (W x L)	BT	T1	T2/3/4	LCT	DU
Foolscap SEF	8.5" x 13"	M	M	M	-	M
Folio SEF	8.25" x 13"	M	M	M	-	M
	11" x 15"	M	M	M	-	M
	10" x 14"	M	M	M	-	M
	8" x 10"	M	M	M	-	M
8K	267 x 390mm	M	M	M	-	M
16K SEF	195 x 267mm	M	M	M	-	M
16K LEF	267 x 195mm	M	M	M	-	M
Custom		M	M	M	-	-
Com10 Env.	4.125" x 9.5"	M	M	-	-	-
Monarch Env.	3.875" x 7.5"	M	M	-	-	-
C6 Env.	114 x 162mm	M	M	-	-	-
C5 Env.	162 x 229mm	M	M	-	-	-
DL Env.	110 x 220mm	M	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 (Mainframe and optional trays)

Main: Mainframe/ 1-bin: 1-bin tray/ Shift: Shift Tray

Paper	Size (W x L)	Main	1-bin	Shift
A3 W	12" x 18"	Y	-	Y
A3 SEF	297 x 420 mm	Y	Y	Y
A4 SEF	210 x 297 mm	Y	Y	Y
A4 LEF	297 x 210 mm	Y	Y	Y
A5 SEF	148 x 210 mm	Y	Y	Y
A5 LEF	210 x 148 mm	Y	Y	Y
A6 SEF	105 x 148 mm	Y	-	Y
B4 SEF	257 x 364 mm	Y	Y	Y
B5 SEF	182 x 257 mm	Y	Y	Y
B5 LEF	257 x 182 mm	Y	Y	Y
B6 SEF	128 x 182 mm	Y	-	Y
Ledger	11" x 17"	Y	Y	Y
Letter SEF	8.5" x 11"	Y	Y	Y
Letter LEF	11" x 8.5"	Y	Y	Y
Legal SEF	8.5" x 14"	Y	Y	Y
Government Legal SEF	8.25" x 14"	Y	Y	Y
Half Letter SEF	5.5" x 8.5"	Y	Y	Y
Executive SEF	7.25" x 10.5"	Y	Y	Y
Executive LEF	10.5" x 7.25"	Y	Y	Y
F SEF	8" x 13"	Y	Y	Y
Foolscap SEF	8.5" x 13"	Y	Y	Y

Paper	Size (W x L)	Main	1-bin	Shift
Folio SEF	8.25" x 13"	Y	Y	Y
	11" x 15"	Y	Y	Y
	10" x 14"	Y	Y	Y
	8" x 10"	Y	Y	Y
8K	267 x 390 mm	Y	-	Y
16K SEF	195 x 267 mm	Y	-	Y
16K LEF	267 x 195 mm	Y	-	Y
Custom		Y	Y	Y
Com10 Env.	4.125" x 9.5"	Y	-	Y
Monarch Env.	3.875" x 7.5"	Y	-	Y
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
-	Not supported

Paper Exit (Finisher SR3140/Booklet Finisher SR3150)

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/ Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU 2 SC 4 Holes	NA 2 Holes	NA3 EU4 Holes
A3 SEF (297 x 420)	A	A	A	A	A*5	A	30	A	15	A	A	A
A4 SEF (210 x 297)	A	A	A	A	A*5	A	50	A	15	A	B	-
A4 LEF (297 x 210)	A	A	A	-	-	A	50	-	-	A	A	A
A5 SEF (148 x 210)	A	B	B	-	-	-	-	-	-	A	A	-
A5 LEF (210 x 148)	A	A	A	-	-	-	-	-	-	A	B	-
A6 SEF (105 x 148)	A	B	-	-	-	-	-	-	-	-	-	-
B4 SEF (257 x 364)	A	A	A	A	A*5	A	30	A	15	A	A	A
B5 SEF (182 x 257)	A	B	B	A	A*5	A	50	A	15	A	A	-

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/ Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU 2 SC 4 Holes	NA 2 Holes	NA3 EU4 Holes
B5 LEF (257 x 182)	A	A	A	-	-	A	50	-	-	A	A	A
B6 SEF (128 x 182)	A	B	-	-	-	-	-	-	-	-	-	-
DLT SEF (11" x 17")	A	A	A	A	A*5	A	30	A	15	A	A	A
Legal SEF ($8^1/_2$" x 14")	A	A	A	A	A*5	A	30	A	15	A	A	-
Foolscap SEF ($8^1/_2$" x 13")	A	A	A	-	-	A	30	-	-	A	A	-
LT SEF ($8^1/_2$" x 11")	A	A	A	A	A*5	A	50	A	15	A	A	-
LT LEF (11" x $8^1/_2$")	A	A	A	-	-	A	50	-	-	A	A	A
Gov. LG SEF ($8^1/_4$" x 14")	A	A	A	-	-	A	30	-	-	A	A	-
Folio SEF ($8^1/_4$" x 13")	A	A	A	-	-	A	30	-	-	A	A	-
F/GL SEF (8" x 13")	A	A	A	-	-	A	30	-	-	A	A	-

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/ Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
GLT SEF (8" x $10^1/_2$")	-	A	A	-	-	A	50	-	-	A	A	-
GLT LEF ($10^1/_2$" x 8")	-	A	A	-	-	A	50	-	-	A	A	A
Eng Quatro SEF (8" x 10")	A	A	A	-	-	A	50	-	-	A	A	-
Eng Quatro LEF (10" x 8")	-	A	A	-	-	A	50	-	-	A	A	-
Executive SEF ($7^1/_4$" x $10^1/_2$")	A	A	A	-	-	A	50	-	-	A	A	-
Executive LEF ($10^1/_2$" x $7^1/_4$")	A	A	A	-	-	A	50	-	-	A	A	A
HLT SEF ($5^1/_2$" x $8^1/_2$")	A	B	B	-	-	-	-	-	-	A	A	-
HLT LEF ($8^1/_2$" x $5^1/_2$")	-	-	-	-	-	-	-	-	-	-	-	-
SRA3 SEF (420 x 320)	-	-	-	-	-	-	-	-	-	-	-	-

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/ Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
SRA4 SEF	A	A	A	-	-	-	-	-	-	-	-	-
SRA4 LEF	-	-	-	-	-	-	-	-	-	-	-	-
Line slider 1 SEF	-	-	-	-	-	-	-	-	-	-	-	-
Line slider 1 LEF	-	-	-	-	-	-	-	-	-	-	-	-
Line slider 2 SEF	-	-	-	-	-	-	-	-	-	-	-	-
Line slider 2 LEF	-	-	-	-	-	-	-	-	-	-	-	-
Com10 SEF (104.8 x 241.3)	-	-	-	-	-	-	-	-	-	-	-	-
Com10 LEF (241.3 x 104.8)	-	-	-	-	-	-	-	-	-	-	-	-
Monarch SEF (98.4 x 190.5)	-	-	-	-	-	-	-	-	-	-	-	-
Monarch LEF (190.5 x 98.4)	-	-	-	-	-	-	-	-	-	-	-	-
C5 SEF (162 x 229)	-	-	-	-	-	-	-	-	-	-	-	-

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/ Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU 2 SC 4 Holes	NA 2 Holes	NA3 EU4 Holes
C5 LEF (229 x 162)	-	-	-	-	-	-	-	-	-	-	-	-
C6 SEF (114 x 162)	-	-	-	-	-	-	-	-	-	-	-	-
C6LEF (162 x 114)	-	-	-	-	-	-	-	-	-	-	-	-
DL Env SEF (110 x 220)	-	-	-	-	-	-	-	-	-	-	-	-
DL Env LEF (220 x 110)	-	-	-	-	-	-	-	-	-	-	-	-
8K SEF (267 x 390)	A	A	A	-	-	A	30	-	-	A	A	A
16K SEF (195 x 267)	A	A	A	-	-	A	50	-	-	A	A	-
16K LEF (267 x 195)	A	A	A	-	-	A	50	-	-	A	A	A
13″ x 19.2″ SEF	-	-	-	-	-	-	-	-	-	-	-	-

Size (W x L) [mm]	Paper exit				Half fold	Staple				Punch		
	Proof	Shift	Shifting	Saddle stitch	Middle fold	Single/ Double stitch	Staple amount	Saddle stitch	Saddle stitch amount	EU2 SC4 Holes	NA2 Holes	NA3 EU4 Holes
13″ x 19″ SEF	-	-	-	-	-	-	-	-	-	-	-	-
13″ x 18″ SEF	-	-	-	-	-	-	-	-	-	-	-	-
12.6″ x 19.2 SEF	-	-	-	-	-	-	-	-	-	-	-	-
12.6″ x 18.5″ SEF	-	-	-	-	-	-	-	-	-	-	-	-
12" x 18" SEF	A	A	A	-	-	-	-	-	-	-	-	-
12" x 18" LEF	-	-	-	-	-	-	-	-	-	-	-	-
11" x 15" SEF	A	A	A	-	-	A	30	-	-	A	A	A
11″ x 14″ SEF	A	A	A	-	-	A	30	-	-	A	A	A
10" x 15" SEF	A	A	A	-	-	A	30	-	-	A	A	-
10" x 14" SEF	A	A	A	-	-	A	50	-	-	-	A	NA3: A EU4:-

Remarks:

A	Paper through, paper exit available.

B	Will not guarantee, but paper can go through or exit.
-	Not available.

*1	Out of the true up precision guarantee.
*2	Multi folding can be done up to 5 sheets.
*3	Envelopes can only go through each at a time.
*4	Except envelops with triangle flap.
*5	Only one sheet can be half folded with saddle stitch mode. Therefore, multi sheets/sets must be paginated and exit each at a time.

Paper Exit (Internal Finisher)

MF: Main Frame, Clr: Clear, Shf: Shift, Stp: Staple,

Paper	Size (W x L)	MF	Internal finisher(Shift/Staple)		
			Clr	Shf	Stp
A3 W	12" x 18"	Y	Y	-	-
A3 SEF	297 x 420 mm	Y	Y	Y	30
A4 SEF	210 x 297 mm	Y	Y	Y	50
A4 LEF	297 x 210 mm	Y	Y	Y	50
A5 SEF	148 x 210 mm	Y	Y	Y	-
A5 LEF	210 x 148 mm	Y	Y	Y	-
A6 SEF	105 x 148 mm	Y	Y	-	-
B4 SEF	257 x 364 mm	Y	Y	Y	30
B5 SEF	182 x 257 mm	Y	Y	Y	50
B5 LEF	257 x 182 mm	Y	Y	Y	50
B6 SEF	128 x 182 mm	Y	Y	-	-

Paper	Size (W x L)	MF	Internal finisher(Shift/Staple)		
			Clr	Shf	Stp
Ledger	11" x 17"	Y	Y	Y	30
Letter SEF	8.5" x 11"	Y	Y	Y	50
Letter LEF	11" x 8.5"	Y	Y	Y	50
Legal SEF	8.5" x 14"	Y	Y	Y	30
Government Legal SEF	8.25" x 14"	Y	Y	Y	30
Half Letter SEF	5.5" x 8.5"	Y	Y	-	-
Executive SEF	7.25" x 10.5"	Y	Y	Y	50
Executive LEF	10.5" x 7.25"	Y	Y	Y	50
F SEF	8" x 13"	Y	Y	-	-
Foolscap SEF	8.5" x 13"	Y	Y	Y	-
Folio SEF	8.25" x 13"	Y	Y	Y	30
	11" x 15"	Y	Y	Y	-
	10" x 14"	Y	Y	Y	-
	8" x 10"	Y	Y	Y	-
8K	267 x 390 mm	Y	Y	Y	30
16K SEF	195 x 267 mm	Y	Y	Y	30
16K LEF	267 x 195 mm	Y	Y	Y	30
Com10 Env.	4.125" x 9.5"	Y	Y	-	-
Monarch Env.	3.875" x 7.5"	Y	Y	-	-
C6 Env.	114 x 162 mm	Y	Y	-	-
C5 Env.	162 x 229 mm	Y	Y	-	-
DL Env.	110 x 220 mm	Y	Y	-	-

Paper	Size (W x L)	MF	Internal finisher(Shift/Staple)		
			Clr	Shf	Stp
Custom		Y	Width:90.0 to 330.2mm (3.55 to 12.00inch) Length:140.0 to 1260.0mm (5.83 to 49.60inch)	Width:148.0 to 297.0mm (5.83 to 11.69inch) Length:140.0 to 431.8mm (5.52 to 17.00inch)	-

MF: Main Frame, E2P: Europe 2 Holes Punch, N2P: North America 2 Holes Punch, N3P: North America 3 Holes Punch, E4P: Europe 4 Holes Punch, S4P: North Europe 4 Holes Punch

Paper	Size (W x L)	MF	Internal finisher(Punch)				
			E2P	N2P	N3P	E4P	S4P
A3 W	12" x 18"	Y	-	-	-	-	-
A3 SEF	297 x 420 mm	Y	Y	Y	Y	Y	Y
A4 SEF	210 x 297 mm	Y	Y	Y	-	-	Y
A4 LEF	297 x 210 mm	Y	Y	Y	Y	Y	Y
A5 SEF	148 x 210 mm	Y	-	-	-	-	-
A5 LEF	210 x 148 mm	Y	-	-	-	-	-
A6 SEF	105 x 148 mm	Y	-	-	-	-	-
B4 SEF	257 x 364 mm	Y	Y	-	-	-	Y
B5 SEF	182 x 257 mm	Y	Y	-	-	-	Y
B5 LEF	257 x 182 mm	Y	Y	-	-	-	Y
B6 SEF	128 x 182 mm	Y	-	-	-	-	-
Ledger	11" x 17"	Y	Y	Y	Y	Y	Y
Letter SEF	8.5" x 11"	Y	Y	Y	-	-	Y
Letter LEF	11" x 8.5"	Y	Y	Y	Y	Y	Y

Paper	Size (W x L)	MF	Internal finisher(Punch)				
			E2P	N2P	N3P	E4P	S4P
Legal SEF	8.5" x 14"	Y	Y	Y	-	-	Y
Government Legal SEF	8.25" x 14"	Y	-	-	-	-	-
Half Letter SEF	5.5" x 8.5"	Y	-	-	-	-	-
Executive SEF	7.25" x 10.5"	Y	Y	Y	-	-	Y
Executive LEF	10.5" x 7.25"	Y	-	-	-	-	-
F SEF	8" x 13"	Y	-	-	-	-	-
Foolscap SEF	8.5" x 13"	Y	Y	Y	-	-	Y
Folio SEF	8.25" x 13"	Y	-	-	-	-	-
	11" x 15"	Y	-	-	-	-	-
	10" x 14"	Y	-	-	-	-	-
	8" x 10"	Y	-	-	-	-	-
8K	267 x 390 mm	Y	Y	-	-	-	-
16K SEF	195 x 267 mm	Y	Y	-	-	-	-
16K LEF	267 x 195 mm	Y	Y	-	-	-	-
Com10 Env.	4.125" x 9.5"	Y	-	-	-	-	-
Monarch Env.	3.875" x 7.5"	Y	-	-	-	-	-
C6 Env.	114 x 162 mm	Y	-	-	-	-	-
C5 Env.	162 x 229 mm	Y	-	-	-	-	-
DL Env.	110 x 220 mm	Y	-	-	-	-	-
Custom		Y	-	-	-	-	-

Remarks:

Y	Supported

30	Output up to 30 sheets
50	Output up to 50 sheets
-	Not supported

Platen/ARDF Original Size Detection

Size (W x L) [mm]	NA		EU/Asia/Oceania		China	
	Platen	ARDF	Platen	ARDF	Platen	ARDF
A3 SEF (297 x 420)	-	Y	Y	Y	Y*1	Y
B4 SEF (257 x 364)	-	-	Y	Y	Y*1	Y
A4 SEF (210 x 297)	Y*1	Y	Y*1	Y	Y*1	Y
A4 LEF (297 x 210)	Y*1	Y	Y*1	Y	Y*1	Y
B5 SEF (182 x 257)	-	-	-	Y	Y*1	Y
B5 LEF (257 x 182)	-	-	Y	Y	Y*1	Y
A5 SEF (148 x 210)	-	-	Y*3	Y	Y*3	Y
A5 LEF (210 x 148)	-	-	Y*3	Y	Y*3	Y
B6 SEF (128 x 182)	-	-	Y	Y	-	-
B6 LEF (182 x 128)	-	-	Y	Y	-	-
DLT SEF (11" x 17")	Y	Y*2	-	Y*2	-	Y*2
LG SEF ($8^1/_2$" x 14")	Y	Y*2	-	-	-	-
LT SEF ($8^1/_2$" x 11")	Y*1	Y*2	Y*1	Y*2	-	Y*2
LT LEF (11" x $8^1/_2$")	Y*1	Y*2	Y*1	Y*2	-	Y*2
HLT SEF ($5^1/_2$" x $8^1/_2$")	Y*3	Y	-	-	-	-
HLT LEF ($8^1/_2$" x $5^1/_2$")	Y*3	Y	-	-	-	-
F SEF (8" x 13")	-	-	Y*4	Y*4	-	Y*4

Foolscap SEF ($8^1/_2$" x 13")	-	Y*2	Y*4	Y*4	-	Y*4
Folio SEF ($8^1/_4$" x 13")	-	-	Y*4	Y*4	-	Y*4
Folio SEF (11" x 15")	-	Y*2	-	-	-	-
Folio SEF (10" x 14")	-	Y	-	-	-	-
Folio SEF (8" x 10")	-	Y*2	-	-	-	-
US EXE SEF ($7^1/_4$" x $10^1/_2$")	-	Y	-	-	-	-
US EXE LEF ($10^1/_2$ x $7^1/_4$")	-	Y*2	-	-	-	-
8K SEF (267 x 390)	-	-	-	Y*2	Y*1	Y*2
16K SEF (195 x 267)	-	-	-	Y*2	Y*1	Y*2
16K LEF (267 x 195)	-	-	-	Y*2	Y*1	Y*2

*1: The machine can detect the paper size depending on the setting of SP4-305-001.

*2: The machine can detect the paper size depending on the setting of SP6-016-001.

*3: The machine can detect the paper size depending on the setting of SP4-303-001.

*4: The machine can detect the paper size depending on the setting of SP5-126-001.

*5: The machine can detect the paper size when the optional ARDF is installed.

Remarks:

Y	Supported
-	Not supported.

Software Accessories

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer allows you to select which components to install.

Printer Drivers

Printer Language	Windows XP, Server 2003, Server 2008, Vista, 7	MacOSX10.2 or later
PCL5c / PCL6	Yes	No
PS3	Yes	Yes
RPCS	No	No

Note

- The PCL5c/6 and PS3 drivers are provided on printer/scanner CD-ROM.
- The PS3 drivers are all genuine Adobe PS drivers, except for Windows XP/Server 2003/Server 2008/Vista/7. A PPD file for each operating system is provided with the driver.
- The PPD installer for Macintosh supports Mac OS X 10.2 or later versions.

Scanner and LAN Fax drivers

Printer Language	Windows XP, Server 2003, Server 2008, Vista, 7	MacOSX10.2 or later
Network TWAIN	Yes	No
LAN-FAX	Yes	No

Note

- The Network TWAIN and LAN Fax drivers are provided on the printer and scanner drivers CD-ROM.
- This software lets you fax documents directly form your PC. Address Book Editor and Cover Sheet Editor are to be installed as well. (These require the optional fax unit.)

Utility Software

Software	Description
Font Manager (XP/Vista)	A font management utility with screen fonts for the printer This is provided on the printer scanner CD-ROM
Smart Device Monitor for Admin (XP/ Server 2003/Server 2008/Vista/7)	A printer management utility for network administrators. NIB setup utilities are also available. This is provided on the web.
DeskTopBinder – SmartDeviceMonitor for Client (XP/Server 2003/Server 2008/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 web.
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 web.
DeskTopBinder Lite (XP/Server 2003/Server 2008/ Vista/7)	DeskTopBinder Lite itself can be used as personal document management software and can manage both image data converted from paper documents and application files saved in each client's PC. This is provided on the web.

Optional Equipment

ARDF DF3090 (D779)

Mode:	Batch mode, SADF mode, Mixed Sizes mode, Original Orientation mode, and Custom Size originals mode
Original Size:	EU/AA • One-sided originals: A3 SEF-B6 JIS SEF/LEF, 11 x 17 SEF-8 1/2 x 11 SEF/LEF • Two-sided originals: A3 SEF-A5 SEF/LEF, 11 x 17 SEF-8 1/2 x 11 SEF/LEF NA • One-sided originals: 11 x 17 SEF-5 1/2 x 8 1/2 SEF/LEF, A3 SEF-A4 SEF/LEF • Two-sided originals: 11 x 17 SEF-5 1/2 x 8 1/2 SEF/LEF, A3 SEF-A4 SEF/LEF
Original weight:	• One-sided originals: 40-128 g/m2 (11-34 lb. Bond) • Two-sided originals: 52.3-128 g/m2 (14-34 lb. Bond)
Number of originals to be set (81 g/m2, 20 lb. Bond):	100 sheets
Maximum power consumption:	42 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	565 x 500 x 125 mm (22.3 x 19.7 x 5.0 inches)
Weight:	Approx. 9 kg (19.9 lb.)

Paper Feed Unit (D579)

Paper Size:	A5 to A3, $7^1/_4$" x $10^1/_2$" LEF to 11" x 17"
Paper Weight:	52 – 157 g/m^2, 14 – 42 lbs.
Tray Capacity:	550 sheets (80 g/m^2, 20 lbs.) x 1 tray
Paper Feed System:	FRR
Paper Height Detection:	5 steps (100%, 70%, 30%, 10%, Empty)

Power Source:	• 24 Vdc and 5Vdc (from the copier/printer): • 120 Vac (120 V version) from the copier/printer when the optional tray heater is installed • 220 – 240 Vac (230 V version) from the copier/printer when the optional tray heater is installed
Power Consumption:	Max: 37 W Average: 22W
Weight:	15 kg (33 lbs.)
Dimensions (W x D x H):	580 x 629 x 120 mm (22.8" x 24.8" x 4.7")

Paper Feed Unit (D746)

Paper Size:	A5 to A3, $7^1/_4$" x $10^1/_2$" LEF to 11" x 17"
Paper Weight:	52 – 157 g/m^2, 14 – 42 lbs.
Tray Capacity:	550 sheets (80 g/m^2, 20 lbs.) x 1 tray
Paper Feed System:	FRR
Paper Height Detection:	5 steps (100%, 70%, 30%, 10%, Empty)
Power Source:	• 24 Vdc and 5Vdc (from the copier/printer): • 120 Vac (120 V version) from the copier/printer when the optional tray heater is installed • 220 – 240 Vac (230 V version) from the copier/printer when the optional tray heater is installed
Power Consumption:	Max: 60 W Average: 35 W
Weight:	26 kg (58 lbs.)
Dimensions (W x D x H):	580 x 628 x 260 mm (22.8" x 24.8" x 10.3")

LCIT PB3190 (D747)

Paper Size:	A4 LEF/LT LEF

Paper Weight:	52 g/m^2 to 157 g/m^2, 14lbs. to 42lbs.
Tray Capacity:	2,000 sheets (80 g/m^2, 20lbs.)
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) • 120 Vac (120 V version) from the copier/printer when the optional tray heater is installed • 220 – 240 Vac (230 V version) from the copier/printer when the optional tray heater is installed
Power Consumption:	55 W (Max.)/35 W (Ave.)
Weight:	26 kg (57 lbs.)
Dimensions (W x D x H):	580 x 628 x 260 mm (22.8" x 24.8" x 10.3")

1-Bin Tray (D582)

Paper Size:	A5 LEF to A3, HLT to DLT
Paper Weight:	60 g/m^2 to 105 g/m^2 (16 lbs. to 28 lbs.)
Tray Capacity:	100 sheets (80 g/m^2, 20 lbs.): A4 or smaller 50 sheets (80 g/m^2, 20 lbs.): B4 or larger
Power Source:	DC 5 V (from copier)
Power Consumption:	1 W
Weight:	2 kg (4.4 lbs.)
Dimensions (W x D x H):	502 x 417 x 142 mm (19.8" x 16.4" x 5.6")

Shift Tray Unit (D583)

Paper Size:	Standard Size: A6 LEF to A3, HLT LEF to DLT Non-standard Size: Width: 90 to 305 mm, Length: 148 to 600 mm
Paper Weight:	52 to 157 g/m^2 (14 to 42 lbs.)
Tray Capacity:	125 sheets (80 g/m^2, 20 lbs.): B4 or larger 250 sheets (80 g/m^2, 20 lbs.): A4 or smaller
Power Source:	DC 5 V, 24 V (from copier)
Power Consumption:	Max: 4.4 W Average: 3.9 W
Weight:	2 kg (4.4 lbs.)
Dimensions (W x D x H):	423 x 467 x 113 mm (16.7" x 18.4" x 4.4")(without basement) 423 x 469 x 122 mm (16.7" x 18.5" x 4.8") (with basement)

Bridge Unit (D584)

Paper Size:	Standard sizes: A6 LEF to A3, HLT to DLT Non-standard sizes: Width: 90 to 305 mm, Length: 148 to 600 mm
Paper Weight:	52 g/m^2 to 157 g/m^2 (14 lbs. to 42 lbs.)
Tray Capacity:	125 sheets (80 g/m^2, 20 lbs.): B4 or larger 250 sheets (80 g/m^2, 20 lbs.): A4 or smaller 10 sheets: Envelopes
Power Source:	DC 24 V, 5 V (form copier)
Dimensions (W x D x H):	420 x 513 x 145 mm (16.5" x 20.2" x 5.7")
Weight	4.0 kg (8.8 lbs.)

Finisher SR3140 (D687)

Paper size for the finisher upper tray:	A3 SEF B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 SEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA4 SEF, custom size
Paper weight for the finisher upper tray:	52–169 g/m^2 (14 lb. Bond–90 lb. Index)
Stack capacity for the finisher upper tray (80 g/m^2, 20 lb. Bond):	250 sheets: A4, 81/2 x 11 or smaller 50 sheets: B4 JIS, 81/2 x 14 or larger
Paper size for the finisher shift tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS LEF, A5 LEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 11 x 14 SEF, 10 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 SEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 1/2 SEF/LEF, 8 x 10 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA4 SEF, custom size
Paper weight for the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb.Cover)
Paper sizes that can be shifted when delivered to the finisher shift tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS LEF, A5 LEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 11 x 14 SEF, 10 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 SEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 1/2 SEF/LEF, 8 x 10 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA4 SEF, custom size
Paper weight that can be shifted when delivered to the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb.Cover)
Stack capacity for the finisher shift tray (80 g/m^2, 20 lb. Bond):	1,000 sheets: A4, 8 1/2 x 11 or smaller 500 sheets: B4 JIS, 8 1/2 x 14 or larger

Staple paper size:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, 11 x 17 SEF, 11 x 15 SEF, 11 x 14 SEF, 10 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8 x 13 SEF, 8 x 10 1/2 SEF/LEF, 8 1/2 x 13 SEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 10 SEF/LEF, 8K SEF, 16K SEF/LEF, custom size
Staple paper weight:	52–105 g/m^2 (14–28 lb. Bond)
Staple capacity (80 g/m^2, 20 lb. Bond):	• Without Mixed Size: **30 sheets:** B4 JIS, 8 1/2 x 14 or larger **50 sheets:** A4, 8 1/2 x 11 or smaller • With Mixed Size: **22 sheets:** A3 SEF/A4 LEF, B4 JIS SEF/B5 JIS LEF, 11 x 17 SEF/8 1/2 x 11LEF
Stack capacity after stapling (80 g/m^2, 20 lb. Bond):	• 2–9 sheets: 100 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11 LEF) • 10–50 sheets: 100–20 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11LEF) • 2–9 sheets: 50 sets: (A4 SEF, B5 JIS SEF, 8 1/2 x 11SEF) • 10–50 sheets: 50–10 sets (A4 SEF, B5 JIS SEF, 8 1/2 x 11SEF) • 2–9 sheets: 50 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF) • 10–30 sheets: 50–10 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF)
Staple position:	3 positions (Top, Bottom, 2 Staples)
Power consumption:	35.4 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	646 x 620 x 960 mm (25.5 x 24.5 x 37.8 inches)
Weight:	• Approx. 27 kg (59.6 lb.) (without punch unit) • Approx. 31 kg (68.4 lb.) (with punch unit)

Booklet Finisher SR3150 (D686)

Paper size for the finisher upper tray:	A3 SEF B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, A5 SEF/LEF, B6 JIS SEF, A6 SEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 SEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 SEF, 5 1/2 x 8 1/2 SEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA4 SEF, custom size
Paper weight for the finisher upper tray:	52–169 g/m^2 (14 lb. Bond–90 lb. Index)
Stack capacity for the finisher upper tray (80 g/m^2, 20 lb. Bond):	250 sheets: A4, 81/2 x 11 or smaller 50 sheets: B4 JIS, 81/2 x 14 or larger
Paper size for the finisher shift tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS LEF, A5 LEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 11 x 14 SEF, 10 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 SEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 1/2 SEF/LEF, 8 x 10 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA4 SEF, custom size
Paper weight for the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb.Cover)
Paper sizes that can be shifted when delivered to the finisher shift tray:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS LEF, A5 LEF, 12 x 18 SEF, 11 x 17 SEF, 11 x 15 SEF, 11 x 14 SEF, 10 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 13 SEF, 8 1/2 x 11 SEF/LEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 13 SEF, 8 x 10 1/2 SEF/LEF, 8 x 10 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8K SEF, 16K SEF/LEF, SRA4 SEF, custom size
Paper weight that can be shifted when delivered to the finisher shift tray:	52–300 g/m^2 (14 lb. Bond–110 lb.Cover)
Stack capacity for the finisher shift tray (80 g/m^2, 20 lb. Bond):	1,000 sheets: A4, 8 1/2 x 11 or smaller 500 sheets: B4 JIS, 8 1/2 x 14 or larger

Staple paper size:	A3 SEF, B4 JIS SEF, A4 SEF/LEF, B5 JIS SEF/LEF, 11 x 17 SEF, 11 x 15 SEF, 11 x 14 SEF, 10 x 15 SEF, 10 x 14 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF/LEF, 7 1/4 x 10 1/2 SEF/LEF, 8 x 13 SEF, 8 x 10 1/2 SEF/LEF, 8 1/2 x 13 SEF, 8 1/4 x 14 SEF, 8 1/4 x 13 SEF, 8 x 10 SEF/LEF, 8K SEF, 16K SEF/LEF, custom size
Staple paper weight:	52–105 g/m^2 (14–28 lb. Bond)
Staple capacity (80 g/m^2, 20 lb. Bond):	• Without Mixed Size: **30 sheets:** B4 JIS, 8 1/2 x 14 or larger **50 sheets:** A4, 8 1/2 x 11 or smaller • With Mixed Size: **22 sheets:** A3 SEF/A4 LEF, B4 JIS SEF/B5 JIS LEF, 11 x 17 SEF/8 1/2 x 11LEF
Stack capacity after stapling (80 g/m^2, 20 lb. Bond):	• 2–9 sheets: 100 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11 LEF) • 10–50 sheets: 100–20 sets (A4 LEF, B5 JIS LEF, 8 1/2 x 11LEF) • 2–9 sheets: 50 sets: (A4 SEF, B5 JIS SEF, 8 1/2 x 11SEF) • 10–50 sheets: 50–10 sets (A4 SEF, B5 JIS SEF, 8 1/2 x 11SEF) • 2–9 sheets: 50 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF) • 10–30 sheets: 50–10 sets (A3 SEF, B4 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF)
Staple position:	3 positions (Top, Bottom, 2 Staples)
Saddle stitch paper size:	A3 SEF, A4 SEF, B4 JIS SEF, B5 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF, 12 x 18 SEF
Saddle stitch paper weight:	52–105 g/m^2 (14–28 lb. Bond)
Saddle stitch capacity (80 g/m^2, 20 lb. Bond):	1 set (15 sheets)
Stack capacity after saddle stitching (80 g/m^2, 20 lb. Bond):	2–5 sheets: approx. 20 sets 6–10 sheets: approx. 10 sets 11–15 sheets: approx. 7 sets
Saddle stitch position:	Center 2 positions

Types of folds:	Half Fold
Paper size:	• With Half Fold: A3 SEF, A4 SEF, B4 JIS SEF, B5 JIS SEF, 11 x 17 SEF, 8 1/2 x 14 SEF, 8 1/2 x 11 SEF, 12 x 18 SEF
Paper weight:	• With Half Fold: 52–105 g/m2 (14–28 lb.Bond)
Power consumption:	35.4 W or less (Power is supplied from the main unit.)
Dimensions (W x D x H):	646 x 620 x 960 mm (25.5 x 24.5 x 37.8 inches)
Weight:	• Approx. 40 kg (88.2 lb.) (without punch unit) • Approx. 44 kg (97.1 lb.) (with punch unit)

Internal Finisher (D586) and Punch Unit (D587)

Print Paper Size:	**No punch mode**: Standard Size: A3/11" x 17" to B6/5.5" x 8.5" (SEF) Non Standard Size: Width 90 to 305.0 mm (3.55" to 12") Length 148 to 1260 mm (5.83" to 49.6") **Punch mode**: **2 holes (Europe):** A3, A4, B4, B5 or 11" x 17", 8.5" x 14" (SEF), 8.5" x 13" (SEF), 8.5" x 11", 7.25" x 10.5"(SEF) **2 holes (North):** A3, A4, 11" x 17", 8.5" x 14" (SEF), 8.5" x 13" (SEF), 8.5" x 11", 7.25" x 10.5"(SEF) **3 holes (North):** A3, A4 (LEF) or 11" x 17", 8.5" x 11" (LEF) **4 holes (Europe)**: A3, A4 (LEF) or 11" x 17", 8.5" x 11" (LEF) **4 holes (Scandinavia)**: A3, A4, B4, B5 or 11" x 17", 8.5" x 14" (SEF), 8.5" x 13" (SEF), 8.5" x 11", 7.25" x 10.5"(SEF) **Staple mode**: A3/11" x 17" to B5/8.5" x 11"
Paper Weight:	No punch mode: 52 to 256 g/m^2 (14 to 64 lbs.) Punch mode: 52 to 105 g/m^2 (14 to 28 lbs.) Staple mode: 52 to 105 g/m^2 (14 to 28 lbs.) Label/Thick paper/OHP cannot be stapled
Tray Capacity:	500 sheets: A4, 8.5" x 11" or less 250 sheets: B4, 8.5" x 14" or more

Staple capacity:	50 sheets: A4, 8.5" x 11" or smaller 30 sheets: B4, 8.5" x 14" or larger	
Staple position:	3 positions 1-staple: 2 positions (Top/ Bottom) 2-staples: 1 position	
Staple replenishment:	Cartridge (5000 staples)	
Power consumption:	50 W + 16 W (Punch Unit)	
Dimensions (W x D x H):	**Finisher:** 495 x 477 x 161 mm (19.5" x 18.7" x 6.3") **Punch Unit:** 171 x 459 x 136 mm (6.7" x 18.1" x 5.4")	
Weight:	Without punch unit:	13 kg (28.6 lbs.)
	With punch unit:	17 kg (37.4 lbs.)

Smart Operation Panel

LCD	Size	10.1 inch panel	
	No. of pixels	WSVGA (1024×600)	
	Bit width	RGB666	18-bit color
	Brightness	200cd/m^2(typ.)	
	Back light	LED rear light (lifetime 15000h)	
Touch panel		Light load touch panel, 2 -point touch detection	
Memory	Volatile memory	RAM: 1GB	
	Non-volatile memory	NAND: 2GB	Program area and data area for the OS and applications

External I/F	USB memory	USB2.0 Host Type-A	
	SD card	SD card slot 1ch (SD/SDHC)	
	USB	USB2.0 Host Type-mini AB	Not available
Network	Wireless LAN	802.11b/g/n	
Audio input/ output	Speaker/ microphone	Monophonic speaker 1ch (power 1-2W) Microphone	
Power consumption	When active	During regular time: Less than 4W During wireless-LAN high-load operation: Less than 4.6W	Excluding external I/F and internal function expansion.
	During sleep	Less than 350 mW	In sleep mode or while the power is off, do not supply power to an extension USB device connected to an external USB port.

2. Appendices:Preventive Maintenance Tables

Maintenance Tables

Note

- The amounts mentioned as the PM interval indicate the number of prints.
- After carrying out PM, clear the maintenance counter (SP7-804).

Preventive Maintenance Items

Chart: A4 (LT)/5%

Mode: 3 copies / original (prints/job)

Ratio 30%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect

Mainframe

Item	EM	60K	120K	600K	NOTE
Scanner/Laser Optics					
Reflector		C			Optics cloth
1st Mirror	C	C			Optics cloth
2nd Mirror	C	C			Optics cloth
3rd Mirror	C	C			Optics cloth
Scanner Guide Rails		C			Do not use alcohol. RTB 58 Modified
Platen Sheet Cover	C	C			Replace the platen sheet, if necessary. Dry cloth or alcohol
Exposure Glass	C	C			Dry cloth or alcohol

Item	EM	60K	120K	600K	NOTE
Toner Shield Glass	C	C			Optics cloth
APS Sensor		C			Dry cloth or blower brush
Around the Drum					
Transfer/Separation Unit			R		
ID Sensor	I	C			Perform the ID sensor initial setting (SP2-935) after cleaning (blower brush)
PCU					
Drum		R			Do SP2801. This initializes the developer and resets the TD and ID sensor outputs to their defaults. It also resets the PCU counter.
Charge Roller		R			
Cleaning Roller		R			
Cleaning Blade		R			
Pick-off Pawls		R			
Developer		R			
Paper Feed					
Registration Rollers	C				Clean with water
Registration Sensor	C				Dry cloth
Paper Feed Roller	C				Dry cloth
Separation Roller	C				Dry cloth
Pick-up Roller	C				Dry cloth
Relay Rollers	C				Dry cloth
Feed Sensor	C				Dry cloth
Vertical Transport Sensor	C				Dry cloth
Dust collection box	C	C			Remove, empty, clean
Fusing Unit and Paper Exit					

Item	EM	60K	120K	600K	NOTE
Fusing Entrance and Exit Guide Plates		C			Clean with water or alcohol.
Hot Roller			R		Clean with water or alcohol.
Pressure Roller			R		
Fusing Thermistors			R		
Cleaning Roller			C		
Cleaning Roller Bushings			C		
Hot Roller Strippers		C	R		Cleaner
Hot Roller and Pressure Roller Bushings			L		Grease Barrierta S552R (A2579300)
Exit Roller	C				Clean with water
Reverse Roller	C				Clean with water
Reverse Sensor	C				Clean with water
Duplex					
Rollers	C				Clean with water.
Duplex Entrance Sensor	C				Clean with water
Duplex Exit Sensor	C				Clean with water

ARDF DF3090 (D779)

Item	EM	80K (Original)	NOTE
Pick-up Roller	C	R	Clean with water
Feed Belt	C	R	Clean with water
Separation Roller	C	R	Clean with water
Other Rollers	C	C	Clean with water

Item	EM	80K (Original)	NOTE
Gears	L		Lubricate, if necessary
Platen Sheet	C	C	Clean with water or alcohol

Paper Feed Unit (D579)

Item	EM	NOTE
Paper Feed Roller	C	Clean with water
Pick-up Roller	C	Dry cloth
Separation Roller	C	Clean with alcohol.
Relay Rollers	C	Clean with water.
Bottom Plate Pad	C	Clean with water.

Paper Feed Unit (D746)

Item	EM	NOTE
Paper Feed Roller	C	Clean with water
Pick-up Roller	C	Dry cloth
Separation Roller	C	Clean with alcohol.
Relay Rollers	C	Clean with water.
Bottom Plate Pad	C	Clean with water.

LCIT BP3190 (D747)

Item	EM	NOTE
Paper Feed Roller	C	Clean with water
Pick-up Roller	C	Dry cloth

Item	EM	NOTE
Separation Roller	C	Clean with alcohol.
Relay Rollers	C	Clean with water.
Bottom Plate Pad	C	Clean with water.

1 Bin Tray (D582)

Item	EM	NOTE
Rollers	C	Dry or damp cloth
Copy Tray	C	Dry or damp cloth
Sensors	C	Blower brush

Internal Finisher (D586)

Item	EM	NOTE
Rollers	C	Clean with water or alcohol.
Sensors	C	Blower brush
Punch Chads	C	Discard chads.

Booklet Finisher SR3150 (D686) / Finisher SR3140 (D687)

Item	EM	NOTE
Rollers	C	Clean with alcohol.
Quenching brush	C	Clean with alcohol.
Bearings	C	Lubricate when noise occurred. Silicone oil/spindle oil
Sensors	C	Blower brush
Jogger Fence	C	Lubricate when noise or malfunction detected. Resin grease

Item	EM	NOTE
Stapler	C	Replace when staple counter on logging data reached 500 thousand times. Staple some times for test after replacement

Others Yield Parts

The parts mentioned in these tables have a target yield. However, the total copy/print volume made by the machine will not reach the target yield within the machine's targeted lifetime if the machine is used under the target usage conditions (ACV, color ratio, P/J, and C/O). So, these parts are categorized not as PM parts but as yield parts (EM parts).

Item	600K	NOTE
Development Case	C	

3. Appendices:SP Mode Tables

Main SP Tables-1

SP1-XXX (Feed)

1001	[Leading Edge Registration] -		
1-001-002	Tray: Plain	E*	[-9.0 to 9.0 / **0.0** / 0.1mm/step] Use the key to toggle between + and – before entering the value. The specification is 3 ± 2 mm. See "Replacement and Adjustment - Copy Adjustment" for details.
1-001-003	Tray: Middle Thick	E*	
1-001-004	Tray: Thick	E*	
1-001-007	By-pass: Plain	E*	
1-001-008	By-pass: Middle Thick	E*	
1-001-009	By-pass: Thick	E*	
1-001-013	Duplex: Plain	E*	
1-001-014	Duplex: Middle Thick	E*	

1002	[Side-to-Side Registration] -		
1-002-001	By-pass Table	E*	[–4.0 to +4.0 / **0.0** / 0.1 mm/step] Adjusts the printing side-to-side registration from each paper feed station using the Trimming Area Pattern (SP2902 Pattern No. 10). Use the key to toggle between + and – before entering the value. The specification is 2 ± 1.5 mm. See "Replacement and Adjustment - Copy Adjustment" for details.
1-002-002	Paper Tray 1	E*	
1-002-003	Paper Tray 2	E*	
1-002-004	Paper Tray 3	E*	
1-002-005	Paper Tray 4	E*	
1-002-006	Duplex	E*	

1003	[Paper Buckle] -

1-003-002	Paper Tray 1: Plain	E*	[–9 to 5 / **0** / 1 mm/step] Adjusts the paper feed clutch timing at registration. The paper feed clutch timing determines the amount of paper buckle at registration. (A larger setting leads to more buckling.)
1-003-003	Tray 1: Middle Thick	E*	
1-003-004	Paper Tray 1: Thick	E*	
1-003-007	Paper Tray 2/3/4/LCT: Plain	E*	
1-003-008	Paper Tray 2/3/4/LCT: Middle Thick	E*	
1-003-009	Paper Tray 2/3/4/LCT: Thick	E*	
1-003-012	By-pass: Plain	E*	
1-003-013	By-pass: Middle Thick	E*	
1-003-014	By-pass: Thick	E*	
1-003-018	Duplex: Plain	E*	
1-003-019	Duplex: Middle Thick	E*	

1007	**[By-pass Size Detection]** Controls paper size detection for the by-pass feed table.		
1-007-001	LG	E*	[0 or 1 / **0** / 1/step] 0: LTSEF, 1: LG

1101	**[Flicker Control]** Enables or disables the Flicker Control.		
1-101-001	Flicker Control	E*	[0 or 1 / **0** / step] 0: Off 1: On

1103	**[Reload Permit Setting]** Specifies the settings of the reload permit.

1-103-001	Fusing Idling0:OFF 1:ON 2:OFF+Temp	E*	[0 to 2 / 0 / 1/step] Switches fusing idling on/off. [0 = Off / 1 = On / 2 = Off plus machine temperature check] Switch on if fusing on the 1st and 2nd copies is incomplete (this may occur if the room is cold.)
1-103-002	Reload Temp.:Center	E*	[100 to 150 / **130** / 1°C/step] Adjusts the reload temperature at the center and both ends of the hot roller when the temperature inside the machine is 17°C or higher.
1-103-003	Reload Temp.:Ends	E*	[100 to 150 / **130** / 1°C/step]Adjusts the reload temperature at the center and both ends of the hot roller when the temperature inside the machine is 17°C or higher.
1-103-004	Reload Temp.:Cold:Center	E*	[100 to 150 / **130** / 1°C/step] Adjusts the reload temperature at the center and both ends of the hot roller when the temperature inside the machine is 16°C or lower.
1-103-005	Reload Temp.:Cold:Ends	E*	[100 to 150 / **130** / 1°C/step] Adjusts the reload temperature at the center and both ends of the hot roller when the temperature inside the machine is 16°C or lower.

1105	**[Fusing Temperature Adjustment]** -		
1-105-001	Roller Center:Plain1	E*	[120 to 200 / **165** / 1°C/step] Adjusts the fusing temperature at the center and both ends of the hot roller for plain paper 1.
1-105-002	Roller Ends:Plain1	E*	
1-105-003	Roller Center:Plain2	E*	[120 to 200 / **170** / 1°C/step] Adjusts the fusing temperature at the center and both ends of the hot roller for plain paper 2.
1-105-004	Roller Ends:Plain2	E*	

1-105-005	Roller Center:M-Thick	E*	[120 to 200 / **175** / 1°C/step] Adjusts the fusing temperature at the center and both ends of the hot roller for middle thick paper.
1-105-006	Roller Ends:M-Thick	E*	
1-105-007	Thick Paper - Roller Center	E*	[0 to 40 / **20** / 1°C/step] Adjusts the additional temperature for the center and both ends of the hot roller for thick paper.
1-105-008	Thick Paper - Roller Ends	E*	
1-105-009	Center Minus:Thin	E*	[0 to 20 / **5** / 1°C/step] Adjusts the subtract temperature for the center and both ends of the hot roller for thick paper.
1-105-010	Ends Minus:Thin	E*	
1-105-011	Energy Saver	E*	[0 to 200 / **135** / 1°C/step] Adjusts the fusing temperature at the center and both ends of the hot roller for energy saver mode.
1-105-012	Wait Temp: Center Minus	E*	[0 to 30 / **10** / 1 °C/step] Adjusts the subtract temperature for the center and both ends of the hot roller in stand-by mode.
1-105-013	Wait Temp: Ends Minus	E*	
1-105-014	After Warming-up Time	E*	[0 to 180 / **12** / 1s/step] In this machine, fusing temperature is kept 10°C higher than the normal temperature for a short while after the machine warms up. This SP selects the length of time that this temperature is used.
1-105-015	After Warming-up - No. of Page	E*	[0 to 10 / **3** / 1 page/step] In this machine, fusing temperature is kept 10°C higher than the normal temperature for a number of pages after the machine has warmed up. This SP selects the number of pages made at this temperature.

1-105-016	Low:Center Add:Plain	E*	[0 to 30 / **5** / 1 °C/step] Adjusts the additional temperature for the center and both ends of the hot roller for printing on thin paper/plain paper 1/plain paper 2/middle thick paper when the temperature inside the machine is 16 °C or lower.
1-105-017	Low:Ends Add:Plain	E*	
1-105-018	Low:Center Add:Thick	E*	[0 to 30 / **5** / 1 °C/step] Adjusts the additional temperature for the center and both ends of the hot roller for printing on thick paper when the temperature inside the machine is 16 °C or lower.
1-105-019	Low:Ends Add:Thick	E*	
1-105-020	Registration Waiting:Plain1	E*	[0 to 1 / **0** / 1/step] Turns the registration waiting mode on or off for each paper type. 0=Off, 1=On The paper waits at the registration roller until the fusing temperature reaches the prescribed temperature (adjustable with SP1105-024 to -31).
1-105-021	Registration Waiting:Plain2	E*	
1-105-022	Registration Waiting:M-Thick	E*	
1-105-023	Registration Waiting:Thick	E*	[0 to 1 / **1** / 1/step] Turns the registration waiting mode on or off for each paper type. 0=Off, 1=On The paper waits at the registration roller until the fusing temperature reaches the prescribed temperature (adjustable with SP1105-024 to -31).

1-105-024	Waiting:Center Minus:Plain1	E*	[0 to 60 / **10** / 1deg/step] Adjusts the offset value for each re-load temperature to exit the registration waiting mode.
1-105-025	Waiting:Ends Minus:Plain1	E*	
1-105-026	Waiting:Center Minus:Plain2	E*	
1-105-027	Waiting:Ends Minus:Plain2	E*	
1-105-028	Waiting:Center Minus:M-Thick	E*	
1-105-029	Waiting:Ends Minus:M-Thick	E*	
1-105-030	Waiting:Center Minus:Thick	E*	
1-105-031	Waiting:Ends Minus:Thick	E*	
1-105-032	Down Temp:No. of Page:Center	E*	[0 to 20 / **5** / 1sheet/step] When the fusing temperature at the center of the hot roller is lowered due to consecutive printing, the lowered temperature is kept until the number of sheets set here is printed.
1-105-033	Down Temp:No. of Page: Ends	E*	[0 to 20 / **5** / 1sheet/step] When the fusing temperature at both ends of the hot roller is lowered due to consecutive printing, the lowered temperature is kept until the number of sheets set here is printed.
1-105-034	Copy Down Temp:Center	E*	[0 to 30 / **1** / 1deg/step] Adjusts the subtract temperature for the center and both ends of the hot roller when the machine lowers the temperature due to consecutive printing.
1-105-035	Copy Down Temp:Ends	E*	
1-105-036	Copy Down Temp:Add:Center	E*	[0 to 30 / **5** / 1deg/step] Adjusts the additional temperature until a specified period of time passes or a specified number of sheets are printed after reload.
1-105-037	Copy Down Temp:Add:Ends	E*	

1-105-038	Feed Permit Setting:Thick	E*	[0 to 60 / **20** / 1deg/step] Adjusts the temperature at which feeding thick paper is permitted. Thick paper can be fed when the specified fusing temperature minus the actual temperature is the same as or smaller than this setting.

1106	**[Fusing Temperature Display]** -		
1-106-001	Roller Center	E	[-20 to 250 / **0** / 1deg/step] Displays the fusing temperature for the center or both ends of the hot roller.
1-106-002	Roller Ends	E	
1-106-003	In the Machine at Power On	E	[-20 to 250 / **0** / 1deg/step] Displays the temperature in the machine at power on. This temperature is monitored by the thermistor on the BCU board.

1108	**[Fusing Soft Start Setting]** -		
1-108-001	Warming-up	E*	[100 to 2000 / **1000** / 100 msec/step] Adjusts the fusing temperature control cycle when the machine is warming up.
1-108-002	Print	E*	[100 to 2000 / **1000** / 100 msec/step] Adjusts the fusing temperature control cycle when the machine is printing.
1-108-003	Wait	E*	[100 to 2000 / **1000 (North America, Taiwan), 2000 (Other countries)** / 100 msec/step] Adjusts the fusing temperature control cycle.

1112	**[Image Proc. Temp. Correction]** -

1-112-001	Temp.:Normal:Level1	E*	[–25 to 10 / **0** / 1deg/step] Specifies the correction temperature for the level 1 of the job image control.
1-112-002	Temp.:Normal:Level2	E*	[–25 to 10 / **–5** / 1deg/step] Specifies the correction temperature for the level 2 of the job image control.

1124	**[CPM Down Setting]** Specifies the settings for the CPM down mode.		
1-124-006	High:1st CPM	E*	[10 to 100 / **60** / 5 %/step] Specifies the 1st CPM down ratio against the normal CPM in the high temperature condition.
1-124-007	High:2nd CPM	E*	[10 to 100 / **50** / 5 %/step] Specifies the 2nd CPM down ratio against the normal CPM in the high temperature condition.
1-124-008	High:3rd CPM	E*	[10 to 100 / **25** / 5 %/step] Specifies the 3rd CPM down ratio against the normal CPM in the high temperature condition.
1-124-009	High:1st CPM Down Temp.:A3	E*	[100 to 250 / **215** / 1deg/step] Specifies the heating roller temperature for 1st CPM down of A3 paper size.
1-124-010	High:2nd CPM Down Temp.:A3	E*	[100 to 250 / **220** / 1deg/step] Specifies the heating roller temperature for 2nd CPM down of A3 paper size.
1-124-011	High:3rd CPM Down Temp.:A3	E*	[100 to 250 / **225** / 1deg/step] Specifies the heating roller temperature for 3rd CPM down of A3 paper size.
1-124-012	High:1st CPM Down Temp.:A4	E*	[100 to 250 / **215** / 1deg/step] Specifies the heating roller temperature for 1st CPM down of A4 paper size.

1-124-013	High:2nd CPM Down Temp.:A4	E*	[100 to 250 / **220** / 1deg/step] Specifies the heating roller temperature for 2nd CPM down of A4 paper size.
1-124-014	High:3rd CPM Down Temp.:A4	E*	[100 to 250 / **225** / 1deg/step] Specifies the heating roller temperature for 3rd CPM down of A4 paper size.
1-124-015	High:1st CPM Down Temp.:B5	E*	[100 to 250 / **200** / 1deg/step] Specifies the pressure roller temperature for 1st CPM down of B5 paper size.
1-124-016	High:2nd CPM Down Temp.:B5	E*	[100 to 250 / **205** / 1deg/step] Specifies the pressure roller temperature for 2nd CPM down of B5 paper size.
1-124-017	High:3rd CPM Down Temp.:B5	E*	[100 to 250 / **210** / 1deg/step] Specifies the pressure roller temperature for 3rd CPM down of B5 paper size.
1-124-018	High:1st CPM Down Temp.:A5	E*	[100 to 250 / **200** / 1deg/step] Specifies the pressure roller temperature for 1st CPM down of A5 paper size.
1-124-019	High:2nd CPM Down Temp.:A5	E*	[100 to 250 / **205** / 1deg/step] Specifies the pressure roller temperature for 2nd CPM down of A5 paper size.
1-124-020	High:3rd CPM Down Temp.:A5	E*	[100 to 250 / **210** / 1deg/step] Specifies the pressure roller temperature for 3rd CPM down of A5 paper size.
1-124-021	High:1st CPM Down Temp.:A6	E*	[100 to 250 / **200** / 1deg/step] Specifies the pressure roller temperature for 1st CPM down of A6 paper size.
1-124-022	High:2nd CPM Down Temp.:A6	E*	[100 to 250 / **205** / 1deg/step] Specifies the pressure roller temperature for 2nd CPM down of A6 paper size.

1-124-023	High:3rd CPM Down Temp.:A6	E*	[100 to 250 / **210** / 1deg/step] Specifies the pressure roller temperature for 3rd CPM down of A6 paper size.
1-124-024	Judging Interval	E*	[1 to 250 / **10** / 1sec/step] Specifies the interval for CPM down judgment.

1135	**[Inrush Control]** -		
1-135-001	Inrush control	E	[0 or 1 / **0** / 1/step]

1152	**[Fusing Nip Band Check]** Checks the fusing nip band.		
1-152-001	Execute	E	[- / **-** / -] [Execute] Executes the fusing nip band check from the by-pass tray.
1-152-002	Pre-idling Time	E*	[0 to 999 / **20** / 1sec/step] Specifies the fusing rotation time before executing SP1152-001.
1-152-003	Stop Time	E*	[0 to 100 / **20** / 1sec/step] Specifies the time for paper staying at the nip.

1159	**[Fusing Jam Detection]** -		
1-159-001	SC display	E*	[0 to 1 / **0** / 1/Step] Disables or enables the consecutive jam error for the fusing unit. When set to "1" (on) this SC code is issued after the 3rd consecutive jam in the fusing unit.

1801	**[MotorSpeedAdjust]** -

1-801-002	MainMotor:120	E*	[-4.00 to 4.00 / **0.00** / 0.01%/step] Main motor speed adjustment Orval-C1b,c: 150.0mm/s
1-801-010	Duplex:Low	E*	[-4.00 to 4.00 / **0.00** / 0.01%/step] Duplex motor speed adjustment Low (normal speed) : Orval-C1a: 121.2mm/s, Orval-C1b,c: 149.1mm/s
1-801-011	Duplex:High	E*	[-4.00 to 4.00 / **0.00** / 0.01%/step] Duplex motor speed adjustment High (Increase speed) : Orval-C1a: 339.1mm/s, Orval-C1b,c: 417.0mm/s
1-801-024	Reverse:Low	E*	[-4.00 to 4.00 / **0.00** / 0.01%/step] Reverse motor speed adjustment Low (normal speed) : Orval-C1a: 123.8mm/s, Orval-C1b,c: 152.2mm/s
1-801-029	Reverse:High	E*	[-.00 to 4.00 / **0.00** / 0.01%/step] Reverse motor speed adjustment High (Increase speed) : Orval-C1a: 339.1mm/s,Orval-C1b,c:417.0mm/s

1903	**[Feed Cl Re-energize]** -		
1-903-001	By-pass Feed	E*	[0 to 10 / ***5*** / 1 mm/step] Over-feed amount of the vertical conveying clutch SP [mm] during resist restart body 1, 2 on bypass.
1-903-002	Tray 1 Feed	E*	[0 to 10 / ***5*** / 1 mm/step] Over-feed amount of the vertical conveying clutch SP [mm] during resist restart body 1, 2 on tray 1.

1-903-003	Other Trays	E*	[0 to 10 / **5** / 1 mm/step] Over-feed amount of the vertical conveying clutch SP [mm] during resist restart body 1, 2 on tray2, 3, 4.

1907	**[Paper Feed Timing Adj.]** -		
1-907-001	Feed Solenoid ON	E*	[-10 to 10 / **0** / 1mm/step] The feed solenoid turns on A mm before the pick-up roller feed out the trailing edge of the paper. + is direction that increase margin of rear end. - is direction that decrease margin of rear end.
1-907-005	Inverter Stop Position	E*	[-10 to 10 / **0** / 1mm/step] Positioning adjustment of reversal stop SP [mm]. + is the direction that slows speed. - is the direction that hastens speed.
1-907-015	Re-Feed Stop Position	E*	[-10 to 10 / **0** / 1mm/step] Positioning adjustment of re feeding. + is the direction that slows speed. - is the direction that hastens speed.
1-907-020	Bank1: Feed Solenoid ON: Plain	E*	[35 to 85 / **60** / 5%/step] The feed solenoid turns on A mm before the pick-up roller feed out the trailing edge of the paper. A=(Original length – 80) x B / 100 B=setting value
1-907-021	Bank1: Feed Solenoid ON: Middle Thick	E*	[35 to 85 / **60** / 5%/step] The feed solenoid turns on A mm before the pick-up roller feed out the trailing edge of the paper. A=(Original length – 80) x B / 100 B=setting value

1-907-022	Bank1: Feed Solenoid ON: Thick 1	E*	[35 to 85 / **35** / 5%/step] The feed solenoid turns on A mm before the pick-up roller feed out the trailing edge of the paper. A=(Original length – 80) x B / 100 B=setting value
1-907-023	Bank2: Feed Solenoid ON: Plain	E*	[35 to 85 / **60** / 5%/step] The feed solenoid turns on A mm before the pick-up roller feed out the trailing edge of the paper. A=(Original length – 80) x B / 100 B=setting value
1-907-024	Bank2: Feed Solenoid ON: Middle Thick	E*	[35 to 85 / **60** / 5%/step] The feed solenoid turns on A mm before the pick-up roller feed out the trailing edge of the paper. A=(Original length – 80) x B / 100 B=setting value
1-907-025	Bank2: Feed Solenoid ON: Thick 1	E*	[35 to 85 / **35** / 5%/step] The feed solenoid turns on A mm before the pick-up roller feed out the trailing edge of the paper. A=(Original length – 80) x B / 100 B=setting value
1-907-026	Bank1: Feed Clutch OFF: Plain	E*	[-10 to 10 / **0** / 1mm/step] The feed solenoid turns off A mm after the pick-up roller feed out the trailing edge of the paper. A=4 + B B=setting value
1-907-027	Bank1: Feed Clutch OFF: Middle Thick	E*	[-10 to 10 / **0** / 1mm/step] The feed solenoid turns off A mm after the pick-up roller feed out the trailing edge of the paper. A=4 + B B=setting value

1-907-028	Bank1: Feed Clutch OFF: Thick 1	E*	[-10 to 10 / **0** / 1mm/step] The feed solenoid turns off A mm after the pick-up roller feed out the trailing edge of the paper. A=4 + B B=setting value
1-907-029	Bank2: Feed Clutch OFF: Plain	E*	[-10 to 10 / **0** / 1mm/step] The feed solenoid turns off A mm after the pick-up roller feed out the trailing edge of the paper. A=4 + B B=setting value
1-907-030	Bank2: Feed Clutch OFF: Middle Thick	E*	[-10 to 10 / **0** / 1mm/step] The feed solenoid turns off A mm after the pick-up roller feed out the trailing edge of the paper. A=4 + B B=setting value
1-907-031	Bank2: Feed Clutch OFF: Thick 1	E*	[-10 to 10 / **0** / 1mm/step] The feed solenoid turns off A mm after the pick-up roller feed out the trailing edge of the paper. A=4 + B B=setting value
1-907-032	Bank Feed Wait Position	E*	[-20 to 20 / **0** / 1mm/step] Stop and hold the paper A mm after the leading edge of the paper activates the vertical transport sensor. A=setting value

1908	**[Paper Feed Timing Adj.]** -

1-908-015	Junction Gate SOL1: ON	E*	[-10 to 10 / **0** / 1mm/step]
1-908-017	Junction Gate SOL1: OFF	E*	

1-908-020	Bridge Junction Gate SOL ON: Plain	E*	[0 to 20 / **0** / 1mm/step] The bridge junction gate solenoid turns on A mm after the leading edge of the paper activates the paper exit sensor. A=setting value
1-908-021	Bridge Junction Gate SOL ON: Middle Thick	E*	
1-908-022	Bridge Junction Gate SOL ON: Thick 1	E*	
1-908-023	Bridge Junction Gate SOL OFF: Plain	E*	[0 to 50 / **0** / 1mm/step] The bridge junction gate solenoid turns off A mm after the leading edge of the paper activates the paper exit sensor. A=setting value
1-908-024	Bridge Junction Gate SOL OFF: Middle Thick	E*	
1-908-025	Bridge Junction Gate SOL OFF: Thick 1	E*	

1950	**[Fan Cooling Time Set]** -		
1-950-001	Fan	E*	[10 to 600 / **10** / 1sec/step] Adjust the rotation time for the fan motor (Fan for PSU, fusing, heater, controller box) after a job end.

1991	**[Max Fusing Lamp Duty]** These SP codes are debugging tools.		
1-991-001	Roller Center	E*	[40 to 100 / **100** / 10%/step] Duty upper limit (center) when other than Start-up times
1-991-002	Roller Ends	E*	[40 to 100 / **100** / 10%/step] Duty upper limit (end other than Start-up times.
1-991-003	After Warming-up – Center	E*	[40 to 100 / **100** / 10%/step] Duty upper limit (center) when Start-up times
1-991-004	After Warming-up – Ends	E*	[40 to 100 / **100** / 10%/step] Duty upper limit (end) when Start-up times

1996	[Heater Forced Off]		
1-996-005	After Printing	E*	[0 to 120 / **7** / 1sec/step] A fusing temperature to aim predetermined time after the last sheet has passed through the fixing unit.
1-996-006	After Printing Temp Center	E*	[100 to 200 / **145** / 1deg/step] A fusing temperature to aim predetermined time after the last sheet has passed through the fixing unit.
1-996-007	After Printing Temp Ends	E*	

Main SP Tables-2

SP2-XXX (Drum)

2001	**[Charge Roller Bias Adjust]** -		
2-001-001	Setting (Copying)	E*	[–2100 to –1500 / **–1700** / 10 V/step] Adjusts the voltage applied to the charge roller during printing. This value will be changed automatically when the charge roller bias correction is performed. Note that if this value is changed, the charge roller voltage will be corrected based on the new voltage.
2-001-002	ID Sensor Pattern	E*	[0 to 400 / **200** / 10 V/step] Adjusts the voltage applied to the charge roller when making the Vsdp ID sensor pattern (for charge roller bias correction). The actual charge roller voltage is this value plus the value of SP2001 1.
2-001-003	Temporally Input	E*	[–2500 to 0 / **0** / 10 V/step] Inputs the charge roller voltage temporarily for test purposes. **Do not change the value.**

2005	**[Charge Bias Correction]** -		
2-005-001	Vsdp Min	E*	[0 to 100 / **90** / 1%/step] Adjusts the lower threshold value for the charge roller correction. When the value of Vsdp/Vsg is less than this value, the charge roller voltage increases by 50V (e.g. from –500 to –550). The size of the increase depends on SP2005 3.

2-005-002	Vsdp Max	E*	[0 to 100 / **95** / 1 %/step] Adjusts the upper threshold value for the charge roller correction. When the value of Vsdp/Vsg is greater than this value, the charge roller voltage decreases by 50V (e.g. from –550 to –500). The size of the decrease depends on SP2005 3.
2-005-003	Revision Step	E*	[0 to 200 / **50** / 10 vol/step] Correction amount per that correct value that set at SP2-001-001.

2102	**[Main Scan Mag. Adjustment]** -		
2-102-001	-	E*	[–0.5 to 0.5 / **0.0** / 0.1%/step] Adjusts the magnification in the main scan direction for copy mode and printer mode. +key stretches images. -key shortens images.

2103	**[Erase Margin Adjust]** -		
2-103-001	Leading Edge	E	[0.0 to 4.0 / **3.0** / 0.1mm/step] The reflected as an adjustment value (standard value).
2-103-002	Trailing Edge	E	[0.0 to 4.0 / **3.0** / 0.1mm/step] The reflected as an adjustment value (standard value).
2-103-003	Left	E	[0.0 to 4.0 / **2.0** / 0.1mm/step] The reflected as an adjustment value (standard value).
2-103-004	Right	E	[0.0 to 4.0 / **2.0** / 0.1mm/step] The reflected as an adjustment value (standard value).

2-103-005	Duplex Trail.: L Size: Plain	E	[0.0 to 4.0 / **1.2** / 0.1mm/step] Reflects the Edge Width of Duplex Trail.: L Size [Larger than 297.0mm]: Plain paper with the Adj Value intact(adding to the standard)
2-103-006	Duplex Trail.: M Size: Plain	E	[0.0 to 4.0 / **0.8** / 0.1mm/step] Reflects the Edge Width of Duplex Trail.: M Size [Smaller than 297.0mm]: Plain paper with the Adj Value intact(adding to the standard)
2-103-007	Duplex Trail.: S Size: Plain	E	[0.0 to 4.0 / **0.6** / 0.1mm/step] Reflects the Edge Width of Duplex Trail.: S Size [Smaller than 216.0mm]: Plain paper with the Adj Value intact(adding to the standard)
2-103-008	Duplex Left: Plain	E	[0.0 to 1.5 / **0.3** / 0.1mm/step] Reflects the Edge Width of Duplex Left: Plain paper with the Adj Value intact(adding to the standard)
2-103-009	Duplex Right: Plain	E	[0.0 to 1.5 / **0.3** / 0.1mm/step] Reflects the width of Duplex Right: Plain paper with the Adj Value intact(adding to the standard)
2-103-010	Duplex Trail.: L Size: Thick	E	[0.0 to 4 .0 / **1.0** / 0.1mm/step] Reflects the Edge Width of Duplex Trail.: L Size [Larger than 297.0mm]: Thick: paper with the Adj Value intact(adding to the standard)
2-103-011	Duplex Trail.: M Size: Thick	E	[0.0 to 4.0 / **0.6** / 0.1mm/step] Reflects the Edge Width of Duplex Trail.:M Size [Smaller than 297.0mm]: Thick: paper with the Adj Value intact(adding to the standard)
2-103-012	Duplex Trail.: S Size: Thick	E	[0.0 to 4.0 / **0.4** / 0.1mm/step] Reflects the Edge Width of Duplex Trail.:S Size [Smaller than 216.0mm]: Thick: paper with the Adj Value intact(adding to the standard)

2-103-013	Duplex Left: Thick	E	[0.0 to 1.5 / **0.1** / 0.1mm/step] Reflects the Edge Width of Duplex Left: Thick paper with the Adj Value intact(adding to the standard)
2-103-014	Duplex Right: Thick	E	[0.0 to 1.5 / **0.1** / 0.1mm/step] Reflects the Edge Width of Duplex Right: Thick paper with the Adj Value intact(adding to the standard)

2105	**[LD Power Adjustment]** -		
2-105-001	-	E*	[50 to 255 / **171** / 1/step] Adjusts the LD power. +key increase amount of light. -key decrease amount of light.
2-105-002	Unit	E*	[-50.0 to 50.0 / **0.0** / 0.1%/step] Adjusts the LD power. +key increase amount of light. -key decrease amount of light.

2109	**[Test Pattern]** -		
2-109-001	Pattern Select	E	[0 to 21 / **0** / 1/step]
2-109-002	Test Pattern Density	E	[0 to 15 / **15** / 1/step] Reflects the adj. value to the density when the pattern is output.

Test Patterns for SP2109

0	None	11	Independent Pattern (1dot)
1	Vertical Line (1 dot)	12	Independent Pattern (2dot)
2	Vertical Line (2dot)	13	Independent Pattern (4dot)

3	Horizontal Line (1dot)	14	Trimming Area
4	Horizontal Line (2 dot)	15	Black Band (Horizontal)
5	Grid Vertical Line	16	Black Band (Vertical)
6	Grid Horizontal Line	17	Checker Flag Pattern
7	Grid Pattern Small	18	Grayscale (Vertical)
8	Grid Pattern Large	19	Grayscale (Horizontal)
9	Argyle Pattern Small	20	Full Dot Pattern
10	Argyle Pattern Large	21	All White Pattern

2201	**[Development Bias Adjust]** -		
2-201-001	Printing	E*	[-1500 to 0 / **-650** / 10vol/step] Is the Development Output. Density is increased when the absolute value is raised as the capability of the development, which affects PCU, is enhanced.
2-201-002	P Pattern Revision	E*	[0 to 4 / **0** / 0/step] Adjusts the Ctrl Pt of the Toner density in the Development Unit. When [Thick] is chosen, the Toner density in the Development Unit is controlled to be denser. Attention and care are needed to check the margin diminution of Bg Dirt and Toner Scattering whereas the density is increased. When [Thin] is chosen, the Toner density in the Development Unit is controlled to be less dense. The margin of Bg Dirt and Toner Scattering is raised whereas the density is decreased

2210	**[Bias Off Time]** -

2-210-001	Charge Bias	E*	[10 to 150 / **100** / 10msec/step] Adjusts the charge voltage (-1200V) application time.
2-210-002	Development Bias	E*	[10 to 200 / **80** / 10 msec/step] Adjusts the first development bias (-300V) off time during Stage fall time.

2211	**[PCU Reverse Interval]** -		
2-211-001	-	E*	[0 to 999 / **100** / 1sheets/step] When printing is operated to this set point, interrupts printing and do the reverse operation.

2213	**[Copies After Toner Near End]** Selects the number of copies that can be made after toner near-end has been detected.		
2-213-001	End Limits	E*	[0 or 1 / **0** / 1/step]

2220	**[Process Data Dilay]** -		
2-220-001	Vsp	E*	[0.00 to 9.99 / **0.00** / 0.01vol/step] Vsp value during Psensor runtime.
2-220-002	Vsg	E*	[0.00 to 9.99 / **0.00** / 0.01vol/step] Vsg value during Psensor runtime.
2-220-003	Vsdp	E*	[0.00 to 9.99 / **0.00** / 0.01vol/step] Vsdp value during Psensor runtime.
2-220-004	Vt	E*	[0.00 to 9.99 / **0.00** / 0.01vol/step] Current Vt value.
2-220-005	Vtref	E*	[0.00 to 9.99 / **2.50** / 0.01vol/step] Current Vtref value.

2224	[Copies After Toner Near End] -		
2-224-001	Counter	E*	[0 to 999 / 0 / 1sheet/step]

2301	[Transfer Current Adjust] -		
2-301-001	Thin:1side:Image Area	E*	[-4 to 4 / 0 / 1uA/step]
2-301-002	Thin:1side:Lead Edge	E*	
2-301-003	Thin:1side:Trail Edge	E*	
2-301-004	Thin:2side:Image Area	E*	
2-301-005	Thin:2side:Lead Edge	E*	
2-301-006	Thin:2side:Trail Edge	E*	
2-301-007	Plain:1side:Image Area	E*	[-4 to 4 / 0 / 1uA/step]
2-301-008	Plain:1side:Lead Edge	E*	
2-301-009	Plain:1side:Trail Edge	E*	
2-301-010	Plain:2side:Image Area	E*	
2-301-011	Plain:2side:Lead Edge	E*	
2-301-012	Plain:2side:Trail Edge	E*	
2-301-013	Middle:1side:Image Area	E*	[-4 to 4 / 0 / 1uA/step]
2-301-014	Middle:1side:Lead Edge	E*	
2-301-015	Middle:1side:Trail Edge	E*	
2-301-016	Middle:2side:Image Area	E*	
2-301-017	Middle:2side:Lead Edge	E*	
2-301-018	Middle:2side:Trail Edge	E*	

2-301-019	Thick:1side:Image Area	E*	[-4 to 4 / **0** / 1uA/step]
2-301-020	Thick:1side:Lead Edge	E*	
2-301-021	Thick:1side:Trail Edge	E*	
2-301-022	Input:1side	E*	[0 to 30 / **0** / 1uA/step]
2-301-023	Input:2side	E*	
2-301-024	Non Image Area	E*	[0 to 30 / **10** / 1uA/step] Used when there is an excessive amount of a Weakly-charged Toner and a Reverse-charged Toner and it causes Back Side Dirty. This prevents toner from adhering to a Transfer Roller by increasing an electric current in a Non-Image unit.
2-301-025	Temp Inside the Machine	E*	[0 to 99 / **20** / 1deg/step] A Setting of Inside the Machine, which is one of the elements of the transfer current value.

2302	**[Transfer Current Switch Timing]** -		
2-302-001	Lead Edge	E*	[-10 to 10 / **0** / 1mm/step] Adjusts the transfer current switch timing based on FGATE assert.
2-302-002	Trail Edge	E*	[-10 to 10 / **0** / 1mm/step] Adjusts the transfer current switch timing based on FGATE negate.

2303	**[Transfer Roller Cleaning Bias]** -

2-303-001	Positive	E*	[0 to 20 / **10** / 1uA/step] Used when there is an excessive amount of a Weakly-charged toner and a Reverse-charged toner on the Drum causing Back Side Dirty. It is effective for preventing dirt on transfer roller caused by toner of a base-surface portion. However, a Normally-charged [Minus] toner gets to adhere easily. Thus, using SP2-303-001 together with it is recommended.
2-303-002	Negative	E*	[0 to 20 / **4** / 1-uA/step] Used when improving the capability of cleaning for Toner, which adhere to a transfer unit caused by a jam or another issue. A Charged toner is removed by raising a CL Bias whereas it tends to attract a weakly-charged toner and a reverse-charged toner. Thus, using SP2-303-001 with it is recommended.

2801	**[Developer Initialization]** Do this SP after you fill the PCU with developer at machine installation and every time developer is replaced.		
2-801-001	-	E	[0 or 1 / **0** / 0/step]

2802	**[Developer Mixing]** Operated when a Toner needs to be stirred by compulsion.		
2-802-001	-	E	[0 or 1 / **0** / 0/step]

2803	**[Developer Initialization Data]** -		
2-803-001	Vtref	E*	[0 to 9.99 / **2.50** / 0.01vol/step] Vtref level when the setting of the initial chemical is completed.
2-803-002	ID Sensor PWM Value	E*	[0 to 1023 / **0** / 1/step] PWM level of a P Sensor when the setting of the initial chemical is completed.

2901	[Separation Voltage Adjust] -		
2-901-001	1side:Lead Edge	E*	[0 to 4000 / **1800** / 100-V/step] Used when improving separation of a Side1 [improvement of a ring jam and separation scar]. When there are some side effects such as dust, Increase only Separation Bias to minimize the effects on Image.
2-901-002	1side:Image Area	E*	[0 to 4000 / **1800** / 100-V/step] Used when improving separation of a Side1 and dust. Separation is improved by raising Bias while care and attention is needed for side effects such as dust.
2-901-003	2side:Lead Edge	E*	[0 to 4000 / **2100** / 100-V/step] Used when improving separation of a Side2 [improvement of a ring jam and separation scar]. When there are some side effects such as dust caused by raising whole biases, Increase only Separation Bias on the edge to minimize the effects on Imp.
2-901-004	2side:Image Area	E*	[0 to 4000 / **2100** / 100-V/step] Used when improving separations of a Side2 and dust. Separation is improved by raising Bias while care and attention is needed for side effects such as dust.
2-901-005	Switching Timing Lead Edge	E*	[-20 to 20 / **15** / 1mm/step] Adjusts the separation voltage switch timing based on FGATE assert.

2906	[Tailing Control] -		
2-906-001	Shift Range	E*	[0.0 or 1.0 / **0.0** / 0.1mm/step] Shift size during tailing run time.

2-906-002	Number of Sheets	E*	[0 to 10 / **0** / 1sheets/step] Amount of tailing Implementation number.

2907	**[Filter Setting]** -		
2-907-001	Text: Multilevel Copy	E*	[0 to 10 / **6** / 1/step] Line thickness of the multi-level when copying in text mode. + makes it thick. - makes it thin.
2-907-002	Photo: Multilevel Copy	E*	[0 to 10 / **5** / 1/step] Line thickness of the multi-level when copying in photo mode. + makes it thick. - makes it thin.
2-907-003	Text/Photo: Multilevel Copy	E*	[0 to 10 / **5** / 1/step] Line thickness of the multi-level when copying in text and photo mode. + makes it thick. - makes it thin.
2-907-004	Pale: Multilevel Copy	E*	[0 to 10 / **5** / 1/step] Line thickness of the multi-level when copying in Pale manuscript mode. + makes it thick. - makes it thin.
2-907-005	Generation: Multilevel Copy	E*	[0 to 10 / **5** / 1/step] Line thickness of the multi-level when copying in Manuscript copy mode. + makes it thick. - makes it thin.

2908	**[Forced Toner Supply]** Forces the toner bottle to supply toner to the toner supply unit.

2-908-001	-	E	[- / **-** / -] [Execute]

2915	**[Polygon Motor Idling Time]** -		
2-915-001	Idling Time ADJ	E*	[0 to 60 / **15** / 1sec/step] Selects the polygon motor idling time.
2-915-002	Post Idling Time ADJ	E*	[0 to 60 / **10** / 1sec/step] Sets rotation time of polygon motor after print out.

2921	**[Toner Supply Mode]** -		
2-921-001	Mode Select	E	[0 to 4 / **0** / 1/step] Selects the toner supply mode. 0: Normally the modes other than 1 are for installing. Fixed Supply needs attention as this may cause an excessive supply

2922	**[Toner Supply Time]** -		
2-922-001	[sec]	E	[0.1 to 5.0 / **0.6** / 0.1sec/step] Set the Standard Supply Time which is determined by the consequences of Tsensor and Vtref

2923	**[Toner Recovery Time]** -		
2-923-001	-	E*	[1 to 60 / **30** / 1sec/step] Set the Supply Time of an Intermittent Toner when a result of T sensor detection, a Toner near End and a Toner End are detected.

2925	[Toner Supply Ratio] -		
2-925-001	Ratio Select	E*	[0 to 7 / **0** / 1/step] Valid when the Toner Supply mode is set to 2:Fixed1. The time for supply is an obtained value when 0.2 seconds and a setting value are multiplied together.

2926	[Standard Vt] -		
2-926-001	-	E*	[0.00 to 5.00 / **2.50** / 0.05vol/step] Cancellation of a Toner Near End and a Toner End. Clear a Printing Counter (SP2-224-001) after a Near End.

2927	[ID Sensor Control] -		
2-927-001	Function Select	E*	[0 or 1 / **1** / 1/step] Select whether to control Psensor

2928	[Toner End Clear] -		
2-928-001	-	E*	[- / **-** / -] [Execute] Cancellation of a toner near end and a toner end. Clear a Printing Counter (SP2-224-001) after a Near End.

2929	[Vref Adjustment] -		

2-929-001	Upper Limit	E*	[0.50 to 3.50 / **3.10** / 0.05vol/step] Adjusts the upper limit for Vref. The upper limit is set to prevent toner from sticking on the Carrier due to excessively high Vref.
2-929-002	Lower Limit	E*	[0.50 to 3.50 / **1.40** / 0.05vol/step] Adjusts the lower limit for Vref. The lower limit is set to prevent toner from scattering and causing Back Side Dirty due to excessively low Vref.

2930	**[TD Sensor Manual Setting]** Controls Vtref directly here. If the level here is set, SP2-926-001 becomes invalid.		
2-930-001	-	E*	[0.00 to 5.00 / **0.00** / 0.05vol/step]

2931	**[TD (V/wt%) Setting]** Controls the degree of easiness of Toner Supplement. If the level here is set low, toner is easy to supply even though the TD sensor levels are the same. DO NOT SET as it is a SP for the design.		
2-931-001	[V/wt%]	E*	[0.01 to 1.50 / **0.40** / 0.01/step]

2932	**[Toner Density Control Level]** -		
2-932-001	Level Select	E*	[0 to 4 / **0** / 1/step] Valid when the toner supply mode is set to 1:Normal2.

2933	**[ID Sensor Control Correction]** -		
2-933-001	-	E*	[0.5 to 3.0 / **1.0** / 0.1/step] Controls the level of the P sensor Correction. DO NOT SET as it is a SP for the design.

2934	[ID Sensor PWM Setting] -		
2-934-001	Dilay	E*	[0 to 1023 / **200** / 1/step] Displays Psensor PWM value.
2-934-003	Upper Limit Correction	E*	[0 to 1023 / **100** / 1/step] Upper limit of P sensor PWM value.

2935	[ID Sensor Initialization] -		
2-935-001	-	E	[0 or 1 / **0** / 1/step] [Execute] Perform this setting after replacing or cleaning the ID sensor. Firstly, Clear PMW level, adjust Vsg again. Then, reset the PWM again.

2936	[ID Sensor Detection Interval] Counts per a sheet of printed paper.		
2-936-001	Counter	E	[0 to 999 / **0** / 1page/step]

2992	[After TD Sensor Error] -		
2-992-001	Copies Limit	E*	[0 or 1 / **0** / 1/step] Operates SC after printing for a predetermined number of set sheets when a T sensor error occurs
2-992-002	Counter	E*	[0 to 255 / **0** / 1sheet/step] Is the counter for SP2-992-001.

2995	[ID Sensor Detection Interval] -		

2-995-001	Warming-up	E*	[0 to 999 / **480** / 1min/step] If the period of time specified here elapses before the machine returns to full operation from the energy saver or auto off mode, ID sensor warming-up is performed.
2-995-002	Number of Pages	E*	[0 to 999 / **300** / 1sheets/step] A printing operation is suspended and the operation set in SP2-995-003 is conducted when the SP2-936-001 Counter detects more amount of paper than the amount set here.
2-995-003	Effect Timing	E*	[0 or 1 / **0** / 1/step] Determines when the ID sensor reads the ID sensor pattern. 0: Job End. Read pattern at job end. 1: Interrupt. Read pattern at interval set with SP2995-2, even if the job is not completed.

2996	**[Transfer Roller Cleaning]** -		
2-996-001	Function Select	E*	[0 or 1 / **0** / 1/step] Setting to determine whether to clean a transfer roller before printing.
2-996-002	Interval	E*	[0 to 100 / **50** / 1/step] The transfer roller is cleaned at the Job End when the SP2-996-003 Counter detects more amount of paper than the amount set here. If the amount set here is 0, cleaning will not conducted.
2-996-003	Counter	E*	[0 or 1 / **0** / 1/step] Determines when the ID sensor reads the ID sensor pattern. 0: Job End. Read pattern at job end. 1: Interrupt. Read pattern at interval set with SP2995-2, even if the job is not completed.

2998	[PCU Reverse Rotation Time] -		
2-998-001	Wait Time	E*	[240 to 999 / **300** / 1/step] Adjusts the Wait Time from the halt of the Main Motor to the start of the reverse operation
2-998-002	Reverse Time	E*	[0 to 99 / **60** / 1/step] Adjusts the time length of the reverse operation when the Main Motor stops.

Main SP Tables-3

SP3-XXX (Process)

There are no Group 3 SP codes for this machine.

Main SP Tables-4

SP4-XXX (Scanner)

4008	**[Sub Scan Magnification Adj]** Adjusts the magnification in the sub scan direction for scanning. If this value is changed, the scanner motor speed is changed. Use the [./*] key to enter the minus (–) before entering the value. Setting a lower value reduces the motor speed and lengthens the image in the sub scan direction (paper direction). Setting a larger value increases the motor speed and shortens the image in the sub scan direction.		
4-008-001	-	E*	[-1.0 to 1.0 / **0.0** / 0.1%/step]

4010	**[Sub Scan Registration Adj]** Adjusts the leading edge registration by changing the scanning start timing in the sub-scan direction. Use the [./*] key to enter the minus (–) before entering the value. A minus setting moves in the direction of the leading edge. A larger value shifts the image away from the leading edge, and a smaller value shifts the image toward the leading edge.		
4-010-001	-	E*	[-2.0 to 2.0 / **0.0** / 0.1mm/step]

4011	**[Main Scan Reg]** Adjusts the side-to-side registration for scanning. (–): The image disappears at the left side. (+): The image appears at the left side. Use the [./*] key to enter the minus (–) before entering the value.		
4-011-001	-	E*	[-2.5 to 2.5 / **0.0** / 0.1mm/step]

4012	**[Set Scale Mask]** Adjusts the erase margin for scanning. The leading, trailing, right and left margins can be set independently. Do not adjust this unless the user wishes to have a scanner margin that is greater than the printer margin.

4-012-001	Book: Sub LEdge	E	[0.0 to 3.0 / **1.0** / 0.1mm/step] Set Scale Mask for the Book: Leading Edge [Left Side] of the Sub Scan
4-012-002	Book: Sub TEdge	E	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set Scale Mask for the Book: Trailing Edge [Right Side] of the Sub Scan
4-012-003	Book: Main LEdge	E	[0.0 to 3.0 / **1.0** / 0.1mm/step] Set Scale Mask for the Book: Left [Back Side] of the Main Scan
4-012-004	Book: Main:TEdge	E	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set Scale Mask for the Book: Right [Front Side] of the Main Scan
4-012-005	ADF: Leading Edge	E	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set the Scale Mask Area for the ADF: Leading Edge on the Sub Scan
4-012-007	ADF: Right	E	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set the Scale Mask Area for the ADF: Right on the Main Scan
4-012-008	ADF: Left	E	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set the Scale Mask Area for the ADF: Left on the Main Scan

4013	**[Scanner Free Run]** Performs a scanner free run with the exposure lamp on or off.		
4-013-001	Book mode :Lamp Off	E	[OFF or ON / **-** / 1/step]
4-013-002	Book mode :Lamp On	E	

4014	**[Scan]** Executes the scanner free run with each mode.		
4-014-001	HP Detection Enable	E	[- / **-** / -] [Execute]
4-014-002	HP Detection Disable	E	

4020	[Dust Check] -		
4-020-001	Dust Detect:On/Off	E*	[0 or 1 / **0** / 1/step] Select On/Off for Dust Detect: OFF:0/ON:1
4-020-002	Dust Detect:Lvl	E*	[0 to 8 / **4** / 1/step] Selects the level of the Dust Detect. There are 9 levels [0 to 8].The default level is 4. Larger number of the level makes the detection easier. 0:Off, 1: Weakest, 4 Default, 8:Strongest
4-020-003	Dust Reject:Lvl	E*	[0 to 4 / **0** / 1/step] Selects the level of the sub scan line correction when using the ARDF. 0: Off, 1: Weakest, 2: Weak, 3: Strong, 4: Strongest

4301	[Operation Check APS Sensor] Displays the status of the APS sensors and platen/DF cover sensor.		
4-301-001	-	E	[0 to 255 / **0** / 1/step]

4303	[Min Size for APS] SP to display the Custom Size [Small Size] when the paper size is detected.		
4-303-001	-	E*	[0 or 1 / **0** / 1/step] 0: No Original 1: A5-Lengthwise

4305	[8K/16K Detection] SP to determine the size setting when the paper size is detected

4-305-001	-	E*	[0 to 3 / **0** / 1/step] 0: Nomal Detection 1:A4-Sideways LT-Lengthwise 2:LT-Sideways A4-Lengthwise 3:8K 16K

4308	**[Scan Size Detection]** -		
4-308-001	Detection ON/OFF	E*	[0 to 1 / **1** / 1/step] 0: Off, 1: On Selects whether the machine detects the original size.

4309	**[Scan Size Detect:Setting]** -		
4-309-001	Original Density Thresh	E*	[0 to 255 / **18** / 1digit/step] SP in the Paper-size Detect function to select the Shading Correction Target Level Setting for image reading
4-309-002	Detection Time	E*	[20 to 100 / **60** / 20msec/step] SP in the Paper-size Detect function to adjust the time for the detection
4-309-003	Lamp ON:Delay Time	E*	[40 to 200 / **40** / 20msec/step] SP in the Paper-size Detect function to adjust the timing of Lamp Lighting.
4-309-004	LED PWM Duty	E*	[0 to 100 / **60** / 1/step] SP in the Paper-size Detect function to adjust the LED Strength

4310	**[Scan Size Detect Value]** SP in the Paper-size Detect function to check the Image Density

4-310-001	S1:R	E	[0 to 255 / **0** / 1digit/step]
4-310-002	S1:G	E	
4-310-003	S1:B	E	
4-310-004	S2:R	E	
4-310-005	S2:G	E	
4-310-006	S2:B	E	
4-310-007	S3:R	E	
4-310-008	S3:G	E	
4-310-009	S3:B	E	

Note

- Each detection point (S1, S2, S3) in SP4310 is as follows.

4350	**[Intermittent Shading: B/W]** -		
4-350-001	Switch On/Off	E*	[0 or 1 / **1** / 1/step] Switches On/OFF for Intermittent Shading when scanning BW (Simplex/Duplex).
4-350-002	Interval 1	E*	[0 to 65535 / **180** / 1sec/step]
4-350-003	Interval 1: Times	E*	[1 to 60 / **1** / 1/step]
4-350-004	Interval 2	E*	[0 to 65535 / **180** / 1sec/step]

4351	**[Intermittent Shading: Color]** -		
4-351-001	Switch On/Off	E*	[0 or 1 / **1** / 1/step] Switches On/OFF for Intermittent Shading when scanning FC (Simplex/Duplex).
4-351-002	Interval1	E*	[0 to 65535 / **180** / 1sec/step]
4-351-003	Interval1:Rotations	E*	[1 to 60 / **1** / 1/step]

4-351-004	Interval2	E*	[0 to 65535 / **180** / 1 / sec]

4400	**[Org Edge Mask]** -		
4-400-001	Book: Sub: LEdge	E*	[0.0 to 3.0 / **0.0** / 0.1mm/step] Sets mask for original shadow edge 0.1mm per step.
4-400-002	Book: Sub: TEdge	E*	
4-400-003	Book: Main:Ledge	E*	
4-400-004	Book: Main:Tedge	E*	
4-400-005	ADF: Leading Edge	E*	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set Original Edge Mask for the ADF: Leading Edge of the Sub Scan
4-400-007	ADF: Right	E*	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set Original Edge Mask for the ADF:Right of the Main Scan
4-400-008	ADF: Left	E*	[0.0 to 3.0 / **0.0** / 0.1mm/step] Set Original Edge Mask for the ADF:Left of the Main Scan

4417	**[IPU Test Pattern]** -		
4-417-001	Test Pattern	E	[0 to 8 / **0** / 1/step] 0: Scanned image 1: Gradation main scan A 2: Patch 16C 3: Grid pattern A 4: Slant grid pattern B 5: Slant grid pattern C 6: Slant grid pattern D 7: Scanned+Slant Grid C 8: Scanned+Slant Grid D

4429	[Select Copy Data Security] Adjusts the ICI density level.		
4-429-001	Copying	E*	[0 to 3 / **3** / 1/step] 0:Off , 1:thinest, 3:thickest Select the density level of the illegal copy for Copying.
4-429-002	Scanning	E*	[0 to 3 / **3** / 1/step] 0: Off , 1:thinest, 3:thickest Select the density level of the illegal copy for Scanning.
4-429-003	Fax Operation	E*	[0 to 3 / **3** / 1/step] 0: Off , 1:thinest, 3:thickest Select the density level of the illegal copy for Fax Operation.

4450	[Scan Image Pass Selection] -		
4-450-001	Black Subtraction ON/OFF	E	[0 or 1 / **1** / 1/step] Uses or does not use the black reduction image path.
4-450-002	SH ON/OFF	E	[0 or 1 / **0** / 1/step] Uses or does not use the shading image path.

4460	[Digital AE Set] Specifies the detection threshold for background deletion in ADS mode.		
4-460-001	Low Limit	E*	[0 to 1023 / **364** / 1/step] Low-Limit Threshold which is detected as a background when the Platen is scanned. The areas of an image input which are brighter [have higher numbers] than the Threshold is recognized as backgrounds.
4-460-002	Background Level	E*	[512 to 1535 / **932** / 1/step]

4550	[Scan Apli:Txt/Print] Sets the text/print MTF level of the scanner application.		
4-550-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-550-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-550-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-550-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-550-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4551	[Scan Apli:Txt] Sets the text MTF level of the scanner application.		
4-551-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-551-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-551-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-551-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-551-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4552	[Scan Apli:Txt Dropout] Sets the text dropout color MTF level of the scanner application.		
4-552-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-552-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-552-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-552-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]

4-552-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4553	**[Scan Apli:Txt/Photo]** Sets the text/photo MTF level of the scanner application.		
4-553-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-553-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-553-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-553-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-553-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4554	**[Scan Apli:Photo]** Sets the photo MTF level of the scanner application.		
4-554-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-554-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-554-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-554-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-554-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4565	**[Scan Apli:GrayScale]** Sets the Grayscale MTF level of the scanner application.		
4-565-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-565-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]

4-565-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-565-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-565-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4570	**[Scan Apli:Col Txt/Photo]** Sets the color text/photo MTF level of the scanner application.		
4-570-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-570-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-570-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-570-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-570-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4571	**[Scan Apli:Col Gloss Photo]** Sets the color gloss photo MTF level of the scanner application.		
4-571-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]
4-571-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-571-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-571-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-571-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4572	**[Scan Apli:AutoCol]** Sets the automatic color MTF level of the scanner application.		
4-572-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step]

4-572-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step]
4-572-007	Brightness: 1-255	E*	[1 to 255 / **128** / 1/step]
4-572-008	Contrast: 1-255	E*	[1 to 255 / **128** / 1/step]
4-572-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7 / **0** / 1/step]

4580	**[Fax Apli:Txt/Chart]** Sets the text/chart MTF level of the fax application.		
4-580-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step] 0: MTF Off When the CCD converts the original image to electrical signals, the contrast is reduced due to the influence that adjacent white and black pixels have on one another as a result of lens properties. Typically, you will see very narrow width and spacing between black and white areas. MTF corrects this problem and emphasizes image detail.
4-580-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 0 /step] Selects the level of smoothing for originals that contain dithered images. 0: Default (Off) 7: Strongest
4-580-007	Brightness: 1-255	E*	[1 to 255/ **128** /1/step] Sets the overall brightness of the image. 1: Weakest 128: Default 255: Strongest

4-580-008	Contrast: 1-255	E*	[1 to 255/ **128** /1/step] Sets the overall contrast of the image. 1: Weakest 128: Default 255: Strongest
4-580-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7/ **0** / 1/step] Sets the level of independent dot erasure to improve the appearance of background. 0: Default (Off) 7: Strongest
4-580-010	Texture Erase: 0	E*	[0 to 2 / **0** / 1/step] Sets the erasure level of textures. Set higher for stronger effect, lower for weaker effect. 0: Not activated **Note**: This SP code exists for SP4580, SP4582 and SP4583 only.

4581	**[Fax Apli:Txt]** Sets the text MTF level of the fax application.		
4-581-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step] 0: MTF Off When the CCD converts the original image to electrical signals, the contrast is reduced due to the influence that adjacent white and black pixels have on one another as a result of lens properties. Typically, you will see very narrow width and spacing between black and white areas. MTF corrects this problem and emphasizes image detail.
4-581-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 0/step] Selects the level of smoothing for originals that contain dithered images. 0: Default (Off) 7: Strongest

4-581-007	Brightness: 1-255	E*	[1 to 255/ **128** /1/step] Sets the overall brightness of the image. 1: Weakest 128: Default 255: Strongest
4-581-008	Contrast: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall contrast of the image. 1: Weakest 128: Default 255: Strongest
4-581-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7/ **0** / 1/step] Sets the level of independent dot erasure to improve the appearance of background. 0: Default (Off) 7: Strongest

4582	**[Fax Apli:Txt/Photo]** Sets the text/photo MTF level of the fax application.		
4-582-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step] 0: MTF Off When the CCD converts the original image to electrical signals, the contrast is reduced due to the influence that adjacent white and black pixels have on one another as a result of lens properties. Typically, you will see very narrow width and spacing between black and white areas. MTF corrects this problem and emphasizes image detail.
4-582-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 0/step] Selects the level of smoothing for originals that contain dithered images. 0: Default (Off) 7: Strongest

4-582-007	Brightness: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall brightness of the image. 1: Weakest 128: Default 255: Strongest
4-582-008	Contrast: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall contrast of the image. 1: Weakest 128: Default 255: Strongest
4-582-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7/ **0** / 1/step] Sets the level of independent dot erasure to improve the appearance of background. 0: Default (Off) 7: Strongest
4-581-010	Texture Erase: 0	E*	[0 to 2 / **0** / 1/step] Sets the erasure level of textures. Set higher for stronger effect, lower for weaker effect. 0: Not activated **Note**: This SP code exists for SP4580, SP4582 and SP4583 only.

4583	**[Fax Apli:Photo]** Sets the photo MTF level of the fax application.		
4-583-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step] 0: MTF Off When the CCD converts the original image to electrical signals, the contrast is reduced due to the influence that adjacent white and black pixels have on one another as a result of lens properties. Typically, you will see very narrow width and spacing between black and white areas. MTF corrects this problem and emphasizes image detail.

4-583-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step] Selects the level of smoothing for originals that contain dithered images. 0: Default (Off) 7: Strongest
4-583-007	Brightness: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall brightness of the image. 1: Weakest 128: Default 255: Strongest
4-583-008	Contrast: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall contrast of the image. 1: Weakest 128: Default 255: Strongest
4-583-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7/ **0** / 1/step] Sets the level of independent dot erasure to improve the appearance of background. 0: Default (Off) 7: Strongest
4-583-010	Texture Erase: 0	E*	[0 to 2 / **0** / 1/step] Sets the erasure level of textures. Set higher for stronger effect, lower for weaker effect. 0: Not activated **Note**: This SP code exists for SP4580, SP4582 and SP4583 only.

4584	**[Fax Apli:Original 1]** Sets the original 1 MTF level of the fax application.

4-584-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step] 0: MTF Off When the CCD converts the original image to electrical signals, the contrast is reduced due to the influence that adjacent white and black pixels have on one another as a result of lens properties. Typically, you will see very narrow width and spacing between black and white areas. MTF corrects this problem and emphasizes image detail.
4-584-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step] Selects the level of smoothing for originals that contain dithered images. 0: Default (Off) 7: Strongest
4-584-007	Brightness: 1-255	E*	Sets the overall brightness of the image. [1 to 255/ **128** / 1/step] 1: Weakest 128: Default 255: Strongest
4-584-008	Contrast: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall contrast of the image. 1: Weakest 128: Default 255: Strongest
4-584-009	Ind. Dot Erase: 0(Off) 1-7(Weak-Strong)	E*	[0 to 7/ **0** / 1/step] Sets the level of independent dot erasure to improve the appearance of background. 0: Default (Off) 7: Strongest

4585	**[Fax Apli:Original 2]** Sets the original 2 MTF level of the fax application.

4-585-005	MTF: 0(Off) 1-15 (Weak-Strong)	E*	[0 to 15 / **8** / 1/step] 0: MTF Off When the CCD converts the original image to electrical signals, the contrast is reduced due to the influence that adjacent white and black pixels have on one another as a result of lens properties. Typically, you will see very narrow width and spacing between black and white areas. MTF corrects this problem and emphasizes image detail.
4-585-006	Smoothing: 0(x1) 1-7 (Weak-Strong)	E*	[0 to 7 / **4** / 1/step] Selects the level of smoothing for originals that contain dithered images. 0: Default (Off) 7: Strongest
4-585-007	Brightness: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall brightness of the image. 1: Weakest 128: Default 255: Strongest
4-585-008	Contrast: 1-255	E*	[1 to 255/ **128** / 1/step] Sets the overall contrast of the image. 1: Weakest 128: Default 255: Strongest
4-585-009	Independent Dot Erase: (0) / 1-7(Strong)	E*	[0 to 7/ **0** / 1/step] Sets the level of independent dot erasure to improve the appearance of background. 0: Default (Off) 7: Strongest

4600	**[SBU Version Display]** Displays the version number of the SBU.

4-600-001	SBU ID	E	[0x00 to 0xFF / **0** / 1 / -]
4-600-002	SCAT ID	E	

4602	**[Scanner Memory Access]** Enables the read and write check for the SBU registers.		
4-602-001	-	E	[0x000000 to 0xFFFFFF / **0x000000** / - / -]

4603	**[Auto Adjustment Operation]** Executes the AGC and enables the home position detection.		
4-603-001	HP Detection Enable	E	[- / **-** / -] [Execute]
4-603-002	HP Detection Disable	E	

4604	**[FGATE Open/Close]** Select ON/ Off of the FGATE XSSCAN] in the Schedule Adjustment process.		
4-604-001	-	E	[OFF or ON / **-** / 1/step]

4609	**[Gray Balance Set: R]** Adjusts the gray balance of the red signal for each scanning mode.		
4-609-001	Book Scan	E*	[-384 to 255 / **-100** / 1digit/step]
4-609-002	DF Scan	E*	

4610	**[Gray Balance Set: G]** Adjusts the gray balance of the green signal for each scanning mode.		
4-610-001	Book Scan	E*	[-384 to 255 / **-100** / 1digit/step]
4-610-002	DF Scan	E*	

4611	**[Gray Balance Set: B]** Adjusts the gray balance of the blue signal for each scanning mode.		
4-611-001	Book Scan	E*	[-384 to 255 / **-100** / 1digit/step]
4-611-002	DF Scan	E*	

4635	**[SSCG Correction Set]** Selects SSCG Noise Correction Mode. Use when SSCG does not function correctly due to accidental malfunction, as a temporally action, set with out adjusting SSCG. When SSCG does not function correctly, due to scanner, side streak/cross streak might appear in high density area. Use this temporally if changing setting redresses problem.		
4-635-001	Mode Selection	E*	[0 to 3 / **1** / 1/step]

4637	**[SSCG Correction Value (Ana.)]** Displays SSCG analog correction value. Adjustment will be done when scanner turns on. Use for design evaluation, analyzing malfunction (abnormal images). RE: Red Even signal, RO: Red Odd signal GE: Green Even signal, GO: Green Odd signal BE: Blue Even signal, BO: Blue Odd signal		
4-637-001	Latest:RE	E	[-31 to 31 / **0** / 1digit/step]
4-637-002	Latest:RO	E	
4-637-003	Latest:GE	E	
4-637-004	Latest:GO	E	
4-637-005	Latest:BE	E	
4-637-006	Latest:BO	E	

4638	**[SSCG Correction Value (Dig.)]** Displays SSCG digital correction value. Adjustment will be done when scanner turns on. Use for design evaluation, analyzing malfunction (abnormal images). RE: Red Even signal, RO: Red Odd signal GE: Green Even signal, GO: Green Odd signal BE: Blue Even signal, BO: Blue Odd signal

4-638-001	Latest:RE	E	[-255 to 255 / **0** / 1digit/step]
4-638-002	Latest:RO	E	
4-638-003	Latest:GE	E	
4-638-004	Latest:GO	E	
4-638-005	Latest:BE	E	
4-638-006	Latest:BO	E	

4639	**[SSCG Correction Value (Ana.)]** -		
4-639-001	Factory Setting:RE	E*	[-31 to 31 / **0** / 1digit/step]
4-639-002	Factory Setting:RO	E*	
4-639-003	Factory Setting:GE	E*	
4-639-004	Factory Setting:GO	E*	
4-639-005	Factory Setting:BE	E*	
4-639-006	Factory Setting:BO	E*	

4640	**[SSCG Correction Value (Dig.)]** -		
4-640-001	Factory Setting:RE	E*	[-255 to 255 / **0** / 1digit/step]
4-640-002	Factory Setting:RO	E*	
4-640-003	Factory Setting:GE	E*	
4-640-004	Factory Setting:GO	E*	
4-640-005	Factory Setting:BE	E*	
4-640-006	Factory Setting:BO	E*	

4641	**[SSCG Noise Amplitude]** Displays SSCG Nose Amplitude when adjusting SSCG. Correction value will be decided depending on detected Noise Amplitude when adjusting. Adjustment will be done when scanner turns on. Use for design evaluation, analyzing malfunction (abnormal images). RE: Red Even signal, RO: Red Odd signal GE: Green Even signal, GO: Green Odd signal BE: Blue Even signal, BO: Blue Odd signal		
4-641-001	RE	E	[0 to 1023 / **0** / 1digit/step]
4-641-002	RO	E	
4-641-003	GE	E	
4-641-004	GO	E	
4-641-005	BE	E	
4-641-006	BO	E	

4646	**[Scan Adjust Error]** Displays error value of scanning adjustment.		
4-646-001	White level	E	[0 to 65535 / **0** / 1 / 1/step] Shows cause of error when an error occurs during the white level adjustment when scanner turns on. When an error occurred, SC142-00 will be given.
4-646-002	Black level	E	[0 to 65535 / **0** / 1 / 1/step] Shows cause of error when an error occurs during the black level adjustment when scanner turns on. When an error occurred, SC142-00 will be given.

4-646-003	SSCG Correction	E	[0 to 65535 / **0** / 1 / 1/step] Shows cause of error when an error occurs With the SSCG Noise correction when scanner turns on. When an error occurred, SC142-00 will be given.

4647	**[Scanner Hard Error]** Displays result of SBU connection check.		
4-647-001	Power-ON	E	[0 to 65535 / **0** / 1/step]

4651	**[Black Level Adj. Value (Ana.)]** Displays Black level analog adjustment value. Black level adjustment is continuously done hardwarelly by SBUs ASIC (SCAT). Black level is checked when scanner turns on, then adjustment value is given. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). RE: Red Even signal, RO: Red Odd signal		
4-651-001	Latest: RE	E	[0 to 127 / **0** / 1digit/step]
4-651-002	Latest: RO	E	

4652	**[Black Level Adj. Value (Ana.)]** Displays Black level analog adjustment value. Black level adjustment is continuously done hardwarelly by SBUs ASIC (SCAT). Black level is checked when scanner turns on, then adjustment value is given. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). GE: Green Even signal, GO: Green Odd signal		
4-652-001	Latest: GE	E	[0 to 127 / **0** / 1digit/step]
4-652-002	Latest: GO	E	

4653	**[Black Level Adj. Value (Ana.)]** Displays Black level analog adjustment value. Black level adjustment is continuously done hardwarelly by SBUs ASIC (SCAT). Black level is checked when scanner turns on, then adjustment value is given. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). BE: Blue Even signal, BO: Blue Odd signal		
4-653-001	Latest: BE	E	[0 to 127 / **0** / 1digit/step]
4-653-002	Latest: BO	E	

4654	**[Black Level Adj. Value (Dig.)]** Displays Black level digital adjustment value. Black level adjustment is continuously done hardwarelly by SBUs ASIC (SCAT). Black level is checked when scanner turns on, then adjustment value is given. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). RE: Red Even signal, RO: Red Odd signal		
4-654-001	Latest: RE	E	[0 to 16383 / **0** / 1digit/step]
4-654-002	Latest: RO	E	

4655	**[Black Level Adj. Value (Dig.)]** Displays Black level digital adjustment value. Black level adjustment is continuously done hardwarelly by SBUs ASIC (SCAT). Black level is checked when scanner turns on, then adjustment value is given. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). GE: Green Even signal, GO: Green Odd signal		
4-655-001	Latest: GE	E	[0 to 16383 / **0** / 1digit/step]
4-655-002	Latest: GO	E	

4656	**[Black Level Adj. Value (Dig.)]** Displays Black level digital adjustment value. Black level adjustment is continuously done hardwarelly by SBUs ASIC (SCAT). Black level is checked when Scanner turns on, then Adjustment value is given. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). BE: Blue Even signal, BO: Blue Odd signal		
4-656-001	Latest: BE	E	[0 to 16383 / **0** / 1digit/step]
4-656-002	Latest: BO	E	

4658	**[Analog Gain Adjust]** Displays the previous gain value of the amplifiers on the controller for Red.		
4-658-001	Latest: R	E	[0 to 14 / **0** / 1digit/step]

4659	**[Analog Gain Adjust]** Displays the previous gain value of the amplifiers on the controller for Green.		
4-659-001	Latest: G	E	[0 to 14 / **0** / 1digit/step]

4660	**[Analog Gain Adjust]** Displays the previous gain value of the amplifiers on the controller for Blue.		
4-660-001	Latest: B	E	[0 to 14 / **0** / 1digit/step]

4661	**[Digital Gain Adjust]** Displays Digital gain adjustment value. RE: Red Even signal, RO: Red Odd signal. White level adjustment will be done to keep hold of image signal's dynamic range when scanner turns on. Gain adjustment will be done hardwarelly by SBUs ASIC (SCAT) and be given, cause to the fact that White level adjustment will amplify or attenuated image signal. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-661-001	Latest: RE	E	[0 to 1023 / **0** / 1digit/step]
4-661-002	Latest: RO	E	

4662	**[Digital Gain Adjust]** Displays Digital gain adjustment value. GE: Green Even signal, GO: Green Odd signal. White level adjustment will be done to keep hold of image signal's dynamic range when scanner turns on. Gain adjustment will be done hardwarelly by SBUs ASIC (SCAT) and be given, cause to the fact that White level adjustment will amplify or attenuated image signal. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-662-001	Latest: GE	E	[0 to 1023 / **0** / 1digit/step]
4-662-002	Latest: GO	E	

4663	**[Digital Gain Adjust]** Displays Digital gain adjustment value. GE: Green Even signal, GO: Green Odd signal. White level adjustment will be done to keep hold of image signal's dynamic range when scanner turns on. Gain adjustment will be done hardwarelly by SBUs ASIC (SCAT) and be given, cause to the fact that White level adjustment will amplify or attenuated image signal. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-663-001	Latest: BE	E	[0 to 1023 / **0** / 1digit/step]
4-663-002	Latest: BO	E	

4670	**[Black Level Adj. Value (Ana.)]** Display/Saves Factory Black level analog adjusting value. RE: Red even, RO: Red Odd signal. Factory Black level analog adjusting value from Main unit warranty process is saved. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-670-001	Factory Setting: RE	E*	[0 to 127 / **0** / 1digit/step]
4-670-002	Factory Setting: RO	E*	

4671	**[Black Level Adj. Value (Ana.)]** Display/Saves Factory Black level analog adjusting value. GE: Green even, GO: Green Odd signal. Factory Black level analog adjusting value from Main unit warranty process is saved. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-671-001	Factory Setting: GE	E*	[0 to 127 / **0** / 1digit/step]
4-671-002	Factory Setting: GO	E*	

4672	**[Black Level Adj. Value (Ana.)]** Display/Saves Factory Black level analog adjusting value. BE: Blue even, BO: Blue Odd signal. Factory Black level analog adjusting value from Main unit warranty process is saved. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-672-001	Factory Setting: BE	E*	[0 to 127 / **0** / 1digit/step]
4-672-002	Factory Setting: BO	E*	

4673	**[Black Level Adj. Value (Dig.)]** Display/Saves Factory Black level digital adjusting value. RE: Red even, RO: Red Odd signal. Factory Black level digital adjusting value from Main unit warranty process is saved. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-673-001	Factory Setting: RE	E*	[0 to 16383 / **0** / 1digit/step]
4-673-002	Factory Setting: RO	E*	

4674	**[Black Level Adj. Value (Dig.)]** Display/Saves Factory Black level digital adjusting value. GE: Green even, GO: Green Odd signal. Factory Black level digital adjusting value from Main unit warranty process is saved. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-674-001	Factory Setting: GE	E*	[0 to 16383 / **0** / 1digit/step]
4-674-002	Factory Setting: GO	E*	

4675	[Black Level Adj. Value (Dig.)] Display/Saves Factory Black level digital adjusting value. BE: Blue even, BO: Blue Odd signal. Factory Black level digital adjusting value from Main unit warranty process is saved. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-675-001	Factory Setting: BE	E*	[0 to 16383 / **0** / 1digit/step]
4-675-002	Factory Setting: BO	E*	

4677	[Analog Gain Adjust] Displays the factory setting values of the gain adjustment for Red.		
4-677-001	Factory Setting: R	E*	[0 to 14 / **0** / 1digit/step]

4678	[Analog Gain Adjust] Displays the factory setting values of the gain adjustment for Green.		
4-678-001	Factory Setting: G	E*	[0 to 14 / **0** / 1digit/step]

4679	[Analog Gain Adjust] Displays the factory setting values of the gain adjustment for Blue.		
4-679-001	Factory Setting: B	E*	[0 to 14 / **0** / 1digit/step]

4680	[Digital Gain Adjust] Displays the gain value of the amplifiers on the controller for Red.		
4-680-001	Factory Setting: RE	E*	[0 to 1023 / **0** / 1digit/step]
4-680-002	Factory Setting: RO	E*	

4681	[Digital Gain Adjust] Displays the gain value of the amplifiers on the controller for Green.		
4-681-001	Factory Setting: GE	E*	[0 to 1023 / **0** / 1digit/step]
4-681-002	Factory Setting: GO	E*	

4682	**[Digital Gain Adjust]** Displays the gain value of the amplifiers on the controller for Blue.		
4-682-001	Factory Setting: BE	E*	[0 to 1023 / **0** / 1digit/step]
4-682-002	Factory Setting: BO	E*	

4688	**[DF Density Adjustment]** Adjusts the white shading parameter when scanning an image with the DF. Adjusts the density level if the ID of outputs made in the DF and Platen mode is different.		
4-688-001	ARDF	E*	[80 to 120 / **102** / 1%/step]

4690	**[White Level Peak Read]** Displays the peak level of the white level scanning. If these scanned white levels are out of the correct range, SC142 may be issued.		
4-690-001	RE	E	[0 to 1023 / **0** / 1digit/step]
4-690-002	RO	E	

4691	**[White Level Peak Read]** Displays the peak level of the white level scanning. If these scanned white levels are out of the correct range, SC142 may be issued.		
4-691-001	GE	E	[0 to 1023 / **0** / 1digit/step]
4-691-002	GO	E	

4692	**[White Level Peak Read]** Displays the peak level of the white level scanning. If these scanned white levels are out of the correct range, SC142 may be issued.		
4-692-001	BE	E	[0 to 1023 / **0** / 1digit/step]
4-692-002	BO	E	

4693	**[Black Level Peak Read]** Displays the peak level of the black level scanning. If these scanned white levels are out of the correct range, SC142 may be issued.

4-693-001	RE	E	[0 to 1023 / **0** / 1digit/step]
4-693-002	RO	E	

4694	**[Black Level Peak Read]** Display the peak level of the black level scanning. If these scanned white levels are out of the correct range, SC142 may be issued.		
4-694-001	GE	E	[0 to 1023 / **0** / 1digit/step]
4-694-002	GO	E	

4695	**[Black Level Peak Read]** Display the peak level of the black level scanning. If these scanned white levels are out of the correct range, SC142 may be issued.		
4-695-001	BE	E	[0 to 1023 / **0** / 1digit/step]
4-695-002	BO	E	

4698	**[Factory Setting Input]** -		
4-698-002	Execution Flag	E*	[0 or 1 / **0** / 1/step]

4699	**[SBU Test Pattern Change]** Outputs SBU Test pattern. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).		
4-699-001	-	E	[0 to 255 / **0** / 1/step]

4802	**[Sanner Free Run]** Executes the scanner free run for shading movement with the exposure lamp on or off. The free run moves the scanning lamp a short distance and immediately returns it to its home position.		
4-802-001	Lamp OFF	E	[OFF or ON / **-** / 1/step]
4-802-002	Lamp ON	E	Touch [ON] to start the free run. Be sure to touch [OFF] to stop the free run.

4804	[Home Position Operation] Moves the exposure lamp a short distance and immediately returns it to its home position. Touch [Execute]> "Completed"> [Exit].		
4-804-001	-	E	[- / - / -] [Execute]

4806	[Scan Carriage Retract Op] Moves the exposure lamp a short distance away from the home position and stops. • Touch [Execute]> "Completed"> [Exit] • Do SP4804 to return the exposure lamp to its home position. Note • This SP is done before shipping the machine to another location. Turning the machine power off/on also returns the exposure lamp to its home position.		
4-806-001	-	E	[- / - / -] [Execute]

4807	[SBU Off Mode] Selects the SBU test pattern generated by the controller board..		
4-807-001	On/Off	E*	[0 or 1 / 0 / 1/step]

4813	[ALC Selection] -

4-813-001	FC	E*	[0 or 1 / **0** / 1/step] Sets ON/OFF variable correction for Originals scanning level when continuously scanning multiple originals using ADF. For increasing productivity of ADF, creating correction data is done at a certain (3min) interval. If shade correcting data is not updated, original scanning level will change; affected from the light source brightness change; there for, variable will be corrected by scanning ADF's guide plate (white) from between originals. In an occasion of an unexpected malfunction and level correcting does not work, or background density disorderly changes among multiple scanned originals, and by changing setting these will improve; then temporarily set correction OFF. By setting interval shading OFF with SP4-351-001, even when ALC is set OFF, shading will be done each time, and will prevent density change when having level correction OFF.

4-813-002	BW	E*	[0 or 1 / **0** / 1/step] Sets ON/OFF variable correction for Originals scanning level when continuously scanning multiple originals using ADF. For increasing productivity of ADF, creating correction data is done at a certain (3min) interval. If shade correcting data is not updated, original scanning level will change; affected from the light source brightness change; there for, variable will be corrected by scanning ADF's guide plate (white) from between originals. In an occasion of an unexpected malfunction and level correcting does not work, or background density disorderly changes among multiple scanned originals, and by changing setting those will improve; then temporarily set correction OFF. By setting interval shading OFF with SP4-351-001, even when ALC is set OFF, shading will be done each time, and will prevent density change when having level correction OFF.

4850	**[PWM]** -		
4-850-001	Latest	E	[0 to 8191 / **0** / 1digit/step] Displays adjustment value of LED lighting duty (PWM) for LED light quantity adjustment. Reduces light quantity when CCD's output is overflowed from the amount of light, by adjusting LED light source lighting duty when scanner powers ON. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).

4-850-002	Factory Setting	E*	[0 to 8191 / **0** / 1digit/step] Displays factory adjustment value of LED lighting duty (PWM) for LED light quantity adjustment. Factory adjustment values are saved from main unit warranty process. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC).

4851	**[LED White Level Peak Read]** Displays scanning values of White level peak for LED light quantity adjustment. Scanning levels of white basis board will be displayed when scanner powers on and LED light source lighting duty (PWM) is adjusted. When LED light quantity does not complete, SC102-00 is given. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). RE: Red Even signal, RO: Red Odd signal GE: Green Even signal, GO: Green Odd signal BE: Blue Even signal, BO: Blue Odd signal		
4-851-001	Latest: RE	E*	[0 to 1023 / **0** / 1digit/step]
4-851-002	Latest: RO	E*	
4-851-003	Latest: GE	E*	
4-851-004	Latest: GO	E*	
4-851-005	Latest: BE	E*	
4-851-006	Latest: BO	E*	

4852	**[LED White Level Peak Read]** Display/Saves White level peak scanning value (Front side) for factory light quantity adjustment of LED. Factory scanning value for white level peak from main unit warranty process. Use for design evaluation, analyzing cause of malfunction (abnormal images, SC). RE: Red Even signal, RO: Red Odd signal GE: Green Even signal, GO: Green Odd signal BE: Blue Even signal, BO: Blue Odd signal		

4-852-001	Factory Setting: F:RE	E*	[0 to 1023 / **0** / 1digit/step]
4-852-002	Factory Setting: F:RO	E*	
4-852-003	Factory Setting: F:GE	E*	
4-852-004	Factory Setting: F:GO	E*	
4-852-005	Factory Setting: F:BE	E*	
4-852-006	Factory Setting: F:BO	E*	

4903	**[Filter Setting]** Sets the threshold value for independent dot erase. • The "0" setting disables independent dot erase. • A higher setting detects more spurious dots for erasing. However, this could cause dots to erase in images that contain areas filled by dithering.		
4-903-001	Ind Dot Erase: Text	E*	[0 to 7 / **0** / 1/step]
4-903-002	Ind Dot Erase: Generation Copy	E*	

4905	**[Select Gradation Level]** Set the parameter for gradation process used in a copy appreciation. Default [0] provides the most suitable parameter. If another level is chosen, re-adjustment of the tone is required.		
4-905-001	-	E*	[0 to 255 / **0** / 1/step]

4909	**[Man Gamma:P ColK]** -		
4-909-001	Offset:Highlight	E*	[0 to 30 / **15** / 1/step]
4-909-002	Offset:Middle	E*	
4-909-003	Offset:Shadow	E*	
4-909-004	Offset:IDMax	E*	
4-909-005	Option:Highlight	E*	[0 to 255 / **0** / 1/step]
4-909-006	Option:Middle	E*	[0 to 12 / **0** / 1/step]

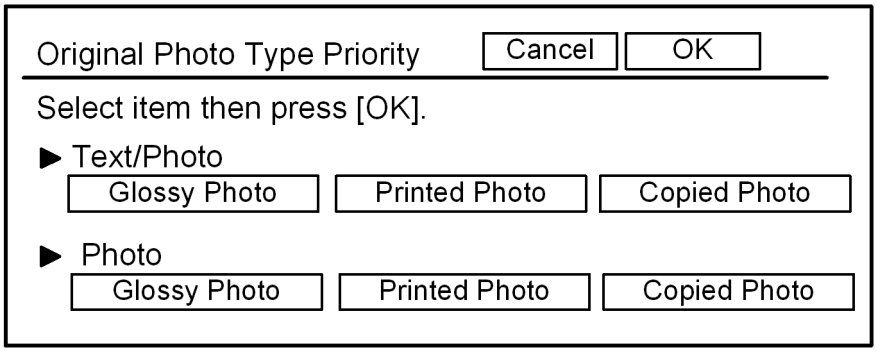
4-909-007	Option:Shadow	E*	[0 to 255 / **0** / 1/step]
4-909-008	Option:IDmax	E*	[0 to 255 / **0** / 1/step]

4914	**[Man Gamma:T ColK]** -		
4-914-001	Offset:Highlight	E*	[0 to 30 / **15** / 1/step]
4-914-002	Offset:Middle	E*	
4-914-003	Offset:Shadow	E*	
4-914-004	Offset:IDMax	E*	
4-914-005	Option:Highlight	E*	[0 to 255 / **0** / 1/step]
4-914-006	Option:Middle	E*	[0 to 12 / **0** / 1/step]
4-914-007	Option:Shadow	E*	[0 to 255 / **0** / 1/step]
4-914-008	Option:IDmax	E*	[0 to 255 / **0** / 1/step]

4918	**[Man Gamma Adj]** Adjusts the offset data of the printer gamma for yellow in Photo mode.		
4-918-009	-	E	[- / **-** / -] [Change]

Text/Photo and Photo have different settings (Glossy Photo, Printed Photo, Copied Photo, etc.) as shown in the screen below).

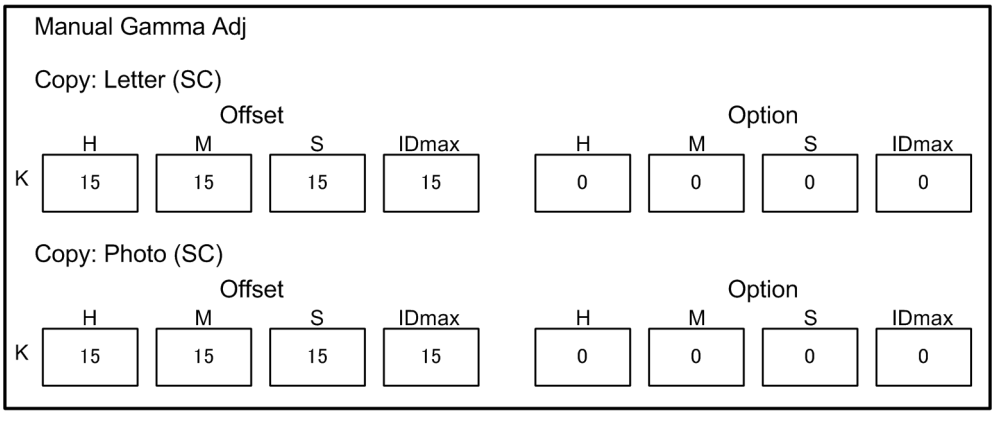
To display this screen: User Tools/Counter button ()> "Copier/Document Server Settings"> "General Features"> "Original Photo Type Priority".



d059d005

These features can be adjusted with SP4918.

Enter the SP mode and select SP4918.



d059d006

Eight adjustments can be done independently for "Text" and "Photo" originals. Refer to the table below.

	Area Adjusted on Original	Value	
		Low (1)	High (15)
Offset			
H	Density in light areas (highlights)	Lighter	Darker
M	Density at center	Lighter	Darker
S	Density of dark areas (shadows)	Lighter	Darker
IDmax	Density of entire original	Lighter	Darker
Option			

	Area Adjusted on Original	Value	
		Low (1)	High (15)
H	Entire original background erase	Weak	Strong
M	Entire original contrast	Low	High
S	Not used	---	---
IDmax	Not used	---	---

4954	[Read/Restore Std] Restores the standard chromaticity rank.		
4-954-005	Chromaticity Rank	E*	[0 to 255 / **0** / 1/step]

4993	[Highlight Correction] Selects the level of highlight correction.		
4-993-001	Sensitivity Selection	E*	[0 to 9 / **4** / 1 /step] Sets the level of sensitivity for the removal of shadows that can be caused with originals that have been marked up with highlighter pens. Lowering the setting reduces the removal effect, and raising the setting increases the removal effect. 0: weakest sensitivity 9: strongest sensitivity
4-993-002	Range Selection	E*	[0 to 9 / **4** / 1 /step] Sets the region where highlight removal is applied. A lower setting increases the size of the region, and a higher setting reduces the size of the region. 0: weakest skew correction, 9: strongest skew correction

4994	**[Adj Txt/Photo Recog Level]** Use this SP to adjust the copier capability to distinguish between text and photo areas of images. This adjustment applies only to scanner applications using the high compression PDF mode.		
4-994-001	High Compression PDF	E*	[0 to 2 / **1** / 1 /step] 0: Text priority 1: Normal 2: Photo priority

4996	**[White Paper Detection Level]** Selects the threshold level of the original background density. Increasing this threshold level machine easily judge that an original is white.		
4-996-001	-	E*	[0 to 6 / **3** / 1/step] 0: Lightest 6: Darkest

Main SP Tables-5

SP5-XXX (Mode)

5009	[Add Disp. Lang] Adds language available in user choice. (Only the languages registered in the machine) Refer to the displayed language list to set in the way showed below. List Num.Assigned Bit Switch No.1 to 8BIT1 to 8 (SP5009-201) No.9 to 16BIT1 to 8 (SP5009-202) No.17 to 24BIT1 to 8 (SP5009-203) No.25 to 32BIT1 to 8 (SP5009-204) Example: To add American(No.3 in the list) or Czech (No.15) Turn Bit 3 of "SP5009-201" 0 to 1 for American. Turn Bit 7 of "SP5009-202" 0 to 1 for Czech. After setting, turn the main power switch off and on to make the setting valid.		
5-009-201	1-8	C*	[1 to 255/ **0** / 1/ step]
5-009-202	9-16	C*	
5-009-203	17-24	C*	
5-009-204	25-32	C*	

5024	[mm/inch Display Selection] Selects whether mm or inches are used in the display. **Note**: After selecting the number, you must turn the main power switch off and on.		
5-024-001	0:mm 1:inch	C*	[0 or 1 / **1** / 1/step]

5045	[Accounting counter] Selects whether the accounting counter is displayed on the LCD or not. SP5-801-001/003 will not clear this SP. The value will be under an exclusive control because the value varies in segments.

5-045-001	Counter Method	C*	[0 or 1 / **0** / 1/step]

5047	**[Paper Display]** Sets whether to display the backing paper button in the paper type setting on the initial setting display.		
5-047-001	Backing Paper	C*	[0 to 1 / **0** / 1/step]

5055	**[Display IP address]** Display or does not display the IP address on the LCD.		
5-055-001	-	C*	[0 or 1 / **0** / 1/step] 0: OFF 1: ON

5062	**[Part Replacement Alert Display]** Display or does not display the PM part yield on the system banner. This setting will not affect the system alert display. The display message depends on the setting of SP5-066.		
5-062-001	PCU_BK	C*	[0 or 1 / **0** / 1/step] 0: No Display 1: Display

5066	**[PM Part Display]** Displays or does not display the PM parts button on the initial setting display.		
5-066-001	-	C*	[0 or 1 / **0** / 1/step] 0: No Display 1: Display

5067	**[Part Replacement Operation Type]** Selects the service maintenance or user maintenance for each PM parts.		
5-067-001	PCU_BK	C*	[0 or 1 / **0** / 1/step] 0: Service 1: User

5071	[Set Bypass Paper Size Display] Turn on or off the paper size confirmation pop-up on the LED. This pop-up prevents mismatching between a paper size selected by the operation panel and an actual paper size on the by-pass tray.		
5-071-001	-	C*	[0 or 1 / **0** / 1/step]

5074	[Home Key Customization] Sets the application that appears when the home key is pressed.		
5-074-002	Login Setting	C*	[FFh / **0x0** / 1hex/step] Sets the log-in operation mode of the home menu.
5-074-050	Show Home Edit Menu	C	[0 or 2 / **0** / 1/step] 0: Auto 1: Display 2: Not display Sets whether to display the home edit menu on the system initial setting or WebImageMonitor. It depends whether the machine has the Smart Oeration Panel or not.
5-074-091	Function Setting	C*	[0 to 2 / **0** / 1/step] 0: Function disable 1: SDK application 2: MFP browser application Selects the application to show up when pressed the home key.
5-074-092	Product ID	C*	[0x00 to 0xFFFF FFFF / **0** / 1/step] Sets the Application product ID.
5-074-093	Application Screen ID	C*	[0 to 255 / **0** / 1/step] Sets the display category of the application that is specified in the SP5075-001

5075	[USB Keyboard] Sets the function of the external keyboard.

5-075-001	Function Setting	C*	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5081	**[ServiceSP Entery Code Setting]** **DFU**		
5-081-001	-	C*	[- / **-** / -]

5083	**[LED Light Switch Setting]** Specifies whether the alert LED is lit or not when toner near end condition is detected. (This does not change the toner near end condition indication in the operation panel LCD.)		
5-083-001	Toner Near End	C*	[0 or 1 / **0** / 1/step]

5113	**[Optional Counter Type]** -		
5-113-002	Default Optional Counter Type	C*	[0 to 12 / **0** / 1/step] This program specifies the external counter type. 0: None 1: Key Card(RK3,4) 2: Key Card(down) 3: PrepaidCard 4: Coin Rack 5: MFKeyCard 11: Exp.KeyCard(Add) 12: Exp.KeyCard(Deduct)

5114	**[Optional Counter I/F]** Set when connecting an expansion unit using the MF key card I/F.

5-114-001	MF Key Card Extension	C*	[0x00 or 0x01 / **0x00** / 1/step] 0: Not installed 1: Installed (scanning accounting)

5118	**[Disable Copying]** This program disables copying.		
5-118-001	-	C*	[0 or 1 / **0** / 1/step] 0: Not disabled 1: Disabled

5120	**[Mode Clear Opt. Counter Removal]** Sets the mode clear operation in removal of counters to all the accounting counter devices. Sets whether to operate the mode clear or not when the accounting devices released (e.g. no key-card, no remains in a card) before starting a job or during idle after a job end. If the accounting devices released during a job, the machine starts canceling the job and then stops the counter. This SP, thus, is aimed to set whether to do the mode clear operation if the stopped timing was during job canceling.		
5-120-001	0:Yes 1: Standby 2:No	C*	[0 to 2 / **0** / 1/step]

5121	**[Counter Up Timing]** Determines whether the optional key counter counts up at paper feed-in or at paper exit.		
5-121-001	0:Feed 1:Exit	C*	[0 or 1 / **0** / 1/step]

5126	**[Set F-size Document]** Selects F size original setting.		
5-126-001	-	E	[0 to 2 / **0** / 1/step] 0: 8 1/2x13 1: 8 1/4x13 2: 8x13

5127	[APS OFF Mode] Selects whether the APS function is enabled or disabled with the contact of a pre-paid card or coin lock.		
5-127-001	-	C*	[0 or 1 / **0** / 1/step]

5130	[Paper Size Type Selection] -		
5-130-001	0:D 1:N 2:E	C*	[0 to 2 / **1** / step] 0: JP 1: NA 2: EU

5150	[Bypass Length Setting] Sets up the by-pass tray for long paper.		
5-150-001	0:OFF 1: ON	E*	[0 or 1 / **0** / 1/step] 0: OFF 1: ON

5160	[App. Switch Method] -		
5-160-001	-	C*	[0 or 1 / **0** / 1step] 0: Soft Key Set 1: Hard Key Set

5165	[Z-fold Position] DFU

5-165-001	A3T	C*	[- / **2.0** / 0.1mm/step]
5-165-002	B4T	C*	
5-165-003	A4T	C*	
5-165-004	DLTT	C*	
5-165-005	LGT	C*	
5-165-006	LTT	C*	
5-165-007	12x18	C*	
5-165-008	Other	C*	

5167	**[Fax Printing Mode at Optional Counter Off]** Enables or disables the automatic print out without an accounting device. This SP is used when the receiving fax is accounted by an external accounting device.		
5-167-001	-	C*	[0 or1 / **0** / 1/step]

5169	**[CE Login]** If you will change the printer bit switches, you must 'log in' to service mode with this SP before you go into the printer SP mode.		
5-169-001	-	C*	[0 or1 / **0** / 1/step]

5181	**[Size Adjust]** Adjusts the paper size for each tray.		
5-181-001	TRAY 1: 1	E*	[0 or 1 / **1** / 1/step]
5-181-002	TRAY 1: 2	E*	
5-181-003	TRAY 1: 3	E*	
5-181-004	TRAY 1: 4	E*	
5-181-005	TRAY 1: 5	E*	

5-181-006	TRAY 2: 1	E*	[0 or 1 / **1** / 1/step]
5-181-007	TRAY 2: 2	E*	
5-181-008	TRAY 2: 3	E*	
5-181-009	TRAY 2: 4	E*	
5-181-010	TRAY 3/T-LCT: 1	E*	[0 or 1 / **1** / 1/step]
5-181-011	TRAY 3: 2	E*	
5-181-012	TRAY 3: 3	E*	
5-181-013	TRAY 3: 4	E*	
5-181-014	TRAY 4: 1	E*	[0 or 1 / **1** / 1/step]
5-181-015	TRAY 4: 2	E*	
5-181-016	TRAY 4: 3	E*	
5-181-017	TRAY 4: 4	E*	

5186	**[RK4: Setting]** 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.		
5-186-001	-	E*	[0 or 1 / **0** / 1/step]

5188	**[Copy Nv Version]** Displays the version number of the NVRAM on the controller board.		
5-188-001	-	C*	[- / **-** / -]

5191	**[Mode Set]** Shifts to the power save mode or not.		
5-191-001	Power Str Set	C*	[0 or 1 / **1** / 1/step] 0: OFF, 1: ON

5195	**[Limitless SW]** Sets limitless paper feed.		
5-195-001	-	C*	[0 or 1 / **0** / 1/step]

5199	**[Paper Exit After Staple End]** This SP determines whether a machine that normally cannot continue to output paper if staple supply runs can continue to operate.		
5-199-001	0: OFF 1: ON	C*	[0 to 1 / **0** / 1/step]

5212	**[Page Numbering]** When page numbering applies both the front and back side, and if a top-right printing is set, the page numbering for the back side is applied to a top-left position. This SP specifies a relative numbering position of the back side against the front.		
5-212-003	Duplex Printout Right/Left Position	C*	[-10.00 to 10.00 / **0.00** / 0.01mm/step] Horizontally positions the page numbers printed on both sides during duplexing.
5-212-004	Duplex Printout High/Low Position	C*	[-10.00 to 10.00 / **0.00** / 0.01mm/step] Vertically positions the page numbers printed on both sides during duplexing.

5227	**[Page Numbering]** -		
5-227-201	Allow Page No. Entry	C*	[2 to 9 / **9** / 1/step] Specify max. digits for "Job serial numbering start number" of optical text print.
5-227-202	Zero Surplus Stting	C*	[0 or 1 / **0** / 1/step] 0:OFF 1:ON Specify zero suppress for "Job serial numbering start number" of optical text print.

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)		
5-302-002	Time Difference	C*	[-1440 to 1440 / **-300** / 1min/step]

5305	**[Auto Off Set]** -		
5-305-101	Auto Off Limit Set	C*	[0 or 1 / **0** / 1/step]

5307	**[Daylight Saving Time]** -		
5-307-001	Setting	C*	[0 or 1 / **1** / 1/step] Enables or disables the summer time mode.
5-307-003	Rule Set(Start)	C*	[- / **3200210h** / -] The start of summer time.
5-307-004	Rule Set(Send)	C*	[- / **11100200h** / -] The end of summer time.

5401	**[Access Control]** **DFU**

5-401-103	Default Document ACL	C*	[- / 0 / -]
5-401-104	Authentication Time	C*	
5-401-162	Extend Certification Detail	C*	
5-401-200	SDK1 UniqueID	C*	
5-401-201	SDK1 Certification Method	C*	
5-401-210	SDK2 UniqueID	C*	[- / 0 / -]
5-401-211	SDK2 Certification Method	C*	
5-401-220	SDK3 UniqueID	C*	
5-401-221	SDK3 Certification Method	C*	
5-401-230	SDK Certification Device	C*	
5-401-240	Detail Option	C*	

5402	**[Access Control]** -		
5-402-101	SDKJ1 Limit Setting	C*	[/ **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 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
5-402-102	SDKJ2 Limit Setting	C*	
5-402-103	SDKJ3 Limit Setting	C*	
5-402-104	SDKJ4 Limit Setting	C*	
5-402-105	SDKJ5 Limit Setting	C*	
5-402-106	SDKJ6 Limit Setting	C*	
5-402-107	SDKJ7 Limit Setting	C*	
5-402-108	SDKJ8 Limit Setting	C*	
5-402-109	SDKJ9 Limit Setting	C*	
5-402-110	SDKJ10 Limit Setting	C*	

5-402-111	SDKJ11 Limit Setting	C*	[/ **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 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
5-402-112	SDKJ12 Limit Setting	C*	
5-402-113	SDKJ13 Limit Setting	C*	
5-402-114	SDKJ14 Limit Setting	C*	
5-402-115	SDKJ15 Limit Setting	C*	
5-402-116	SDKJ16 Limit Setting	C*	
5-402-117	SDKJ17 Limit Setting	C*	
5-402-118	SDKJ18 Limit Setting	C*	
5-402-119	SDKJ19 Limit Setting	C*	
5-402-120	SDKJ20 Limit Setting	C*	
5-402-121	SDKJ21 Limit Setting	C*	[/ **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 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
5-402-122	SDKJ22 Limit Setting	C*	
5-402-123	SDKJ23 Limit Setting	C*	
5-402-124	SDKJ24 Limit Setting	C*	
5-402-125	SDKJ25 Limit Setting	C*	
5-402-126	SDKJ26 Limit Setting	C*	
5-402-127	SDKJ27 Limit Setting	C*	
5-402-128	SDKJ28 Limit Setting	C*	
5-402-129	SDKJ29 Limit Setting	C*	
5-402-130	SDKJ30 Limit Setting	C*	

5-402-141	SDKJ1 ProductID	C*	[0 to 0xffffffff / **0** / 1/step] Sets limited uses for SDKJ application data.
5-402-142	SDKJ2 ProductID	C*	
5-402-143	SDKJ3 ProductID	C*	
5-402-144	SDKJ4 ProductID	C*	
5-402-145	SDKJ5 ProductID	C*	
5-402-146	SDKJ6 ProductID	C*	
5-402-147	SDKJ7 ProductID	C*	
5-402-148	SDKJ8 ProductID	C*	
5-402-149	SDKJ9 ProductID	C*	
5-402-150	SDKJ10 ProductID	C*	[0 to 0xffffffff / **0** / 1/step] Sets limited uses for SDKJ application data.
5-402-151	SDKJ11 ProductID	C*	
5-402-152	SDKJ12 ProductID	C*	
5-402-153	SDKJ13 ProductID	C*	
5-402-154	SDKJ14 ProductID	C*	
5-402-155	SDKJ15 ProductID	C*	
5-402-156	SDKJ16 ProductID	C*	
5-402-157	SDKJ17 ProductID	C*	
5-402-158	SDKJ18 ProductID	C*	
5-402-159	SDKJ19 ProductID	C*	

5-402-160	SDKJ20 ProductID	C*	[0 to 0xffffffff / **0** / 1/step] Sets limited uses for SDKJ application data.
5-402-161	SDKJ21 ProductID	C*	
5-402-162	SDKJ22 ProductID	C*	
5-402-163	SDKJ23 ProductID	C*	
5-402-164	SDKJ24 ProductID	C*	
5-402-165	SDKJ25 ProductID	C*	
5-402-166	SDKJ26 ProductID	C*	
5-402-167	SDKJ27 ProductID	C*	
5-402-168	SDKJ28 ProductID	C*	
5-402-169	SDKJ29 ProductID	C*	
5-402-170	SDKJ30 ProductID	C*	

5404	**[User Code Count Clear]** Clears the counts for the user codes assigned by the key operator to restrict the use of the machine. Press [Execute] to clear.		
5-404-001	-	C*	[- / **-** / -] [Execute]

5411	**[LDAP-Certification]** -		
5-411-004	Simplified Authentication	C*	[0 or 1 / **1** / 1/step] Determines whether easy LDAP certification is done.
5-411-005	Password Null Not Permit	C*	[0 or 1 / **1** / 1/step] This SP is referenced only when SP5411-4 is set to "1" (On).

5-411-006	Detail Option	C*	[- / **0x00** / 0x01/step] Determines whether LDAP option (anonymous certification) is turned on or off. Bit0 0: OFF, 1: ON

5412	**[Krb-Certification]** Sets the level of Kerberos Certification.		
5-412-100	Encrypt Mode	C*	[0x01 to 0xFF / **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]** -		
5-413-001	Lockout On/Off	C*	[0 or 1 / **0** / 1/step] Switches on/off the lock on the local address book account.
5-413-002	Lockout Threshold	C*	[5 to 10 / **5** / 1/step] Sets a limit on the frequency of lockouts for account lockouts
5-413-003	Cancelation On/Off	C*	[0 or 1 / **0** / 1/step] Determines whether the system waits the prescribed.
5-413-004	Cancelation Time	C*	[1 to9999 / **60** / 1min/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]** -		
5-414-001	Mitigation On/Off	C*	[0 or 1 / **0** / 1/step] Switches on/off masking of continuously used IDs and passwords that are identical.
5-414-002	Mitigation Time	C*	[0 to 60 / **15** / 1min/step] Sets the length of time for excluding continuous access for identical user IDs and passwords.

5415	**[Password Attack]** -		
5-415-001	Permissive Number	C*	[0 to 100 / **30** / 1attempt/step] Sets the number of attempts to attack the system with random passwords to gain illegal access to the system.
5-415-002	Detect Time	C*	[1 to 10 / **5** / 1sec/step] Sets the time limit to stop a password attack once such an attack has been detected.

5416	**[Access Information]** -		
5-416-001	Access User Max Num	C*	[50 to 200 / **200** / 1user/step] Limits the number of users used by the access exclusion and password attack detection functions.
5-416-002	Access Password Max Num	C*	[50 to 200 / **200** / 1password/step] Limits the number of passwords used by the access exclusion and password attack detection functions.
5-415-003	Monitor Interval	C*	[1 to10 / **3** / sec/step] Sets the processing time interval for referencing user ID and password information.

5417	[Access Attack] -		
5-417-001	Access Permissible Number	C*	[0 to 500 / **100** / 1/step] Sets a limit on access attempts when an excessive number of attempts are detected for MFP features.
5-417-002	Attack Detect Time	C*	[10 to 30 / **10** / 1sec/step] Sets the length of time for monitoring the frequency of access to MFP features.
5-417-003	Productivity Fall Waite	C+	[0 to 9 / **3** / 1sec/step] Sets the wait time to slow down the speed of certification when an excessive number of access attempts have been detected.
5-417-004	Attack Max Num	C+	[50 to 200 / **200** / 1attemp/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.		
5-420-001	Copy	C*	[0 or 1 / **0** / 1/step] Determines whether certification is required before a user can use the copy applications.
5-420-011	DocumentServer	C*	[0 or 1 / **0** / 1/step] Determines whether certification is required before a user can use the document server.
5-420-021	Fax	C*	[0 or 1 / **0** / 1/step] Determines whether certification is required before a user can use the fax application.

5-420-031	Scanner	C*	[0 or 1 / **0** / 1/step] Determines whether certification is required before a user can use the scanner applications.
5-420-041	Printer	C*	[0 or 1 / **0** / 1/step] Determines whether certification is required before a user can use the printer applications.
5-420-051	SDK1	C*	[0 or 1 / **0** / 1/step] Determines whether certification is required before a user can use the SDK application.
5-420-061	SDK2	C*	
5-420-071	SDK3	C*	
5-420-081	Browser	C*	[0 or 1 / **0** / 1/step] Determines whether certification is required before a user can use the Browser application.

5430	**[Auth Dialog Message Change]** Displays the Authentication dialog message or not.		
5-430-001	Message Change On/Off	C*	[0 or 1 / **0** /1/step] Turns on or off the displayed message change for the authentication.
5-430-002	Message Text Download	C	[- / **-** / -] [Execute] Executes the message download for the authentication.
5-430-003	Message Text ID	C	[- / **-** / -] Inputs message text for the authentication.

5431	**[External Auth User Preset]** -		
5-431-010	Tag	C*	[0 or 1 / **1** / 1/step] Turns on or off the tag copy permission for the external authentication. 0: Not permit, 1: Permit

5-431-011	Entry	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the entry information for the external authentication. 0: Not permit, 1: Permit
5-431-012	Group	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the group information for the external authentication. 0: Not permit, 1: Permit
5-431-020	Mail	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the mail information for the external authentication. 0: Not permit, 1: Permit
5-431-030	Fax	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the fax information for the external authentication. 0: Not permit, 1: Permit
5-431-031	FaxSub	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the fax additional information for the external authentication. 0: Not permit, 1: Permit
5-431-032	Folder	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the folder information for the external authentication. 0: Not permit, 1: Permit
5-431-033	ProtectCode	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the protection code information for the external authentication. 0: Not permit, 1: Permit

5-431-034	SmtpAuth	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the SMTP information for the external authentication. 0: Not permit, 1: Permit
5-431-035	LdapAuth	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the LDAP information for the external authentication. 0: Not permit, 1: Permit
5-431-036	Smb Ftp Fldr Auth	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the SMB/FTP information for the external authentication. 0: Not permit, 1: Permit
5-431-037	AcntAcl	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the account ACL information for the external authentication. 0: Not permit, 1: Permit
5-431-038	DocumentAcl	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the document ACL information for the external authentication. 0: Not permit, 1: Permit
5-431-040	CertCrypt	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the authentication information for the external authentication. 0: Not permit, 1: Permit
5-431-050	UserLimitCount	C*	[0 or 1 / **1** / 1/step] Turns on or off the copy permission of the maximum number information for the external authentication. 0: Not permit, 1: Permit

5481	[Authentication Error Code] Determines how the authentication failures are displayed.		
5-481-001	System Log Disp	C*	[0 or 1 / **0** / 1/step] Determines whether an error code appears in the system log after a user authentication failure occurs.
5-481-002	Panel Disp	C*	[0 or 1 / **1** / 1/step] Determines whether an error code appears on the operation panel after a user authentication failure occurs.

5490	[MF KeyCard] -		
5-490-001	Job Permit Setting	C*	[0 or 1 / **0** / 1/step] Sets up operation of the machine with a keycard. 0: Disabled. Cancels operation if no code is input. 1: Enabled. Allows operation if another code is input and decrements the counter once for use of the entered code.

5491	[Optional Counter] -		
5-491-001	Detail Option	C*	[0 to 11111111 / **0** / 1] Determines whether to cancel the job when MK1 keycard is pulled out from the machine during job. 0: On. Cancels the job. 1: Off. Allows operation if MK1 keycard is pulled out from the machine during the job.

5501	[PM Alarm] -

5-501-001	PM Alarm Level	C*	[0 to 9999 / **0** / 1/step] 0: Alarm off 1 to 9999: Alarm goes off when Value (1 to 9999) x 1000 > PM counter
5-501-002	Original Count Alarm	C*	[0 or 1 / **1** / 1/step] 0: No alarm sounds 1: Alarm sounds after the number of originals passing through the ARDF > 10,000

5504	**[Jam Alarm]** -		
5-504-001	-	C*	[0 to 3 / **3** / 1/step] Sets the alarm to sound for the specified jam level (document misfeeds are not included).

5505	**[Error Alarm]** -		
5-505-001	-	C*	[0 to 255 / **35** / 100copy/step] Sets the error alarm level.

5507	**[Supply/CC Alarm]** -		
5-507-001	Paper Supply Alarm	C*	[0 or 1 / **0** / 1/step] Switches the control call on/off for the paper supply. **DFU** 0: No alarm 1: Sets the alarm to sound for the specified number transfer sheets for each paper size (A3, A4, B4, B5, DLT, LG, LT, HLT)

5-507-002	Staple Supply Alarm	C*	[0 or 1 / **1** / 1/step] Switches the control call on/off for the stapler installed in the finisher. **DFU** 0: Off: No alarm 1: On: Alarm goes off for every 1K of staples used.
5-507-003	Toner Supply Alarm	C*	[0 or 1 / **1** / 1/step] Switches the control call on/off for the stapler installed in the finisher. **DFU** If you select "1" the alarm will sound when the copier detects toner end. 0: Off 1: On
5-507-080	Toner Call Timing	C*	[0 or 1 / **0** / 1/step] Changes the timing of the "Toner Supply Call" via the @Remote, when the following conditions occur. 0:At replacement 1:AtLessThanThresh
5-507-081	Toner Call Threshold	C*	[10 to 90 / 10 / 10%/step]
5-507-128	Interval: Others	C*	[00250 to 10000 / **1000** / 1/step] The "Paper Supply Call Level: nn" SPs specify the paper control call interval for the referenced paper sizes. **DFU**
5-507-132	Interval: A3	C*	
5-507-133	Interval: A4	C*	
5-507-134	Interval: A5	C*	
5-507-141	Interval: B4	C*	
5-507-142	Interval: B5	C*	
5-507-160	Interval: DLT	C*	
5-507-164	Interval: LG	C*	
5-507-166	Interval: LT	C*	
5-507-172	Interval: HLT	C*	

5508	[CC Call] -		
5-508-001	Jam Remains	C*	[0 or 1 / **1** / 1/step] Enables/disables initiating a call. 0: Disable 1: Enable
5-508-002	Continuous Jams	C*	
5-508-003	Continuous Door Open	C*	
5-508-011	Jam Detection: Time Length	C*	[3 to 30 / **10** / 1min/step] Sets the length of time to determine paper jams required to initiate a call.
5-508-012	Jam Detection: Continuous Count	C*	[2 to 10 / **5**/ 1time/step] Sets the number of continuous paper jams required to initiate a call.
5-508-013	Door Open: Time Length	C*	[3 to 30 / **10** / 1min/step] Sets the length of time the door remains open before the machine initiates a call.

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.		
5-515-001	SC Call	C*	[0 or 1 / **1** / 1/step] 0: Off 1: On
5-515-002	Service Parts Near End Call	C*	
5-515-003	Service Parts End Call	C*	
5-515-004	User Call	C*	
5-515-006	Communication Test Call	C*	

5-515-007	Machine Information Notice	C*	[0 or 1 / **1** / 1/step] 0: Off 1: On
5-515-008	Alarm Notice	C*	
5-515-010	Supply Automatic Ordering Call	C*	
5-515-011	Supply Management Report Call	C*	
5-515-012	Jam/Door Open Call	C*	

5517	**[Get Machine Information]** -		
5-517-001	Get SMC Info: Retry Interval	C*	[- / **-** / -]

5728	**[Network Setting]** Displays/sets the port number for the port forwardings to Android operation panel.		
5-728-001	NAT Machine Port1	C*	[1 to 65535 / **49191** / 1/step]
5-728-002	NAT UI Port1	C*	[1 to 65535 / **55101** / 1/step]
5-728-003	NAT Machine Port2	C*	[1 to 65535 / **49102** / 1/step]
5-728-004	NAT UI Port2	C*	[1 to 65535 / **55102** / 1/step]
5-728-005	NAT Machine Port3	C*	[1 to 65535 / **49103** / 1/step]
5-728-006	NAT UI Port3	C*	[1 to 65535 / **55103** / 1/step]
5-728-007	NAT Machine Port4	C*	[1 to 65535 / **49104** / 1/step]
5-728-008	NAT UI Port4	C*	[1 to 65535 / **55104** / 1/step]
5-728-009	NAT Machine Port5	C*	[1 to 65535 / **49105** / 1/step]
5-728-010	NAT UI Port5	C*	[1 to 65535 / **55105** / 1/step]
5-728-011	NAT Machine Port6	C*	[1 to 65535 / **59106** / 1/step]
5-728-012	NAT UI Port6	C*	[1 to 65535 / **55106** / 1/step]
5-728-013	NAT Machine Port7	C*	[1 to 65535 / **49107** / 1/step]
5-728-014	NAT UI Port7	C*	[1 to 65535 / **55107** / 1/step]

5-728-015	NAT Machine Port8	C*	[1 to 65535 / **49108** / 1/step]
5-728-016	NAT UI Port8	C*	[1 to 65535 / **55108** / 1/step]
5-728-017	NAT Machine Port9	C*	[1 to 65535 / **49109** / 1/step]
5-728-018	NAT UI Port9	C*	[1 to 65535 / **55109** / 1/step]
5-728-019	NAT Machine Port10	C*	[1 to 65535 / **49110** / 1/step]
5-728-020	NAT UI Port10	C*	[1 to 65535 / **55110** / 1/step]

5730	**[Extended Function Setting]** -		
5-730-001	JavaTM Platform setting	C*	[0 to 1 / **0** / 1/step] 0: Disabled 1: Enabled This SP will be applied after turning the main power off/on. The process is as follows: *** Set the value 0, turn the power off/on * If JavaVM installed, SAS un-installs the JavaVM. * If JavaVM not installed, SAS does not install as well as opening the JavaVM. *** Set the value 1, turn the power off/on * If JavaVM installed, SAS launches the JavaVM. * If Java VM not installed, SAS installs the JavaVM and lanches it.
5-730-010	Expiration Prior Alarm Set	C*	[0 to 999 / **20** / 1day/step]

5731	**[Counter Effect]** Converts the paper count to the combine count for MK-1 counter.		
5-731-001	Change Mk1 Cnt (Paper->Combine)	C*	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5734	**[PDF Setting]** Sets the limitation of the PDF category for "Scan to", "Fax sending" and "Web downloading".		
5-734-001	PDF/A Fixed	C*	[0 or 1 / **0** / 1/step] 0: All PDF categories 1: PDF/A only

5745	**[EcoCountTime]** -		
5-745-005	AutoClearIntervalDays	C*	[0 to 1439 / **0** / 1/step] Sets the time to add up the eco counter.
5-745-211	Controller Standby	C*	[0 to 9999 / **0** / 1/step] Displays the deemed power consumption of each condition.
5-745-212	STR	C*	
5-745-213	Main Power Off	C*	
5-745-214	Scanning and Printing	C*	
5-745-215	Printing	C*	
5-745-216	Scanning	C*	
5-745-217	Engine Standby	C*	
5-745-218	Low Power Consumption	C*	
5-745-219	Silent condition	C*	
5-745-220	Heater Off	C*	

5746	**[BMLinkS]** -		
5-746-001	Available	C*	[0 or 1 / **1** / 1/step] Enables/disable the series of BMLinkS management.

5-746-002	Interval:mon	C*	[0 to 3600 / **60** / 1sec/step] Displays the polling interval (second) used when the BMlinkS management services monitor changes in the devices state. This SP will detect the states only when registered the notification information of the monitoring service from the management tool.
5-746-004	Available:log	C*	[0 or 1 / **1** / 1/step] Displays/sets the state of disabled/enabled for sending the BMLinkS management statistics information. 0: Disables the function forcibly 1: Enables the function according to the setting of applications. An exclusive control is performed between the statistical information function of BMlinkS management and the job-log function provided by NFA. Setting this SP to 0, which means the job-log function is enabled on the NFA, cannot obtain the statistical information from the BMLinkS management series.

5748	**[OpePanel Setting]** -		
5-748-101	Op Type Action Setting	C*	[0x00 to 0xFF / **0** / 0x01/step] Bit0: disables/enables the re-connection Bit1: sets whether to stop a job when communication with the operation panel disconnected Bit2: switches the launch mode of the Smart Operation Panel.

5-748-201	Cheetah Panel Connect Setting	C*	[0 or 1 / **0** / 1/step] Connection setting for the Smart Operation Panel. 0: not connect 1: connect

5749	**[Import/Export]** Imports and exports preference information.		
5-749-001	Export	C*	[- / **-** / -] [Execute]
5-749-101	Import	C*	

5751	**[Key Event Encryption Setting]** Specifies the key to encrypt the key information.		
5-751-001	Password	C*	[Letters(Up to 31) / **NULL** / -]

5752	**[Copy:FlairAPI Setting]** CopyFlairAPI Function enable / disable.		
5-752-001	0x00 – 0xff	C*	[0x00 to 0xff / **0** / 0x01/step]

Bit	Setting	Meanings		Description
		0	1	
Bit0	Start of FlairAPI Server	Off (Do not Start)	On (Start)	Sets whether to start exclusive FlairAPI http server. If it is 0, scanning FlairAPI function and simple UI function will be disabled. The machine installed Android operating panel option, set "1", others set "0".
Bit1	Access permission of FlairAPI from outside of the machine	Disabled	Enabled	If it is "0", accessing is limited from the machine only, such as operating panel, SDK/J, MFP browsers etc... If it is "1", accessing is allowed from outside of FlairAPI such as PC, Remote UI, IT-Box etc...

Bit2	Switching IPv6 only / IPv4 (priority)	IPv6 only	IPv4 (priority)	If it is "0", limited to IPv6 accessing. If it is "1", use IPv4 if it is available, if not, use IPv6. In this case, it is not able to access from android operation panel when IPv4 is enabled.
bit 3	Reserved	-	-	-
bit 4	Simple UI Function	Disabled	Enabled	If it is "1", the machine can be used Scanner Simple UI. If it is "0", requesting URL of Simple UI returns "404 Not Found"
bit 5	Accessing permission of Simple UI from outside of the machine	Disabled	Enabled	If it is "0", accessing is limited from the machine only (operating panel and MFP browser). If it is "1", accessing is allowed from outside of Simple UI such as PC, mobile devices, and so on.
Bit 6	Reserved	-	-	-
Bit 7	Reserved	-	-	-

5792	**[MCS Debug SW]** -		
5-792-001	1	C*	[0 to 255 / **0** / 1/step]
5-792-002	2	C*	
5-792-003	3	C*	
5-792-004	4	C*	

5793	**[ECS Debug SW]** -		
5-793-001	1	C*	[0 to 255 / **0** / 1/step]

5795	**[SRM Debug SW]** -		
5-795-001	1	C*	[0 to 255 / **0** / 1/step]

5796	[PLN Debug SW] -		
5-796-001	1	C*	[- / **0000000** / -]

5801	[Memory Clear] -		
5-801-001	All Clear	C	[- / **-** / -] [Execute] Initializes items 002 to 027. Take a memo of the settings prior to execute this SP
5-801-002	Engine	E	[0 or 1 / **0** / 1/step] Initializes all registration settings for the engine and copy process settings.
5-801-003	SCS	C	[- / **-** / -] [Execute] Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.
5-801-004	IMH Memory Clr	C	[- / **-** / -] [Execute] Initializes the Mcs settings.
5-801-005	MCS	C	[- / **-** / -] [Execute] Initializes the Mcs settings.
5-801-006	Copier Application	C	[- / **-** / -] [Execute] Initializes all copier application settings.

5-801-007	Fax Application	C	[- / - / -] [Execute] Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and off-hook timer.
5-801-008	Printer Application	C	[- / - / -] [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
5-801-009	Scanner Application	C	[- / - / -] [Execute] Initializes the scanner defaults for the scanner and all the scanner SP modes.
5-801-010	Web Service	C	[- / - / -] [Execute] Deletes the network file application management files and thumbnails, and initializes the job login ID.
5-801-011	NCS	C	[- / - / -] [Execute] All setting of Network Setup (User Menu) (NCS: Network Control Service)

5-801-012	R-FAX	C	[- / - / -] [Execute] Initializes the R-FAX settings.
5-801-014	Clear DCS Setting	C	[- / - / -] [Execute] Initializes the DCS (Delivery Control Service) settings.
5-801-015	Clear UCS Setting	C	[- / - / -] [Execute] Initializes the UCS (User Information Control Service) settings.
5-801-016	MIRS Setting	C	[- / - / -] [Execute] Initializes the MIRS (Machine Information Report Service) settings.
5-801-017	CCS	C	[- / - / -] [Execute] Initializes the CCS (Certification and Charge-control Service) settings.
5-801-018	SRM Memory Clr	C	[- / - / -] [Execute] Initializes the SRM (System Resource Manager) settings.
5-801-019	LCS	C	[- / - / -] [Execute] Initializes the LCS settings.
5-801-020	Web Uappli	C	[- / - / -] [Execute] Initializes the Web user application settings.
5-801-021	ECS	C	[- / - / -] [Execute] Initializes the ECS settings.

5-801-023	AICS	C	[- / **-** / -] Initializes the AICS settings.
5-801-025	websys	C	[- / **-** / -] [Execute]
5-801-026	PLN	C	[- / **-** / -] [Execute]
5-801-027	SAS	C	[- / **-** / -] [Execute]

5803	**[Input Check]** See Input Check Table

5804	**[OUTPUT Check]** See Output Check Table

5810	**[SC Reset]** Cancel SC of the CE cancellation.		
5-810-001	-	E	[0 or 1 / **0** / 1/step] [Execute]

5811	**[Machine Serial]** DFU		
5-811-002	Display	E*	[0 to 255 / **0** / 1/step] Displays the machine serial number.
5-811-004	BICU	E	[0 to 255 / **0** / 1/step] Inputs the serial number.
5-811-005	Novita	E	[0 to 255 / **0** / 1/step]

5812	**[Service Tel. No. Setting]** -

5-812-001	Service	C	[max. 20 digits including <-> / - / -] Inputs the telephone number of the CE (displayed when a service call condition occurs.)
5-812-002	Facsimile	C	[- / - / -] **Not used.**
5-812-003	Supply	C	[- / - / -] Specifies the tel. number of consumables supplier on the initial setting menu screen.
5-812-005	Operation	C	[- / - / -] Allows the service center contact telephone number to be displayed on the initial screen.

5816	**[Remote Service]** -		
5-816-001	I/F Setting	C*	[0 to 2 / **2** / 1/step] Selects the remote service setting.
5-816-002	CE Call	C*	[- / - / -] Performs the CE Call at the start or end of the service. Note: This SP is activated only when SP5816-001 is set to "1".
5-816-003	Function Flag	C*	[0 to 1 / **0** / 1/step] Enables or disables the remote service function. **NOTE**: This SP setting is changed to "1" after @Remote register has been completed.
5-816-004	Communication Test Call	C*	[- / - / -] [Execute]
5-816-005	Device Information Call	C*	[- / - / -] [Execute]

5-816-007	SSL Disable	C*	[0 to 1 / **0** / 1/step] Determines whether to use the RCG certification by SSL or not when calling the RCG.
5-816-008	RCG Connect Timeout	C*	[1 to 90 / **30** / 1sec/step] Specifies the connect timeout interval when calling the RCG.
5-816-009	RCG Write Timeout	C*	[0 to 100 / **60** / 1sec/step] Specifies the write timeout interval when calling the RCG.
5-816-010	RCG Read Timeout	C*	[0 to 100 / **60** / 1sec/step] Specifies the read timeout interval when calling the RCG.
5-816-011	Port 80 Enable	C*	[0 or 1 / **0** / 1/step] Enables/disables access via port 80 to the SOAP method.
5-816-012	@Remote Communication Permission Setting	C*	[0 to 2 / **1** / 1/step] 0: Disabled 1: Enabled 2: Limited
5-816-013	RFU Timing	C*	[0 or 1 / **1** / 1/step] Selects the RFU timing. 0: RFU is executed whenever update request is received. 1: RFU is executed only when the machine is in the sleep mode.
5-816-014	RCG Error Cause	C*	[- / **-** / -] Displays RCG connection error cause.
5-816-021	RCG-C Registed	C*	[- / **-** / -] Displays the Embedded RC Gate installation end flag.

5-816-023	Connect Type(N/M)	C*	[- / - / -] Displays/selects the Embedded RC Gate connection method.
5-816-061	Cert Expire Timing	C*	[- / - / -] Proximity of the expiration of the certification.
5-816-062	User Proxy	C*	[- / - / -] Determines if the proxy server is used when the machine communicates with the service center.
5-816-063	Proxy Host	C*	[- / 0 / -] Sets the address of the proxy server used for communication between Embedded RC Gate-N and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up Embedded RC Gate-N. Note • The address display is limited to 128 characters. Characters beyond the 128 character are ignored. • This address is customer information and is not printed in the SMC report.
5-816-064	Proxy PortNumber	C*	[0-0xffff / 0 / 1/step] This SP sets the port number of the proxy server used for communication between Embedded RC Gate-N and the gateway. This setting is necessary to set up Embedded RC Gate-N. Note • This port number is customer information and is not printed in the SMC report.

5-816-065	Proxy User Name	C*	[- / - / -] 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.
5-816-066	Proxy Password	C*	[- / - / -] This SP sets the HTTP proxy certification password. **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.

5-816-067	CERT:UP State	C*	[- / - / -]
	Displays the status of the certification update.		
	0	The certification used by Embedded RC Gate is set correctly.	
	1	The certification request (setAuthKey) for update has been received from the GW URL and certification is presently being updated.	
	2	The certification update is completed and the GW URL is being notified of the successful update.	
	3	The certification update failed, and the GW URL is being notified of the failed update.	
	4	The period of the certification has expired and new request for an update is being sent to the GW URL.	
	11	A rescue update for certification has been issued and a rescue certification setting is in progress for the rescue GW connection.	
	12	The rescue certification setting is completed and the GW URL is being notified of the certification update request.	
	13	The notification of the request for certification update has completed successfully, and the system is waiting for the certification update request from the rescue GW URL.	
	14	The notification of the certification request has been received from the rescue GW controller, and the certification is being stored.	
	15	The certification has been stored, and the GW URL is being notified of the successful completion of this event.	
	16	The storing of the certification has failed, and the GW URL is being notified of the failure of this event.	
	17	The certification update request has been received from the GW URL, the GW URL was notified of the results of the update after it was completed, but a certification error has been received, and the rescue certification is being recorded.	
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.	

5-816-068	CERT:Error	C*	[- / - / -]
	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.	
5-816-069	CERT:Up ID	C*	[- / - / -] The ID of the request for certification.
5-816-083	Firm Up Status	C*	[- / - / -] Displays the status of the firmware update.
5-816-085	Frim Up User Check	C*	[- / - / -] 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.
5-816-086	Firmware Size	C*	[- / - / -] Allows the service technician to confirm the size of the firmware data files during the firmware update execution.
5-816-087	CERT:Macro Ver.	C*	[- / - / -] Displays the macro version of the @Remote certification.

5-816-088	CERT:PAC Ver.	C*	[- / **-** / -] Displays the PAC version of the @Remote certification.
5-816-089	CERT:ID2Code	C*	[- / **-** / -] Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_). Asterisks (*) indicate that no @Remote certification exists. "000000_____" indicates "Common certification".
5-816-090	CERT:Subject	C*	[- / **-** / -] Displays the common name of the @Remote certification subject. CN = the following 17 bytes. Spaces are displayed as underscores (_). Asterisks (*) indicate that no @Remote certification exists. "000000_____" indicates "Common certification".
5-816-091	CERT:SerialNo.	C*	[- / **-** / -] Displays serial number for the @Remote certification. Asterisks (*) indicate that no @Remote certification exists.
5-816-092	CERT:Issuer	C*	[- / **-** / -] Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asterisks () indicate that no @Remote certification exists.
5-816-093	CERT:Valid Start	C*	[- / **-** / -] Displays the start time of the period for which the current @Remote certification is enabled.
5-816-094	CERT:Valid End	C*	[- / **-** / -] Displays the end time of the period for which the current @Remote certification is enabled.
5-816-095	Server CN Check	C*	[0 or 1 / **0** / 1/step] 0: Check strictly 1: Check easily

5-816-096	GW Host	C	[- / **-** / -]
5-816-097	GW URL Path	C	[- / **-** / -]
5-816-099	Debug RescueG/WURL Set	C	[- / **-** / -] [Execute]
5-816-102	CERT: Encrypt Level	C*	[- / **-** / -] Displays cryptic strength of the NRS certification.
5-816-150	Selection Country	C*	[0 to 10 / **1** / 1step] Select the country where embedded RCG-M is installed in the machine. After selecting the country, you must also set the following SP codes for embedded RCG-M: • SP5816-153 • SP5816-154 • SP5816-161
5-816-151	Line Type Automatic Judgement	C	[- / **-** / -] [Execute] Setting this SP classifies the telephone line where embedded RCG-M is connected as either dial-up (pulse dial) or push (DTMF tone) type, so embedded RCG-M can automatically distinguish the number that connects to the outside line. • The current progress, success, or failure of this execution can be displayed with SP5816-152. • If the execution succeeded, SP5816-153 will display the result for confirmation and SP5816-154 will display the telephone number for the connection to the outside line.

5-816-152	Line Type Judgement Result	C	[- / - / -] Displays a number to show the result of the execution of SP5816 151. Here is a list of what the numbers mean. 0: Success 1: In progress (no result yet). Please wait. 2: Line abnormal 3: Cannot detect dial tone automatically 4: Line is disconnected 5: Insufficient electrical power supply 6: Line classification not supported 7: Error because fax transmission in progress – ioctl() occurred. 8: Other error occurred 9: Line classification still in progress. Please wait.
5-816-153	Selection Dial / Push	C*	[0 or 1 / **0** / 1/step] Displays the classification (tone or pulse) of the telephone line to the access point for embedded RCG-M. The number displayed (0 or 1) is the result of the execution of SP5816-151. However, this setting can also be changed manually.

5-816-154	Outside Line Outgoing Number	C*	[- / - / -] Sets the number that switches to PSTN for the outside connection for embedded RCG-M in a system that employs a PBX (internal line). • If the execution of SP5816-151 has succeeded and embedded RCG-M has connected to the external line, this SP display is completely blank. • If embedded RCG-M has connected to an internal line, then the number of the connection to the external line is displayed. • If embedded RCG-M has connected to an external line, a comma is displayed with the number. The comma is inserted for a 2 sec. pause. • The number setting for the external line can be entered manually (including commas).
5-816-156	Dial Up User Name	C*	[- / - / -] Use this SP to set a user name for access to remote dial up. Follow these rules when setting a user name: • Name length: Up to 32 characters • Spaces and # allowed but the entire entry must be enclosed by double quotation marks (").
5-816-157	Dial Up Password	C*	[- / - / -] Use this SP to set a password for access to remote dial up. Follow these rules when setting a user name: • Name length: Up to 32 characters • Spaces and # allowed but the entire entry must be enclosed by double quotation marks (").

5-816-161	Local Phone Number	C*	[- / **-** / -] Use this SP to set the telephone number of the line where embedded RCG-M is connected. This number is transmitted to and used by the Call Center to return calls. Limit: 24 numbers (numbers only)
5-816-162	Connection Timing Adjustment Incoming	C*	[0 to 24 / **1** / 1/step] When the Call Center calls out to an embedded RCG-M modem, it sends a repeating ID tone (*#1#). This SP sets the time the line remains open to send these ID tones after the number of the embedded RCG-M modem is dialed up and connected. The actual amount of time is this setting x 2 sec. For example, if you set "2" the line will remain open for 4 sec.
5-816-163	Access Point	C*	[Up to 16 / **0** / -] This is the number of the dial-up access point for RCG-M. If no setting is done for this SP code, then a preset value (determined by the country selected) is used. Default: 0 Allowed: Up to 16 alphanumeric characters
5-816-164	Line Connecting	C*	[0 or 1 / **0** / 1/step] Sets the connection conditions for the customer. This setting dedicates the line to RCG-M only, or sets the line for sharing between RCG-M and a fax unit. **Note** • If this setting is changed, the copier must be cycled off and on. • SP5816-187 determines whether the off-hook button can be used to interrupt a RCG-M transmission in progress to open the line for fax transaction. 0: Sharing FAX 1: No Sharing FAX

5-816-173	Modem Serial No.	C*	[- / **-** / -] Displays the serial number registered for the RCG-M.
5-816-174	Retransmission Limit	C	[- / **-** / -] [Execute] Normally, it is best to allow unlimited time for certification and ID2 update requests, and for the notification that the certification has been completed. However, RCG-M generates charges based on transmission time for the customer, so a limit is placed upon the time allowed for these transactions. If these transactions cannot be completed within the allowed time, do this SP to cancel the time restriction.
5-816-186	RCG-C M DebugBitSW	C	[0000000 to 11111111 / **00000000** / -]
5-816-187	FAX TX Priority	C*	[0 or 1 / **0** / 1/step] Determines whether pushing the off-hook button will interrupt a RCG-M transmission in progress to open the line for fax transaction. This SP can be used only if SP5816-164 is set to "0". 0:OFF 1:ON
5-816-200	Manual Polling	C	[- / **-** / -] [Execute] Executes the center polling manually.

5-816-201	Regist Status	C	[0 to 4 / **0** / 1/step] Displays a number that indicates the status of the @Remote service device. 0: Neither the @Remote device nor Embedded RCG Gate is set. 1: The Embedded RCG Gate is being set. Only Box registration is completed. In this status, @Remote device cannot communicate with this device. 2: The Embedded RCG Gate is set. In this status, the @Remote device cannot communicate with this device. 3: The @Remote device is being set. In this status the Embedded RCG Gate cannot be set. 4: The @Remote module has not started.
5-816-202	Letter Number	C*	[- / **-** / -] Allows entry of the request number needed for the Embedded RCG Gate.
5-816-203	Confirm Execute	C	[- / **-** / -] [Execute] Executes the confirmation request to the @Remote Gateway.
5-816-204	Confirm Result	C	[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 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 8: Other error 9: Inquiry executing

5-816-205	Confirm Place		C	[- / **-** / -] 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.
5-816-206	Register Execute		C	[- / **-** / -] [Execute] Executes "Embedded RCG Registration".
5-816-207	Register Result		C	[0 to 255 / **0** / 1/step] Displays a number that indicates the registration result. 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) 8: Other error 9: Registration executing
5-816-208	Error Code		C	[-2147483647 to 2147483647 / **-** / - / step] Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.
	Cause	Code		Meaning
	Illegal Modem Parameter	-11001		Chat parameter error
		-11002		Chat execution error
		-11003		Unexpected error

	Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring device status.
		-12003	Attempted registration without execution of an inquiry and no previous registration.
		-12004	Attempted setting with illegal entries for certification and ID2.
		-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.
		-12006	A confirmation request was made after the confirmation had been already completed.
		-12007	The request number used at registration was different from the one used at confirmation.
		-12008	Update certification failed because mainframe was in use.
		-12009	D2 mismatch between an individual certification and NVRAM.
		-12010	Certification area is not initialized.

	Error Caused by Response from GW URL	-2385		Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387		Not supported at the Service Center
		-2389		Database out of service
		-2390		Program out of service
		-2391		Two registrations for same device
		-2392		Parameter error
		-2393		Basil not managed
		-2394		Device not managed
		-2395		Box ID for Basil is illegal
		-2396		Device ID for Basil is illegal
		-2397		Incorrect ID2 format
		-2398		Incorrect request number format
5-816-209	Instl Clear		C	[- / - / -] [Execute] Releases the machine from its embedded RCG setup.
5-816-250	CommLog Print		C	[- / - / -] [Execute] Prints the communication log. **Note** • This SP is activated only when SP 5816-021 is set to "1".

5821	**[Remote Service Address]** -		
5-821-002	RCG IP Address	C*	[- / - / -] Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.

5-821-003	RCG Port Number	C*	[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.
5-821-004	RCG URL Path	C*	[0 to 16 characters **/RCG/services/** -] Sets the destination URL path of RCG (Remote Communication Gate) for call processing to the remote service center.

5824	**[NV-RAM Data Upload]** -		
5-824-001	-	C	[- / **-** / -] [Execute] Uploads the NVRAM data to an SD card. Push Execute. **Note**: When uploading data in this SP mode, the front door must be open.

5825	**[NV-RAM Data Download]** -		
5-825-001	-	C	[- / **-** / -] [Execute] Downloads data from an SD card to the NVRAM in the machine. After downloading is completed, remove the card and turn the machine power off and on.

5828	**[Network Setting]** Job spool settings/ Interface selection for Ethernet and wireless LAN		
5-828-001	IPv4 Address (Ethernet/ IEEE 802.11)	C*	[- / **-** / -] Allows you to check and reset the IPv4 address for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd

5-828-002	IPv4 Subnet Mask(Ethernet/IEEE 802.11)	C*	[- / **-** / -] Allows you to check and reset the IPv4 subnet mask for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
5-828-003	IPv4 Default Gateway (Ethernet/IEEE 802.11)	C*	[- / **-** / -] 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
5-828-006	DHCP (Ethernet/IEEE 802.11)	C*	[0 or 1 / **1** / 1/step] 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.
5-828-021	Active IPv4 Address	C	[- / **-** / -] Allows you to check the IPv4 address that was used when the machine started up with DHCP.
5-828-022	Active IPv4 Subnet Mask	C	[- / **-** / -] Allows you to check the IPv4 subnet mask setting that was used when the machine started up with DHCP.
5-828-023	Active IPv4 Gateway Address	C	[- / **-** / -] Allows you to check the IPv4 default gateway setting that was used when the machine started up with DHCP.
5-828-050	1284 Compatiblity (Centro)	C*	[0 or 1 / **1** / 1/step] Enables or disables 1284 Compatibility. 0: Disabled, 1: Enabled
5-828-052	ECP(Centro)	C*	[0 or 1 / **1** / 1/step] Displays/sets the ECP. 0: not allowed 1: allowed The 1284 mode must be allowed when the ECP allowed.

5-828-065	Job Spooling		C*	[0 or 1 / **0** / 1 /step] Switches the job spooling on and off. 0: No spooling 1: Spooling enabled
5-828-066	Job Spooling Clear: Start Time		C*	[0 or 1 / **1** / 1/step] 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". 0: ON 1: OFF
5-828-069	Job Spooling (Protocol)		C*	[0 or 1 / **1** / 1/step] Determines whether job spooling is enabled or disabled for each protocol. This is an 8-bit setting.
	0	LPR	4	BMLinks (Japan Only)
	1	FTP (Not Used)	5	DIPRINT
	2	IPP	6	Reserved (Not Used)
	3	SMB	7	Reserved (Not Used)

5-828-087	Protocol Usage	C*	[- / **-** / -] 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
5-828-090	TELNET(0:OFF 1:ON)	C*	[0 or 1 / **1** / 1/step] Enables or disables the Telnet protocol. 0: Disable, 1: Enable
5-828-091	Web(0:OFF 1:ON)	C*	[0 or 1 / **1** / 1/step] Enables or disables the Web operation. 0: Disable, 1: Enable

5-828-145	Active IPv6 Link Local Address	C	[- / **-** / -] This is the IPv6 local address link referenced on the Ethernet or wireless LAN (802.11b) in the format: "Link Local Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
5-828-147	Active IPv6 Stateless Address 1	C	[- / **-** / -] 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.
5-828-149	Active IPv6 Stateless Address 2	C	
5-828-151	Active IPv6 Stateless Address 3	C	
5-828-153	Active IPv6 Stateless Address 4	C	
5-828-155	Active IPv6 Stateless Address 5	C	
5-828-156	IPv6 Manual Address	C*	[- / **-** / -] 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.
5-828-158	IPv6 Gateway Address	C*	[- / **-** / -] This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN (802.11b). The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
5-828-161	IPv6 Stateless Auto Setting	C*	[0 or 1 / **1** / 1 /step] Enables or disables the automatic setting for IPv6 stateless. 0: Disable, 1: Enable

5-828-236	Web Item visible	C*	[0x0000 to 0xffff / **FFFh** / 0x0001/step] Displays or does not display the Web system items. bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)
5-828-237	Web Shopping link visible	C*	[0 or 1 / **1** / 1 /step] Displays or does not display the link to Net RICOH on the top page and link page of the web system. 0: Not display 1: Display
5-828-238	Web Supplies Link visible	C*	[0 or 1 / **1** / 1 /step] Displays or does not display the link to Consumable Supplier on the top page and link page of the web system. 0: Not display 1: Display
5-828-239	Web Link1 Name	C*	[- / **-** / -] Confirms or changes the URL1 name on the link page of the web system. The maximum characters for the URL name are 31 characters.
5-828-240	Web Link1 URL	C*	[- / **-** / -] Confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.
5-828-241	Web Link1 visible	C*	[0 or 1 / **1** / 1/step] Displays or does not display the link to URL1 on the top page of the web system.
5-828-242	Web Link2 Name	C*	[- / **-** / -] Same as "-239"
5-828-243	Web Link2 URL	C*	[- / **-** / -] Same as "-240"

5-828-244	Web Link2 visible	C*	[- / 1 / -] Same as "-241"
5-828-249	DHCPv6 DUID	C	[- / - / -] Sets DHCPv6 DUID.

5832	[HDD] Initializes the hard disk. Use this SP mode only if there is a hard disk error.		
5-832-001	HDD Formatting (ALL)	C*	[- / - / -] [Execute]
5-832-002	HDD Formatting (IHM)	C*	
5-832-003	HDD Formatting (Thumbnail)	C*	
5-832-004	HDD Formatting (Job Log)	C*	
5-832-005	HDD Formatting (Printer Fonts)	C*	
5-832-006	HDD Formatting (User Info)	C*	[- / - / -] [Execute]
5-832-007	Mail RX Data	C*	
5-832-008	Mail TX Data	C*	
5-832-009	HDD Formatting (Data for a Design)	C*	
5-832-010	HDD Formatting (Log)	C*	
5-832-011	HDD Formatting (Ridoc I/F	C*	

5836	[Capture Setting] -

5-836-001	Capture Function (0:Off 1:On)	C*	[0 or 1 / **0** / 1step] With this function disabled, the settings related to the capture feature cannot be initialized, displayed, or selected. 0: Disable 1: Enable
5-836-002	Panel Setting	C*	[0 or 1 / **0** / 1/step] Displays or does not display the capture function buttons. 0: Enable 1: Disable
5-836-072	Reduction for Copy B&W Text	C*	[0 to 6 / **0** / 1/step] 0:1 1:1/2 2:1/3 3:1/4 6:2/3
5-836-073	Reduction for Copy B&W Other	C*	[0 to 6 / **0** / 1/step] 0:1 1:1/2 2:1/3 3:1/4 6:2/3
5-836-075	Reduction for Printer B&W	C*	[0 to 6 / **0** / 1/step] 0:1 1:1/2 2:1/3 3:1/4 6:2/3

5-836-078	Reduction for Printer B&W 1200dpi	C*	[1 to 5 / **1** / -] 1:1/2 3:1/4 4:1/6 5:1/8
5-836-082	Format for Copy B&W Text	C*	[0 to 3 / **1** / 1/step] This SP is available with MLB-equipped machines. 0: JFIF/JPEG 1: TIFF/MMR 2: TIFF/MH 3: TIFF/MR
5-836-083	Format for Copy B&W Other	C*	
5-836-085	Format for Printer B&W	C*	
5-836-091	Default for JPEG	C*	[5 to 95 / **50** / 1/step] Sets the JPEG format default for documents sent to the document management server with the MLB, with JPEG selected as the format. Enabled only when optional File Format Converter (MLB: Media Link Board) is installed.
5-836-101	Primary srv IP address	C*	[- / **-** / -] Sets the IP address for the primary capture server. This is basically adjusted by the remote system.
5-836-102	Primary srv scheme	C*	[- / **-** / -] This is basically adjusted by the remote system.
5-836-103	Primary srv port number	C*	[- / **80** / -] This is basically adjusted by the remote system.
5-836-104	Primary srv URL path	C*	[- / **-** / -] Sets the IP address for the primary capture server. This is basically adjusted by the remote system.
5-836-111	Secondary srv IP address	C*	[- / **-** / -] This is basically adjusted by the remote system.

5-836-112	Secondary srv scheme	C*	[- / **-** / -] This is basically adjusted by the remote system.
5-836-113	Secondary srv port number	C*	[- / **80** / -] This is basically adjusted by the remote system.
5-836-114	Secondary srv URL path	C*	[- / **-** / -] This is basically adjusted by the remote system.
5-836-120	Default Reso Rate Switch	C*	[0 or 1 / **0** / 1/step] This is basically adjusted by the remote system.
5-836-122	Reso: Copy(Mono)	C*	[0 to 6 / **3** / 1/step] Selects the resolution for BW copy mode. This is basically adjusted by the remote system. 0: 600dpi 1: 400dpi 2: 300dpi 3: 200dpi 4: 150dpi 5: 100dpi 6: 75dpi
5-836-124	Reso: Print(Mono)	C*	[0 to 6 / **3** / 1/step] Selects the resolution for BW copy mode. This is basically adjusted by the remote system. 0: 600dpi 1: 400dpi 2: 300dpi 3: 200dpi 4: 150dpi 5: 100dpi 6: 75dpi

5-836-126	Reso: Fax(Mono)	C*	[0 to 6 / **3** / 1/step] Selects the resolution for BW fax mode. This is basically adjusted by the remote system. 0: 600dpi 1: 400dpi 2: 300dpi 3: 200dpi 4: 150dpi 5: 100dpi 6: 75dpi
5-836-127	Reso: Scan(Color)	C*	[0 to 6 / **3** / 1/step] Selects the resolution for color scanning mode. This is basically adjusted by the remote system. 0: 600dpi 1: 400dpi 2: 300dpi 3: 200dpi 4: 150dpi 5: 100dpi 6: 75dpi
5-836-128	Reso: Scan(Mono)	C*	[0 to 6 / **3** / 1/step] Selects the resolution for BW scanning mode. This is basically adjusted by the remote system. 0: 600dpi 1: 400dpi 2: 300dpi 3: 200dpi 4: 150dpi 5: 100dpi 6: 75dpi

5-836-141	All Addr Info Switch	C*	[0 or 1 / **1** / 1/step] Turns on or off the all address information transmission for the captured resources. 0: Off 1: On
5-836-142	Stand-by Doc Max Number	C*	[10 to 9999 / **2000** / 1/step] Selects the maximum number of captured documents to be transmitted to the document server.

5840	**[IEEE 802.11]** -		
5-840-006	Channel MAX	C*	[- / **14** / -] **DFU**
5-840-007	Channel MIN	C*	[- / **1** / -] **DFU**
5-840-011	WEP Key Select	C*	[- / **00000000** / -] Selects the WEP key.
5-840-045	WPA Debug Lvl	C*	[1 to 3 / **3** / 1/step] Selects the debug level for WPA authentication application. This SP is displayed only when the IEEE802.11 card is installed. 1: Info 2: warning 3: error
5-840-046	11w	C*	[0 to 2 / **0** / 1/step]
5-840-047	PSK Set Type	C*	[0 to 1 / **0** / 1/step]

5841	**[Supply Name Setting]** Specifies supply names. These appear on the screen when the user presses the Inquiry button in the user tools screen.

5-841-001	Toner Name Setting: Black	C*	[- / - / -]
5-841-007	OrgStamp	C*	
5-841-011	StapleStd1	C*	
5-841-012	StapleStd2	C*	
5-841-013	StapleStd3	C*	
5-841-014	StapleStd4	C*	[- / - / -]
5-841-021	StapleBind1	C*	
5-841-022	StapleBind2	C*	
5-841-023	StapleBind3	C*	

5842	**[GWWS Analysis]** This is a debugging tool. It sets the debugging output mode of each Net File process.		
5-842-001	Setting 1	C*	[- / **00000000** / -]
5-842-002	Setting 2	C*	

5844	**[USB]** -		
5-844-001	Transfer Rate	C*	[- / **0x04** / -] Sets the speed for USB data transmission. 0x01: Full Speed 0x04: Auto Change
5-844-002	Vendor ID	C*	[- / **5CAh** / -] **DFU**
5-844-003	Product ID	C*	[- / **403h** / -] **DFU**
5-844-004	Device Release Number	C*	[- / **100** / -] **DFU**

5-844-005	Fixed USB Port	C*	[0 to 2 / **0** / 1/step] Standardizes for common use the model name and serial number for USB PnP (Plug & Play). It determines whether the driver requires re-installation. 0: OFF 1: Level1 2: Level2
5-844-006	PnP Model Name	C*	[up to 20 characters / **-** / -] 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 (SP5-844-005).
5-844-007	PnP Serial Number	C*	[- / **-** / -] 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 (SP5-844-005). • 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.
5-844-008	Mac Supply Level	C*	[0 or 1 / **1** / 1/step] 0: OFF 1: ON
5-844-100	Notify Unsupport	C*	[0 or 1 / **1** / 1/step]

5845	**[Delivery Server Setting]** These are delivery server settings.		
5-845-001	FTP Port No.	C*	[0 to 65535 / **3670** / 1/step]

5-845-002	IP Address (Primary)	C*	[000.000.000.000 to 255.255.255.255 / - / 1/step] Use this SP to set the Scan Router Server address. The IP address under the transfer tab can be used with the initial system setting.
5-845-006	Delivery Error Display Time	C*	[0 to 999 / **300** / 1sec/step] Use this setting to set the length of time that the message is shown when a test error occurs during document transfer with the NetFile application and an external device.
5-845-008	IP Address (Secondary)	C*	[- / **-** / -] Sets the IP address that is given to the computer that is the secondary delivery server for Scan Router. This SP lets you set only the IP address, and does not refer to the DNS setting.
5-845-009	Delivery Server Model	C*	[0 to 4 / **0** / 1/step] Allows changing the model of the delivery server registered by the I/O device.
5-845-010	Delivery Svr. Capability	C*	[0 to 255 / **0** / 1/step] Changes the capability of the server that is registered as an I/O device.
5-845-011	Delivery Svr. Capability (Ext)	C*	[0 to 255 / **00000000** / 1/step] Reserved for future extensions of SP5-845-010.
5-845-013	Server Scheme(Primary)	C*	[- / **-** / -] **DFU**
5-845-014	Server Port Number(Primary)	C*	[- / **80** / -] **DFU**
5-845-015	Server URL Path(Primary)	C*	[- / **-** / -] **DFU**
5-845-016	Server Scheme(Secondary)	C*	[- / **-** / -] **DFU**

5-845-017	Server Port Number(Secondary)	C*	[- / **80** / -] **DFU**
5-845-018	Server URL Path(Secondary)	C*	[- / **-** / -] **DFU**
5-845-022	Rapid Sending Control	C*	[0 or 1 / **1** / 1/step] Enables or disables the prevention function for the continuous data sending error.

5846	**[UCS Settings]** -		
5-846-001	Machine ID (for Delivery Server)	C*	[- / **-** / -] Displays the unique device ID in use by the delivery server directory. The value is only displayed and cannot be changed. This ID is created from the NIC MAC or IEEE 1394 EUI. The ID is displayed as either 6-byte or 8-byte binary.
5-846-002	Machine ID Clear(for Delivery Server)	C*	[- / **-** / -] [Execute] Clears the unique ID of the device used as the name in the file transfer directory. Execute this SP if the connection of the device to the delivery server is unstable. After clearing the ID, the ID will be established again automatically by cycling the machine off and on.
5-846-003	Maximum Entries	C*	[2000 to 20000 / **2000** / 1/step] Changes the maximum number of entries that UCS can handle. If a value smaller than the present value is set, the UCS managed data is cleared, and the data (excluding user code information) is displayed.

5-846-006	Delivery Server Retry Timer	C*	[0 to 255 / **0** / 1/step] Sets the interval for retry attempts when the delivery server fails to acquire the delivery server address book.
5-846-007	Delivery Server Retry Times	C*	[0 to 255 / **0** / 1/step] Sets the number of retry attempts when the delivery server fails to acquire the delivery server address book.
5-846-008	Delivery Server Maximum Entries	C*	[2000 to 20000 / **2000** / 1/step] Sets the maximum number account entries of the delivery server user information managed by UCS.
5-846-010	LDAP Search Timeout	C*	[1 to 255 / **60** / 1/step] Sets the length of the timeout for the search of the LDAP server.
5-846-020	WSD Maximum Entries	C*	[5 to 250 / **250** / 1/step] Sets the maximum entries for the address book of the WSD (WS-scanner).
5-846-021	Folder Auth Change	C*	[0 or 1 / **0** / 1/step] 0: Login User, 1: Destination
5-846-022	Initial Value of Upper Limit Count	C*	[0 to 999999 / **500** / 1/step] Sets the initial max. printable value that allows a user to print.
5-846-040	Addr Book Migration(USB->HDD)	C*	[- / **-** / -] [Execute]

5-846-041	Fill Addr Acl Info	C*	[- / - / -] [Execute] This SP must be executed immediately after installation of an HDD unit in a basic machine that previously had no HDD. The first time when 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.

5-846-043	Addr Book Media	C*	[0 to 30 / **0** /1/step] 0: Unconfirmed 1: SD Slot 1 2: SD Slot 2 3: SD Slot 3 4: USB Flash ROM 10: SD Slot 10 20: HDD 30: Nothing Displays the slot number where an address book data is in.
5-846-046	Initialize All Setting & Addr Book	C	[- / **-** / -] [Execute]
5-846-047	Initialize Local Address Book	C	[- / **-** / -] [Execute] Clears the local address book information, including the user code.
5-846-048	Initialize Delivery Addr Book	C	[- / **-** / -] [Execute] Clears the distribution address book information, except the user code.
5-846-049	Initialize LDAP Addr Book	C	[- / **-** / -] [Execute] Clears the LDAP address book information, except the user code.
5-846-050	Initialize All Addr Book	C	[- / **-** / -] [Execute] Clears all directory information managed by UCS, including all user codes.

5-846-051	Backup All Addr Book	C	[- / - / -] [Execute] Uploads all directory information to the SD card.
5-846-052	Restore All Addr Book	C	[- / - / -] [Execute] Downloads all directory information from the SD card.
5-846-053	Clear Backup Info	C	[- / - / -] [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.
5-846-060	Search Option	C*	[0x00 to 0xff / **00001111** / 1] 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

5-846-062	Complexity Option 1	C*	[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.
5-846-063	Complexity Option 2 **DFU**	C*	[0 to 32 / **0** / 1/step] Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to lower case and defines the length of the password.
5-846-064	Complexity Option 3 **DFU**	C*	[0 to 32 / **0** / 1/step] Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to numbers and defines the length of the password.
5-846-065	Complexity Option 4 **DFU**	C*	[0 to 32 / **0** / 1/step] Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to symbols and defines the length of the password.
5-846-091	FTP Auth Port Setting	C*	[0 to 65535 / **3671** / 1/step] Specifies the FTP port for getting a distribution server address book that is used in the identification mode.
5-846-094	Encryption Stat	C*	[0 to 255 / **-** / 1/step]

5847	**[Rep Resolution Resuction]** Changes the default settings of image data sent externally by the Net File page reference function.		
5-847-002	Rate for Copy B&W Text	C*	[- / **0** / -]
5-847-003	Rate for Copy B&W Other	C*	
5-847-005	Rate for Printer B&W	C*	
5-847-007	Rate for Printer B&W 1200dpi	C*	[- / **1** / -]
5-847-021	Network Quality Default for JPEG	C*	[- / **50** / -] Sets the default value for the quality of JPEG images sent as NetFile pages. This function is available only with the MLB (Media Link Board) option installed.

5848	**[Web Service]** Sets the 4-bit switch assignment for the access control setting.		
5-848-002	Access Ctrl: Repositry(onlyLower 4bits)	C*	[4bit assign / **00000010** / bit switch]
5-848-003	Access Ctrl: Doc.Svr.Print (Lower 4bits)	C*	[4bit assign / **00000000** / bit switch]
5-848-004	Access Ctrl: udirectory (Lower 4bits)	C*	[4bit assign / **00000010** / bit switch]
5-848-007	Access Ctrl: Comm. Log Fax (Lower 4bits)	C*	[4bit assign / **00000000** / bit switch]
5-848-009	Access Ctrl: Job Ctrl (Lower 4bits)	C*	[4bit assign / **00000010** / bit switch]
5-848-011	Access Ctrl: Devicemanagement (Lower 4bits)	C*	[4bit assign / **00000000** / bit switch]
5-848-021	Access Ctrl: Delivery (Lower 4bits)	C*	[4bit assign / **00000010** / bit switch]

5-848-022	Access Ctrl: uadministration (Lower 4bits)	C*	[4bit assign / **00000000** / bit switch]
5-848-024	Access Ctrl: Log Service (Lower 4bits)	C*	[4bit assign / **00000000** / bit switch]
5-848-099	Repositry: Download Image Setting\	C*	[4bit assign / **00000000** / bit switch]
5-848-100	Repositry: Download Image Max. Size	C*	[1 to 2048 / **2048** / 1MB/step]
5-848-217	Setting: Timing	C*	[0 to 2 / **0** / 1/step] Read only.

5849	**[Installation Date]** Displays or prints the installation date of the machine.		
5-849-001	Display	C*	[- / **-** / -] Displays the installation date. The installation date is set automatically after test copies are done at the installation site.
5-849-002	Switch to Print	C*	[0 or 1 / **1** / 1/step] Determines whether the installation date is printed on the printout for the total counter.
5-849-003	Total Counter	C*	[- / **-** / -]

5850	**[Address Book Function]**		
5-850-003	Replacement of Circuit Classifications	C*	[- / **-** / -] [Replacement]

5851	**[Bluetooth]**		
5-851-001	Mode	C*	[0 or 1 / **0** / 1/step] Sets the operation mode for the Bluetooth Unit. 0: Public 1: Private

5853	**[Stamp Data Download]** Push [Execute] to download the fixed stamp data from the machine ROM onto the hard disk. Then these stamps can be used by the system. If this is not done, the user will not have access to the fixed stamps ("Confidential", "Secret", etc.). Executes this SP every after HDD replacement or formatting. Always switch the machine off and on after executing this SP.		
5-853-001	-	C*	[- / **-** / -] [Execute]

5856	**[Remote ROM Update]** Allows reception of firmware data via the local port (IEEE 1284) during a remote ROM update, when the value set to "1". This setting is reset to "0" after the machine is cycled off and on. Allows the technician to upgrade the firmware using a parallel cable.		
5-856-002	Local Port	C*	[0 or 1 / **0** / 1/step] 0: Not allowed 1: Allowed

5857	**[Save Debug Log]**		
5-857-001	On/Off	C*	[0 or 1 / **0** / 1/step] Switches on the debug log feature. The debug log cannot be captured until this feature is switched on.
5-857-002	Target(2:HDD 3:SD)	C*	[- / **2** / -] Selects the destination where the debugging information generated by the event selected by SP5-858 will be stored if an error is generated.
5-857-005	Save to HDD	C*	[- / **-** / -] [Execute] Specifies the decimal key number of the log to be written to the hard disk.

5-857-006	Save to SD Card	C*	[- / - / -] [Execute] Specifies the decimal key number of the log to be written to the SD card.
5-857-009	Copy HDD to SD Card (Latest 4MB)	C*	[- / - / -] [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.
5-857-010	Copy HDD to SD Card (Latest 4MB Any Key)	C*	[- / - / -] [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 and no key specified.
5-857-011	Erase HDD Debug Data	C*	[- / - / -] [Execute] Erases all debug logs on the HDD.
5-857-012	Erase SD Card Debug Data	C*	[- / - / -] [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.

5-857-013	Free Space on SD Card	C*	Displays the amount of space available on the SD card. [- / - / -] [Execute]
5-857-014	Copy SD to SD (Latest 4MB)	C*	[- / - / -] [Execute] Copies the last 4MB of the log (written directly to the card from shared memory) onto an SD card.
5-857-015	Copy SD to SD (Latest 4MB Any Key)	C*	[- / - / -] [Execute] 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.
5-857-016	Make HDD Debug	C*	[- / - / -] [Execute] Creates a 32 MB file to store a log on the HDD.
5-857-017	Make SD Debug	C*	[- / - / -] [Execute] Creates a 4 MB file to store a log on the SD card.
5-857-101	Debug Logging Start Date	C*	[- / **20120101** / 1/step] Sets start date of the debug log output.
5-857-102	Debug Logging End Date	C*	[- / **20371212** / -] Sets end date of the debug log output.
5-857-103	Acquire All Debug Logs	C*	[- / - / -] [Execute] Obtains all debug logs.

5-857-104	Acquire Only Controller Debug Logs	C*	[- / **-** / -] [Execute] Obtains controller debug logs.
5-857-105	Acquire Only Engine Debug Logs	C*	[- / **-** / -] [Execute] Obtains engine debug logs.
5-857-106	Acquire Only Snapshot Debug Logs	C*	[- / **-** / -] [Execute] Obtains snapshot debug logs.
5-857-107	Acquire Only Opepanel Debug logs	C*	[- / **-** / -] [Execute] Obtains controller debug logs to the media inserted front I/F.
5-857-120	Make LogTrace Dir	C*	[- / **-** / -]

5858	**[Debug Save When]** Select the content of the debugging information to be saved to the destination selected by SP5-857-002.		
5-858-001	Engine SC Error(0:OFF 1:ON)	C*	[0 or 1 / **0** / 1/step]
5-858-002	Controller SC Error(0:OFF 1:ON)	C*	
5-858-003	Any SC Error	C*	[0 to 65535 / **0** / 1/step]
5-858-004	Jam(0:OFF 1:ON)	C*	[0 or 1 / **0** / 1/step] Stores 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.

5-859-001	Key 1	C*	[0 to 9999999 / **0** / 1/step]
5-859-002	Key 2	C*	
5-859-003	Key 3	C*	
5-859-004	Key 4	C*	
5-859-005	Key 5	C*	
5-859-006	Key 6	C*	
5-859-007	Key 7	C*	
5-859-008	Key 8	C*	
5-859-009	Key 9	C*	
5-859-010	Key 10	C*	

5860	**[SMTP/POP3/IMAP4]** -		
5-860-020	Partial Mail Receive Timeout	C*	[1 to 168 / **72** / 1/step] Sets the amount of time to wait before saving a mail that breaks up during reception. The received mail is discarded if the remaining portion of the mail is not received during this prescribed time.
5-860-021	MDN Response RFC2298 Compliance	C*	[0 or 1 / **1** / 1/step] Determines whether RFC2298 compliance is switched on for MDN reply mail.
5-860-022	SMTP Auth. From Field Replacement	C*	[0 or 1 / **0** / 1/step] Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated.

5-860-025	SMTP Auth. Direct Setting	C*	[- / **00000000** / -] Occasionally, SMTP certification may fail with encryption enabled for the SMTP server. This can occur if the SMTP server does not meet RFC standards. In such cases you can use this SP to set the SMTP certification method directly. However, this SP can be used only encryption has been enabled.
5-860-026	S/MIME:MIME Header Setting	C*	[0 to 2 / **0** / 1] Selects the MIME header type of an E-mail sent by S/MIME. 0: Microsoft Outlook Express standard 1: Internet Draft standard 2: RFC standard
5-860-028	S/MIME: Authentication Check	C*	[0 to 1 / **0** / 1/step] 0: No (not check), 1: Yes (check)

5866	**[E-Mail Report]** -		
5-866-001	Report Validity	C*	[0 or 1 / **1** / 1/step] Enables or disables the E-mail alert function.
5-866-005	Add Date Field	C*	[0 or 1 / **0** / 1/step] Adds or does not add the date field to the header of the alert mail. 0: Not added 1: Added

5870	**[Common keyInfo Writing]** Writes to flash ROM the common proof for validating the device for NRS specifications.		
5-870-001	Writing	C	[- / **-** / -] [Execute]
5-870-003	Initialize	C	
5-870-004	Writing:2048bit	C	

5873	**[SDCardAppliMove]** Allows you to move applications from one SD card to another.		
5-873-001	MoveExec	C*	[- / **-** / -] [Execute] Executes the move from one SD card to another.
5-873-002	UndoExec	C*	[- / **-** / -] [Execute] This is an undo function. It cancels the previous execution.

5875	**[SC Auto Reboot]** Determines whether the machine reboots automatically when an SC error occurs.		
5-875-001	Reboot Setting	C*	[0 or 1 / **0** / 1/step] Enables or disables the automatic reboot function when an SC error occurs. The reboot is not executed for Type A or C SC codes. 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.
5-875-002	Reboot Type	C*	[0 or 1 / **0** / 1/step] Selects the reboot method for SC.

5876	**[Security Clear]** -		
5-876-001	All Clear	C	[- / **-** / -] [Execute]
5-876-011	Clear NCS Security Setting	C	
5-876-015	Clear UCS Security Setting	C	

5878	[Option Setup] Enables the Data Overwrite Security option or HDD Encryption Option after installation.		
5-878-001	Data Overwrite Security	C	[- / **-** / -] [Execute]
5-878-002	HDD Encryption	C	
5-878-004	OCR Dictionary	C	

5879	[Editing Option] DFU		
5-879-001	-	C*	[- / **-** / -] [Execute]

5881	[Fixed Phrase Block Erasing] DFU		
5-881-001	-	C*	[- / **-** / -] [Execute]

5882	[CPM Set] CPM setting for the main machine.		
5-882-001	-	E*	[0 to 5 / **2** / 1/step]

5885	[Set WIM Function] Close or disclose the functions of web image monitor.		

5-885-020	DocSvr Acc Ctrl	C*	[8bit assign / **00000000** / bit switch] Bit Meaning 0: Forbid all document server access (1) 1: Forbid user mode access (1) 2: Forbid print function (1) 3: Forbid fax TX (1) 4: Forbid scan sending (1) 5: Forbid downloading (1) 6: Forbid delete (1) 7: Reserved
5-885-050	DocSvr Format	C*	[0 to 2 / **0** / 1/step] Selects the display type for the document box list.
5-885-051	DocSvr Trans	C*	[5 to 20 / **10** / 1/step] Sets the number of documents to be displayed in the document box list.
5-885-100	Set Signature	C*	[0 to 2 / **0** / 1/step] Selects whether the signature is added to the scanned documents with the WIM when they are transmitted by an e-mail.
5-885-101	Set Encryption	C*	[0 or 1 / **0** / 1/step] Determines whether the scanned documents with the WIM are encrypted when they are transmitted by an e-mail.
5-885-200	Detect Mem Leak	C*	[- / **00000000** / -]
5-885-201	DocSvr Timeout	C*	[- / **30** / -]

5887	**[SD GetCounter]** 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. Insert the SD card in SD card Slot 2 (lower slot). Select SP5887 then touch [EXECUTE]. Touch [Execute] in the message when you are prompted. **Note** • "SD_COUNTER" folder must be created under the root directory of the SC card before this SP is executed.		
5-887-001	-	C*	[- / **-** / -] [Execute]

5888	**[Personal Information Protect]** Selects the protection level for logs.		
5-888-001	-	C*	[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).

5893	**[SDK Application Counter]** Displays the counter name of each SDK application.		
5-893-001	SDK-1	C*	[- / **-** / -]
5-893-002	SDK-2	C*	
5-893-003	SDK-3	C*	
5-893-004	SDK-4	C*	
5-893-005	SDK-5	C*	
5-893-006	SDK-6	C*	

5894	**[External Counter Setting]** Switch the Charge Mode of External Mech Count		
5-894-001	Switch Charge Mode	E*	[0 to 2 / **0** / 1/step]

5900	**[Engine Log Upload]** -		
5-900-001	Pattern	E*	Specifies the Traget Module group for Engine Log Upload. [0 to 4 / **0** /1/step]
5-900-002	Trigger	E*	Specifies the Target Trigger group for Engine Log Upload. [0 to 3 / **0** /1/step]

5907	**[Plug & Play Maker/Model Name]** 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.		
5-907-001	-	C*	[- / **-** / -]

5913	**[Switchover Permission Time]** Sets the length of time to elapse before allowing another application to take control of the display when the application currently controlling the display is not operating because a key has not been pressed.		
5-913-002	Print Application Timer	C*	[- / **3** / -]

5967	**[Copy Server : Set Function]** Enables or 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.		
5-967-001	(0:ON 1:OFF)	C*	[0 to 1 / **0** / 1/step]

5973	[User Stamp Registration] -		
5-973-101	Frame deletion setting	C*	[0 to 3 / **0** / 1mm/step]

5974	[Cherry Server] Specifies which version of ScanRouter, “Light” or “Full”, is installed.		
5-974-001	(0:Light 1: Full)	C*	[0 or 1 / **0** / 1/step] 0: Light 1: Full

5985	[Device Setting] Enables/disables the on-board device.		
5-985-001	On Board NIC	C	[0 to 2 / **0** / 1/step] 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. 0: Disable 1: Enable 2: Function limitation
5-985-002	On Board USB	C	[0 or 1 / **0** / 1/step] 0: Disable 1: Enable

5987	[Mech. Counter] -		

5-987-001	0:OFF / 1:ON	E*	[0 or 1 / **0** / 1/step] This SP detects that a mechanical counter device is removed. If it is detected, SC610 occurs. **0: OFF**. 1: ON

5990	**[SP Print Mode]** Prints out the SMC sheets.		
5-990-001	All (Data List)	C	[- / **-** / -] [Execute] Press "Execute" key to start printing the SMC sheets.
5-990-002	SP (Mode Data List)	C	
5-990-003	User Program	C	
5-990-004	Logging Data	C	
5-990-005	Diagnostic Report	C	
5-990-006	Non-Default	C	
5-990-007	NIB Summary	C	
5-990-008	Capture Log	C	
5-990-021	Copier User Program	C	[- / **-** / -] [Execute] Press "Execute" key to start printing the SMC sheets.
5-990-022	Scanner SP	C	
5-990-023	Scanner User Program	C	
5-990-024	SDK/J Summary	C	
5-990-025	SDK/J Application Info	C	
5-990-026	Printer SP	C	

5992	**[SP Text Mode]** Exports the SMC sheet data to the SD Card.

5-992-001	All(Data List)	C	[- / **-** / -] [Execute] Press "Execute" key to start exporting the SMC data in the SP mode display.
5-992-002	SP(Mode Data List)	C	
5-992-003	User Program	C	
5-992-004	Logging Data	C	
5-992-005	Diagnostic Report	C	
5-992-006	Non-Default	C	
5-992-007	NIB Summary	C	
5-992-008	Capture Log	C	
5-992-021	Copier User Program	C	
5-992-022	Scanner SP	C	
5-992-023	Scanner User Program	C	
5-992-024	SDK/J Summary	C	
5-992-025	SDK/J Application Info	C	
5-992-026	Printer SP	C	

5994	**[Mirroring]** -		
5-994-001	Engine	E	[- / **-** / -] [Execute]

5995	**[Factory Mode]** -		
5-995-001	-	E*	[0 or 1 / **0** / 1/step]

5998	**[Fusing Warm UP]** Sets the timing that the engine switches the fusing ON.		
5-998-002	Fusing ON Timing	E*	[0 or 1 / **1** / 1/step].

Main SP Tables-6

SP6-XXX (Peripherals)

6006	[ADF Adjustment] -		
6-006-001	Side-to-Side Regist: Front	E*	[-3.0 to 3.0 / **0.0** / 0.1mm/step] Adjusts the side-to-side registration of originals with the ARDF.
6-006-002	Side-to-Side Regist: Rear	E*	[-3.0 to 3.0 / **0.0** / 0.1mm/step] Adjusts the side-to-side registration of originals with the ARDF.
6-006-003	Leading Edge Registration	E*	[-5.0 to 5.0 / **0.0** / 0.1mm/step] Adjusts the leading registration of originals with the ARDF.
6-006-005	Buckle: Duplex Front	E*	[-5.0 to 5.0 / **0.0** / 0.1mm/step] Adjust the amount of paper buckle to correct original skew for the front and rear sides.
6-006-006	Buckle: Duplex Rear	E*	[-5.0 to 5.0 / **0.0** / 0.1mm/step] Adjust the amount of paper buckle to correct original skew for the front and rear sides.
6-006-007	Rear Edge Erase	E*	[-10.0 to 10.0 / **0.0** / 0.1mm/step] Adjusts the erase margin at the original trailing edge.

6007	[ARDF (D779) Input Check] See page 288

6008	[ARDF (D779) Output Check] See page 301

6009	**[ADF Free Run]** Performs an ARDF free run in duplex mode. Press [ON] to start, press [OFF] to stop. **Note** • This is a general free run controlled from the copier.		
6-009-001	Free Run Simplex Motion	E	[OFF or ON / - / 1/step] ADF operates in a free-run state with simplex paper.
6-009-002	Free Run Duplex Motion	E	[OFF or ON / - / 1/step] ADF operates in a free-run state with duplex paper.
6-009-003	Free Run Stamp Motion	E	[OFF or ON / - / 1/step] ADF operates in a free-run state with simplex paper and stamp].
6-009-004	Free Run Simplex Motion(low speed)	E	[OFF or ON / - / 1/step] Performs ADF free running with simplex paper in a low speed.
6-009-005	Free Run Simplex Motion(high speed)	E	[OFF or ON / - / 1/step] Performs ADF free running with simplex paper in a high speed.
6-009-006	Free Run Duplex Motion(low speed)	E	[OFF or ON / - / 1/step] Performs ADF free running with duplex paper in a low speed.
6-009-007	Free Run Duplex Motion(high speed)	E	[OFF or ON / - / 1/step] Performs ADF free running with duplex paper in a high speed.

6010	**[Stamp Position Adj.]**		
6-010-001	-	E*	[-5.0 to 5.0 / **0.0** / 0.1mm/step] Adjusts the stamp position in the sub-scan direction in fax mode.

6016	[Original Size Detect Setting] -		
6-016-001	-	E*	[0 to 255 / **0** / 1/step] Sets the priority size code.

6017	[DF Magnification Adj.] -		
6-017-001	-	E*	[-5.0 to 5.0 / **0.0** / 0.1%/step] Adjusts the magnification in the sub-scan direction for the ARDF.

6020	[Skew Correction Moving Setting] Select the skew correction On or Off		
6-020-001	-	E*	[0 or 1 / **0** / 1/step]

6128	[Sub-scan Punch Pos Adj.] Adjusts the punching position in the sub scan direction. • [-] direction: The position of the hole moves to the trailing edge of paper when received. • [+] direction: The position of the hole moves to the leading edge of paper when received.		
6-128-001	JPN/EU: 2-Hole	E*	[-7.5 to 7.5 / **0.0** / 0.5mm/step]
6-128-002	NA: 3-Hole	E*	
6-128-003	Europe: 4-Hole	E*	
6-128-004	NEU: 4-Hole	E*	
6-128-005	NA: 2-Hole	E*	

6129	[Main-Scan Punch Pos Adj.] Adjusts the punching position in the main scan direction. • [-] direction: The position of the hole moves to the front side of the device. • [+] direction: The position of the hole moves to the rear side of the device.		

6-129-001	JPN/EU: 2-Hole	E*	[-2.0 to 2.0 / **0.0** / 0.4mm/step]
6-129-002	NA: 3-Hole	E*	
6-129-003	Europe: 4-Hole	E*	
6-129-004	NEU: 4-Hole	E*	
6-129-005	NA: 2-Hole	E*	

6130	**[Skew Correct Buckle Adj]** Adjusts the paper buckle for each paper size. • [-] direction: Decreases the buckle amount. • [+] direction: Increases the buckle amount.		
6-130-001	A3 SEF	E*	[-5.0 to 5.0 / **0.0** / 0.2 / mm]
6-130-002	B4 SEF	E*	
6-130-003	A4 SEF	E*	
6-130-004	A4 LEF	E*	
6-130-005	B5 SEF	E*	
6-130-006	B5 LEF	E*	
6-130-007	A5 LEF	E*	
6-130-008	DLT SEF	E*	[-5.0 to 5.0 / **0.0** / 0.2 / mm]
6-130-009	LG SEF	E*	
6-130-010	LT SEF	E*	
6-130-011	LT LEF	E*	
6-130-012	HLT-Y	E*	
6-130-013	12x18	E*	
6-130-014	8K SEF	E*	
6-130-015	16K SEF	E*	
6-130-016	16K LEF	E*	
6-130-017	Other	E*	

6131	[Skew Correction Control] Selects the skew correction control for each paper size.		
6-131-001	A3 SEF	E*	[0 or 1 / **0** / 1/step] 0: No (No skew correction) 1: Roller Stop Skew Correction
6-131-002	B4 SEF	E*	
6-131-003	A4 SEF	E*	
6-131-004	A4 LEF	E*	
6-131-005	B5 SEF	E*	
6-131-006	B5 LEF	E*	
6-131-007	A5 LEF	E*	
6-131-008	DLT SEF	E*	
6-131-009	LG SEF	E*	[0 or 1 / **0** / 1/step] 0: No (No skew correction) 1: Roller Stop Skew Correction
6-131-010	LT SEF	E*	
6-131-011	LT LEF	E*	
6-131-012	HLT-Y	E*	
6-131-013	12x18	E*	
6-131-014	8K SEF	E*	
6-131-015	16K SEF	E*	
6-131-016	16K LEF	E*	
6-131-017	Other	E*	

6132	[Jogger Pos Adj:AMU] (1000-sheet finisher (D686/D687)) • [-] direction: The Jogger moves into the direction of which the width becomes narrower than the standard value. • [+] direction: The Jogger moves into the direction of which the width becomes wider than the standard value.

6-132-001	A3 SEF	E*	[-1.5 to 1.5 / **0.0**/ 0.5mm/step]
6-132-002	B4 SEF	E*	
6-132-003	A4 SEF	E*	
6-132-004	A4 LEF	E*	
6-132-005	B5 SEF	E*	
6-132-006	B5 LEF	E*	[-1.5 to 1.5 / **0.0**/ 0.5mm/step]
6-132-007	DLT SEF	E*	
6-132-008	LG SEF	E*	
6-132-009	LT SEF	E*	
6-132-010	LT LEF	E*	
6-132-011	12x18	E*	[-1.5 to 1.5 / **0.0**/ 0.5mm/step]
6-132-012	8K LEF	E*	
6-132-013	16K SEF	E*	
6-132-014	16K LEF	E*	
6-132-015	Other	E*	

6133	**[Jogger Pos Adj:RUB]** (Internal finisher (D586)) • [-] direction: The Jogger moves into the direction of which the width becomes narrower than the Standard Value. • [+] direction: The Jogger moves into the direction of which the width becomes larger than the Standard Value.		
6-133-001	A3 SEF	E*	[-1.5 to 1.5 / **0** / 0.5 / mm]
6-133-002	B4 SEF	E*	[-3 to 3 / **0** / 0.5 / mm]
6-133-003	A4 SEF	E*	[-3 to 3 / **0** / 0.5 / mm]
6-133-004	A4 LEF	E*	[-1.5 to 1.5 / **0** / 0.5 / mm]

6-133-005	B5 SEF	E*	[-3 to 3 / **0** / 0.5 / mm]
6-133-006	B5 LEF	E*	
6-133-007	DLT SEF	E*	
6-133-008	LG SEF	E*	
6-133-009	LT SEF	E*	
6-133-010	LT LEF	E*	
6-133-015	Other	E*	

6134	**[Staple Position Adj:AMU]** (1000-sheet finisher (D686/D687)) • [-] direction: The staple position moves to the front direction of the device. • [+] direction: The staple position moves to the rear direction of the device.		
6-134-001	Finisher1	E*	[-3.5 to 3.5 / **0** / 0.5 / mm]

6135	**[Staple Position Adj:RUB]** (Internal finisher (D586)) • [-] direction: The staple position moves to the front direction of the device. • [+] direction: The staple position moves to the rear direction of the device.		
6-135-001	Finisher2	E*	[-2 to 2 / **0** / 0.5 / mm]

6136	**[Booklet Stapler Pos Adj]** • [-] direction: The staple position moves to the trail edge of paper when received. • [+] direction: The staple position moves to t the leading edge of paper when received.

6-136-001	A3 SEF	E*	[-3 to 3 / **0** / 0.2 / mm]
6-136-002	B4 SEF	E*	
6-136-003	A4 SEF	E*	
6-136-004	B5 SEF	E*	
6-136-005	DLT SEF	E*	
6-136-006	LG SEF	E*	
6-136-007	LT SEF	E*	
6-136-008	12x18	E*	

6137	**[Booklet Folder Pos Adj]** • [-] direction: The folder position moves to the trail edge of paper when received. • [+] direction: The folder position moves to t the leading edge of paper when received.		
6-137-001	A3 SEF	E*	[-3 to 3 / **0** / 0.2 / mm]
6-137-002	B4 SEF	E*	
6-137-003	A4 SEF	E*	
6-137-004	B5 SEF	E*	
6-137-005	DLT SEF	E*	
6-137-006	LG SEF	E*	
6-137-007	LT SEF	E*	
6-137-008	12x18	E*	

6138	**[Fold Times Adj]** Adjusts the fold times.		
6-138-001	-	E*	[0 to 29 / **0** / 1 / times]

6139	**[Fin. Free Run]** -

6-139-001	Free Run1	E	[OFF or ON / - / 1/step] Transmits the following ASAP command when the free-run Value [B0H] is set to "1" (Start). When it is set to "0" (Stop), transmits B0H +00H (Normal Operation: Suspend Free-run operation). D586:ASAP B0H+01H (Shift Freerun] D686/D687:ASAP B0H+01H (Shift Mode 1)
6-139-002	Free Run2	E	[OFF or ON / - / 1/step] Transmits the following ASAP command when the Free-run Value [B0H] is set to "1" (Start). When it is set to "0" (Stop), transmits B0H +00H (Normal Operation: Suspend Free-run operation) D586:ASAP B0H+02H (Near-side Stapling Freerun) D686/D687:ASAP B0H+02H (Staple Mode 1: Corner staple) Note • Remove the stapling cartridge when applying a free-run to D586 or D686/D687.
6-139-003	Free Run3	E	[OFF or ON / - / 1/step] Transmits the following ASAP command when the Free-run Value [B0H] is set to "1" (Start). When it is set to "0" (Stop), transmits B0H +00H (Normal Operation: Suspend Free-run operation). D586: ASAP B0H+03H (Packing Freerun) D686/D687: ASAP B0H+02H (Staple Mode 2: Book Staple) Note • Remove the stapling cartridge when applying a free-run to D686/D687.

6-139-004	Free Run4	E	[OFF or ON / - / 1/step] For D686/D687 only. D686/D687:ASAP B0H+04H (Staple Mode 2: Book Staple) **Note** • Remove the stapling cartridge when applying a free-run to D686/D687.

6140	**[Last Paper Pos Time Adj]** Adjusts the last paper position times.		
6-140-001	-	E*	[0 or 1 / **0** / 1time/step]

6141	**[PositioningStrtTmingAdj]** Adjusts the positioning start timing.		
6-141-001	A3 SEF	E*	[-100 to 100 / **0** / 10msec/step]
6-141-002	B4 SEF	E*	
6-141-003	A4 SEF	E*	
6-141-004	A4 LEF	E*	
6-141-005	B5 SEF	E*	
6-141-006	B5 LEF	E*	[-100 to 100 / **0** / 10msec/step]
6-141-007	DLT SEF	E*	
6-141-008	LG SEF	E*	
6-141-009	LT SEF	E*	
6-141-010	LT LEF	E*	
6-141-011	12x18	E*	[-100 to 100 / **0** / 10msec/step]
6-141-012	8K SEF	E*	
6-141-013	16k SEF	E*	
6-141-014	16K LEF	E*	
6-141-015	Other	E*	

6142	[PosTimeAdj(LstPr2ndTime] Adjusts the positioning time; Last paper 2nd.		
6-142-001	-	E*	[-100 to 100 / **0** / 10msec/step]

6143	[PosTiAdj(ExcLstPr3rdTi)] Adjusts the positioning time; except last paper 2nd.		
6-143-001	A3 SEF	E*	[-100 to 100 / **0** / 10msec/step]
6-143-002	B4 SEF	E*	
6-143-003	A4 SEF	E*	
6-143-004	A4 LEF	E*	
6-143-005	B5 SEF	E*	
6-143-006	B5 LEF	E*	[-100 to 100 / **0** / 10msec/step]
6-143-007	DLT SEF	E*	
6-143-008	LG SEF	E*	
6-143-009	LT SEF	E*	
6-143-010	LT LEF	E*	
6-143-011	12x18	E*	[-100 to 100 / **0** / 10msec/step]
6-143-012	8K SEF	E*	
6-143-013	16K SEF	E*	
6-143-014	16K LEF	E*	
6-143-015	Other	E*	

6144	[Pos Time Adj By Sheet] Adjusts the positioning time on a sheet count basis.

6-144-001	1 - 10 Sheets	E*	[-100 to 100 / 0 / 10msec/step]
6-144-002	11 - 20 Sheets	E*	
6-144-003	21 - 30 Sheets	E*	
6-144-004	31 - 40 Sheets	E*	
6-144-005	41 - 50 Sheets	E*	

6145	[1000-sheet FIN (D686/D687) INPUT Check] See page 288

6146	[Internal FIN (D586) INPUT Check] See page 288

6147	[1000-sheet FIN (D686/D687) OUTPUT Check] See page 301

6149	[Internal FIN (D586) OUTPUT Check] See page 301

6150	[Bridge Unit (D584) INPUT Check] See page 288

6151	[Bridge Unit (D584) OUTPUT Check] See page 301

6152	[Shift Tray (D583) INPUT Check] See page 288

6153	[Shift Tray (D583) OUTPUT Check] See page 301

6154	[1-bin Tray (D582) INPUT Check] See page 288

6155	**[1-bin Tray (D582) OUTPUT Check]** See page 301

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. Raising this setting without quality assurance could damage the machine.		
6-830-001	0 to 50 (Initial:0)	*C	[0 to 50 / **0** / 1/step]

6830	**[Extra Saddles]** Makes possible for staple to saddle stitch more sheets than basic amount. Saddle stitch staple max. amount will be recognized as the total of this SP's value and the basic amount.		
6-830-002	0 to 50 (Initial:0)	*C	[0 to 50 / **0** / 1/step]

6830	**[Extra Half-Fold]** Makes possible for finisher to middle fold more than the basic foldable amount. Middle fold max. amount will be recognized as the total of this SP's value and basic Middle fold amount.		
6-830-003	0 to 50 (Initial:0)	*C	[0 to 50 / **0** / 1/step]

Main SP Tables-7

SP7-XXX (Data Log)

7401	[Total SC Counter] Stores the total detected SC counts.		
7-401-001	SC Counter	C*	[00000 to 65535 / **0** / 1/step]
7-401-002	Total SC Counter	C*	

7403	[SC History] Logs the detected SC codes. The 10 most recently detected SC codes are not displayed on the screen, but can be seen on the SMC (logging) outputs.		
7-403-001	Latest	C*	[- / - / -]
7-403-002	Latest 1	C*	
7-403-003	Latest 2	C*	
7-403-004	Latest 3	C*	
7-403-005	Latest 4	C*	
7-403-006	Latest 5	C*	
7-403-007	Latest 6	C*	
7-403-008	Latest 7	C*	
7-403-009	Latest 8	C*	
7-403-010	Latest 9	C*	

7404	[SC990/SC991 History] Logs last 10 records of SC990/SC991. If the total counter does not work, logging will be stopped so that preventing the records from being deleted when the same SCs occur continuously.

7-404-001	Latest	C*	[- / - / -]
7-404-002	Latest 1	C*	
7-404-003	Latest 2	C*	
7-404-004	Latest 3	C*	
7-404-005	Latest 4	C*	
7-404-006	Latest 5	C*	
7-404-007	Latest 6	C*	
7-404-008	Latest 7	C*	
7-404-009	Latest 8	C*	
7-404-010	Latest 9	C*	

7502	**[Total Paper Jam]** Stores the total paper jam counts.		
7-502-001	Jam Counter	C*	[00000 to 65535 / **0** / 1/step] If the JAM occurred in multiple places, it logs as one SC.
7-502-002	Total Jam Counter	C*	[00000 to 65535 / **0** / 1/step]

7503	**[Total Original Counter]** Displays the total number of original jams.		
7-503-001	-	C*	[00000 to 65535 / **0** / 1/step]
7-503-002	Total Original Counter	C*	

7504	**[Paper Jam location]** Display the counts of transfer jams on a location basis.

7-504-001	At Power On	C*	[0000 to 9999 / **0** / 1/step]
7-504-003	Tray 1: On	C*	
7-504-004	Tray 2: On	C*	
7-504-005	Tray 3: On	C*	
7-504-006	Tray 4: On	C*	
7-504-008	Bypass:On	C*	[0000 to 9999 / **0** / 1/step]
7-504-009	Duplex:On	C*	
7-504-011	Vertical Trans. 1:On	C*	
7-504-012	Vertical Trans. 2:On	C*	
7-504-013	Vertical Trans. 3:On	C*	
7-504-017	Registration: On	C*	
7-504-020	Paper Exit: On	C*	[0000 to 9999 / **0** / 1/step]
7-504-021	Bridge Tray Exit :On	C*	
7-504-022	Bridge Relay: On	C*	
7-504-024	Inverter: ON	C*	
7-504-025	Duplex Exit Sensor: On	C*	
7-504-027	Duplex Entrance Sensor:On	C*	
7-504-051	Vertical Trans.1:Off	C*	[0000 to 9999 / **0** / 1/step]
7-504-052	Vertical Trans.2:Off	C*	
7-504-053	Vertical Trans.3 (PFU):Off	C*	
7-504-054	Vertical Trans.4(PFU):Off	C*	
7-504-057	Registration Sensor:Off	C*	

7-504-060	Paper Exit:Off	C*	[0000 to 9999 / **0** / 1/step]
7-504-061	Bridge:Exit:Off	C*	
7-504-062	Bridge:Transport:Off	C*	
7-504-064	Inverter:Off	C*	
7-504-065	Duplex Exit: Off	C*	
7-504-067	Duplex Entrance: Off	C*	
7-504-100	Entrance Sensor: On	C*	[0000 to 9999 / **0** / 1/step]
7-504-101	Entrance Sensor:Off	C*	
7-504-102	Transport:On	C*	
7-504-103	Transport:Off	C*	
7-504-104	Paper Exit	C*	
7-504-105	Front Jogger Motor	C*	[0000 to 9999 / **0** / 1/step]
7-504-106	Rear Jogger Motor	C*	
7-504-107	Shift Roller Motor	C*	
7-504-108	Positioning Motor	C*	
7-504-109	Ext Guide Plate Motor	C*	
7-504-110	Stapler Shift Motor	C*	
7-504-111	Tray Lift Motor	C*	[0000 to 9999 / **0** / 1/step]
7-504-112	Stapler Motor	C*	
7-504-113	Stack Height Motor	C*	
7-504-114	Punch Moror	C*	
7-504-115	Punch Move Motor	C*	
7-504-116	S-to-S Registration Move Motor	C*	

7-504-148	No Exit Response	C*	[0000 to 9999 / **0** / 1/step]
7-504-149	Main Machine Setting Incorrect	C*	
7-504-200	Entrance : On	C*	
7-504-201	Entrance: Off	C*	
7-504-202	Proof Tray Exit: On	C*	
7-504-203	Proof Tray Exit: Off	C*	
7-504-204	ITB Transport: Right:On	C*	[0000 to 9999 / **0** / 1/step]
7-504-205	Left Relay: On	C*	
7-504-206	Left Relay:Off	C*	
7-504-207	Shift Tray Exit :On	C*	
7-504-208	Shift Tray Exit : Off	C*	
7-504-209	Stack : On	C*	
7-504-210	TE Stopper: On	C*	
7-504-211	TE Stopper: Off	C*	
7-504-212	Booklet Folder Exit: On	C*	[0000 to 9999 / **0** / 1/step]
7-504-213	Booklet Folder Exit: Off	C*	
7-504-220	Entrance Motor	C*	
7-504-221	Proof Motor	C*	
7-504-222	Ppr Feed/Posit & Move Rllr Mt	C*	
7-504-223	Shift Motor	C*	
7-504-224	Jogger Motor	C*	

7-504-225	Exit Guide Plate Motor	C*	[0000 to 9999 / **0** / 1/step]
7-504-226	Feed Out Motor	C*	
7-504-227	Output Tray Motor	C*	
7-504-228	Positioning Motor	C*	
7-504-229	Stapler Shift Motor	C*	
7-504-230	Stapler Motor	C*	
7-504-231	Punch Motor	C*	[0000 to 9999 / **0** / 1/step]
7-504-232	Stack Transport Motor	C*	
7-504-233	LE Stopper Motor	C*	
7-504-234	Folder Blade Motor	C*	
7-504-248	No Exit Response	C*	
7-504-249	Main Machine Setting Incorrect	C*	

7505	**[Original Jam Det]** Display the counts of Original Jams, which are assigned the following branch numbers, with the numbers of four digits		
7-505-001	At Power On	C*	[0000 to 9999 / **0** / 1/step]
7-505-014	Skew Correction Sn: On	C*	
7-505-016	Registration Sensor: On	C*	
7-505-017	Original Exit Sensor: On	C*	
7-505-064	Skew Correction Sensor: Off	C*	[0000 to 9999 / **0** / 1/step]
7-505-066	Registration Sensor: Off	C*	
7-505-067	Original Exit Sensor: Off	C*	
7-505-239	Original Pull	C*	

7506	[Jam Count by Paper Size] Displays the number of jams according to the paper size. Initial Jams are not counted up because it cannot detect the paper size		
7-506-005	A4 LEF	C*	[0000 to 9999 / 0 / 1/step]
7-506-006	A5 LEF	C*	
7-506-014	B5 LEF	C*	
7-506-038	LT LEF	C*	
7-506-044	HLT LEF	C*	
7-506-132	A3 SEF	C*	
7-506-133	A4 SEF	C*	
7-506-134	A5 SEF	C*	[0000 to 9999 / 0 / 1/step]
7-506-141	B4 SEF	C*	
7-506-142	B5 SEF	C*	
7-506-160	DLT SEF	C*	
7-506-164	LG SEF	C*	
7-506-166	LT SEF	C*	
7-506-172	HLT SEF	C*	
7-506-255	Others	C*	

7507	[Plotter Jam History] A Jam Counter for records for 10 latest paper jams. Detail information on 10 latest paper jams is logged. The contents are as follows: [1] date [2] total counts [3] cause [4]paper size These are logged when a paper jam has occurred.

7-507-001	Latest	C*	[- / - / -] The code of causes of paper jams/ paper size/ total count when the jam occurred/ date of the jam.
7-507-002	Latest 1	C*	
7-507-003	Latest 2	C*	
7-507-004	Latest 3	C*	
7-507-005	Latest 4	C*	
7-507-006	Latest 5	C*	
7-507-007	Latest 6	C*	
7-507-008	Latest 7	C*	
7-507-009	Latest 8	C*	
7-507-010	Latest 9	C*	

7508	[Original Jam History] A Jam Counter for records for 10 latest original jams. Detail information on 10 latest original jams is logged. The contents are as follows: [1] date [2] total counts [3] cause [4]paper size These are logged when an original jam has occurred.		
7-508-001	Latest	C*	[- / - / -] The code of causes of original jams/ paper size/ total count when the jam occurred/ date of the jam.
7-508-002	Latest 1	C*	
7-508-003	Latest 2	C*	
7-508-004	Latest 3	C*	
7-508-005	Latest 4	C*	
7-508-006	Latest 5	C*	
7-508-007	Latest 6	C*	
7-508-008	Latest 7	C*	
7-508-009	Latest 8	C*	
7-508-010	Latest 9	C*	

7514	[Paper Jam Count by Location] Total counter of transfer paper jam by each incidence place. Displays occurring count of transfer paper jams by each incidence place.		
7-514-001	At Power On	C*	Paper is not fed at power on. [0000 to 9999 / - / 1/step]
7-514-003	Tray1: On	C*	[0000 to 9999 / - / 1/step]
7-514-004	Tray2: On	C*	
7-514-005	Tray3: On	C*	
7-514-006	Tray4: On	C*	
7-514-008	Bypass: On	C*	
7-514-009	Duplex: On	C*	
7-514-010	Transport 1: On	C*	
7-514-012	Transport 2:On	C*	
7-514-013	Transport 3: On	C*	
7-514-017	Registration: On	C*	[0000 to 9999 / - / 1/step]
7-514-020	Paper Exit: On	C*	
7-514-021	Bridge Tray Exit: On	C*	
7-514-022	Bridge Relay: On	C*	
7-514-024	Inverter: ON	C*	
7-514-025	Duplex Exit Sensor: On	C*	
7-514-027	Duplex Entrance Sensor: On	C*	

7-514-051	Vertical Trans. 1: Off	C*	[0000 to 9999 / - / 1/step]
7-514-052	Vertical Trans. 2: Off	C*	
7-514-053	Vertical Trans. 3 (PFU): Off	C*	
7-514-054	Vertical Trans. 4 (PFU): Off	C*	
7-514-057	Registration Sensor: Off	C*	
7-514-060	Paper Exit: Off	C*	
7-514-061	Bridge Exit: Off	C*	
7-514-062	Bridge: Transport: Off	C*	
7-514-064	Inverter: Off	C*	[0000 to 9999 / - / 1/step]
7-514-065	Duplex Exit: Off	C*	
7-514-067	Duplex Entrance: Off	C*	
7-514-100	Entrance Sensor: On	C*	
7-514-101	Entrance Sensor: Off	C*	
7-514-102	Transport: On	C*	
7-514-103	Transport: Off	C*	
7-514-104	Paper Exit	C*	
7-514-105	Front Jogger Motor	C*	
7-514-106	Rear Jogger Motor	C*	
7-514-107	Shift Roller Motor	C*	
7-514-108	Positioning Motor	C*	
7-514-109	Ext Guide Plate Motor	C*	

7-514-110	Stapler Shift Motor	C*	[0000 to 9999 / - / 1/step]
7-514-111	Tray Lift Motor	C*	
7-514-112	Staple Motor	C*	
7-514-113	Stack Height Motor	C*	
7-514-114	Punch Motor	C*	
7-514-115	Punch Move Motor	C*	
7-514-116	S-to-S Registration Move Motor	C*	
7-514-148	No Exit Response	C*	[0000 to 9999 / - / 1/step]
7-514-149	Main Machine Setting Incorrect	C*	
7-514-200	Entrance: On	C*	
7-514-201	Entrance: Off	C*	
7-514-202	Proof Tray Exit: On	C*	
7-514-203	Proof Tray Exit: Off	C*	
7-514-204	ITB Transport: Right: On	C*	
7-514-205	Left Relay: On	C*	[0000 to 9999 / - / 1/step]
7-514-206	Left Relay: Off	C*	
7-514-207	Shift Tray Exit: On	C*	
7-514-208	Shift Tray Exit: Off	C*	
7-514-209	Stack: On	C*	
7-514-210	TE Stopper: On	C*	
7-514-211	TE Stopper: Off	C*	
7-514-212	Booklet Folder Exit: On	C*	
7-514-213	Booklet Folder Exit: Off	C*	

7-514-220	Entrance Motor	C*	[0000 to 9999 / - / 1/step]
7-514-221	Proof Motor	C*	
7-514-222	Ppr Feed/Posit & Move Rllr Mt	C*	
7-514-223	Shift Motor	C*	
7-514-224	Jogger Motor	C*	
7-514-225	Exit Guide Plate Motor	C*	
7-514-226	Feed Out Motor	C*	
7-514-227	Output Tray Motor	C*	
7-514-228	Positioning Motor	C*	[0000 to 9999 / - / 1/step]
7-514-229	Stapler Shift Motor	C*	
7-514-230	Stapler Motor	C*	
7-514-231	Punch Motor	C*	
7-514-232	Stack Transport Motor	C*	
7-514-233	LE Stopper Motor	C*	
7-514-234	Folder Blade Motor	C*	
7-514-248	No Exit Response	C*	
7-514-249	Main Machine Setting Incorrect	C*	

7515	[Original Jam Count by Location] -

7-515-001	At Power On	C*	[0000 to 9999 / - / 1/step]
7-515-014	Skew Correction Sn: On	C*	
7-515-016	Registration Sensor: On	C*	
7-515-017	Original Exit Sensor: On	C*	
7-515-064	Skew Correction Sensor: Off	C*	
7-515-066	Registration Sensor: Off	C*	
7-515-067	Original Exit Sensor: Off	C*	
7-515-239	Original Pull	C*	

7516	[Jam Paper Size Cnt] Displays occurring count of transfer paper jams by each paper size.		
7-516-005	A4 LEF	C*	[0 to 9999 / 0 / 1 sheets/step]
7-516-006	A5 LEF	C*	
7-516-014	B5 LEF	C*	
7-516-038	LT LEF	C*	
7-516-044	HLT LEF	C*	
7-516-132	A3 SEF	C*	
7-516-133	A4 SEF	C*	
7-516-134	A5 SEF	C*	
7-516-141	B4 SEF	C*	[0 to 9999 / 0 / 1 sheets/step]
7-516-142	B5 SEF	C*	
7-516-160	DLT SEF	C*	
7-516-164	LG SEF	C*	
7-516-166	LT SEF	C*	
7-516-172	HLT SEF	C*	
7-516-255	Others	C*	

7520	**[Update Log]** Displays 10 latest records of errors of Firmware updating. [-001] is the latest error and [-010] is the error of 10 times before. Previous errors which are older than 10 times before are deleted. If the preceding update is completed successfully, [-001] will be a record of the success. A unit updated at a time is counted as 1. If more than one modules are selected and updated, the information of the latest module remains.		
7-520-001	ErrorRecord1	C*	[1 to 255 / **0** / 1/step]
7-520-002	ErrorRecord2	C*	
7-520-003	ErrorRecord3	C*	
7-520-004	ErrorRecord4	C*	
7-520-005	ErrorRecord5	C*	
7-520-006	ErrorRecord6	C*	
7-520-007	ErrorRecord7	C*	
7-520-008	ErrorRecord8	C*	
7-520-009	ErrorRecord9	C*	
7-520-010	ErrorRecord10	C*	

7801	**[ROM No./Firmware Version]** Displays the firmware versions of all ROMs in the system, including the mainframe, the ARDF, and peripheral devices.		
7-801-255	-	C	[Character String with 9 digit / **-** / -]

7803	**[PM Counter Display]** Displays the PM counter since the last PM.		
7-803-001	Paper	C*	[0 to 9999999 / **0** / 1/step]
7-803-002	Sheets 60K Part	E*	[0 to 9999999 / **0** / 1sheets/step]
7-803-003	Sheets 120K Part	E*	
7-803-004	Distance (mm) 60 K	E*	[0 to 999999999 / **0** / 1mm/step]
7-803-005	Distance (mm) 120 K	E*	

7-803-006	Distance60K	E*	[0 to 255 / 0 / 1/step]
7-803-007	Distance120K	E*	

7804	[PM Counter Resets] Resets the PM counter. To reset, press Execute on the touch panel.		
7-804-001	Paper	E	[- / - / -] [Execute]
7-804-002	60K part	E	
7-804-003	120K part	E	

7807	[SC/Jam Counter Reset] Resets the SC and jam counters. To reset, press Execute on the touch panel. This SP does not reset the jam history counters.		
7-807-001	-	C	[- / - / -] [Execute]

7826	[MF Error Counter] Displays the counts that could not send count commands to the MF charging device.		
7-826-001	Error Total	C*	[0 to 9999999 / - / 1step]
7-826-002	Error Staple	C*	

7827	[MF Error Counter Clear] Clears all the records in SP7-826 (MF Error Counter).		
7-827-001	-	C	[- / - / -] [Execute]

7832	[Self-Diagnose Result Display] Execute to open the "Self-Diagnostics Result Display" to view details about errors. Use the keys in the display on the touch-panel to scroll through all the information. If no errors have occurred, you will see the "No Error" message on the screen.		
7-832-001	-	C	[- / - / -] [Execute]

7836	**[Total Memory Size]** Display the memory capacity of the controlling system.		
7-836-001	-	C	[- / - / -]

7840	**[Service SP Entry Code Chg Hist]** Records the dates and times of initializing / changing "Service SP mode switch code setting" for the recent 2 times. (Determines whether the record is for setting changes or resets by branch number.)		
7-840-001	Change Time :Latest	C*	[- / - / -]
7-840-002	Change Time : Last1	C*	[- / - / -]
7-840-101	Initialize Time : Latest	C*	[- / - / -]
7-840-102	Initialize Time : Last1	C*	[- / - / -]

7852	**[DF Glass Dust Check]** Counts the number of occurrences (0 to 65535) when dust was detected on the scanning glass of the ADF.		
7-852-001	Dust Detection Counter	E*	[0 to 65535 / **0** / 1/step] Records the times in which dust is detected anywhere in the reading range. If the same piece of trash or dust remains until the start of the following job, it is considered as the same piece and not counted. Dust detection is counted when SP4-020-001: Scan Glass Dust Check is ON. This is a counter which operates only when a foreign substance is detected three times in a row
7-852-002	Dust Detection Clear Counter	E*	[0 to 65535 / **0** / 1/step] For checking the effect of the movable reading range. Records the time when the vertical-banding is avoided by moving the through-feed when trash/ dust is detected. Dust detection is counted when SP4-020-001: Scan Glass Dust Check is ON.

7856	[Zero Cross] Stores and displays the detected zero cross frequency for main power ac.		
7-856-001	count value	E*	[0 to 255 / **0** / 1/step]

7901	[Assert Info.] Records the location where a problem is detected in the program. The data stored in this SP is used for problem analysis.		
7-901-001	File Name	C*	[- / **-** / -]
7-901-002	Number of Lines	C*	[- / **-** / -]
7-901-003	Location	C*	[- / **-** / -]

7906	[Last PM Count] Displays the most recent PM count for 60K and 120K service parts ("60K" and "120" refer to service life).		
7-906-002	Sheets 60K Part	E*	[0 to 9999999 / **0** / 1sheets/step]
7-906-003	Sheets 120K Part	E*	
7-906-004	Distance (mm) 60 K	E*	[0 to 999999999 / **0** / 1mm/step]
7-906-005	Distance (mm) 120 K	E*	
7-906-006	Distance 60K	E*	[0 to 255 / **0** / 1/step]
7-906-007	Distance 120K	E*	

7907	[Before 2 PM Count] Displays the PM count before the most recent PM count for 60K and 120K service parts ("60K" and "120" refer to service life).		
7-907-002	Sheets 60K Part	E*	[0 to 9999999 / **0** / 1sheets/step]
7-907-003	Sheets 120K Part	E*	
7-907-004	Distance (mm) 60 K	E*	[0 to 999999999 / **0** / 1mm/step]
7-907-005	Distance (mm) 120 K	E*	

7-907-006	Distance 60K	E*	[0 to 255 / **0** / 1/step]
7-907-007	Distance 120K	E*	

7908	**[Before 3 PM Count]** Displays the PM count two counts the most recent PM count for 60K and 120K service parts ("60K" and "120" refer to service life).		
7-908-002	Sheets 60K Part	E*	[0 to 9999999 / **0** / 1sheets/step]
7-908-003	Sheets 120K Part	E*	
7-908-004	Distance (mm) 60 K	E*	[0 to 999999999 / **0** / 1mm/step]
7-908-005	Distance (mm) 120 K	E*	
7-908-006	Distance 60K	E*	[0 to 255 / **0** / 1/step]
7-908-007	Distance 120K	E*	

Main SP Tables-8

SP8-XXX (Data Log 2)

Many of these counters are provided for features that are currently not available, such as sending color faxes, and so on. However, here are some Group 8 codes that when used in combination with others, can provide useful information.

SP Numbers	What They Do
SP8211 to SP8216	The number of pages scanned to the document server.
SP8401 to SP8406	The number of pages printed from the document server
SP8691 to SP8696	The number of pages sent from the document server

Specifically, the following questions can be answered:

- How is the document server actually being used?
- What application is using the document server most frequently?
- What data in the document server is being reused?

Most of the SPs in this group are prefixed with a letter that indicates the mode of operation (the mode of operation is referred to as an "application"). Before reading the Group 8 Service Table, make sure that you understand what these prefixes mean.

Prefixes	What it means	
T:	Total: (Grand Total).	Grand total of the items counted for all applications (C, F, P, etc.).
C:	Copy application.	Totals (pages, jobs, etc.) executed for each application when the job was not stored on the document server.
F:	Fax application.	
P:	Print application.	
S:	Scan application.	

L:	Local storage (document server)	Totals (jobs, pages, etc.) for the document server. The L: counters work differently case by case. Sometimes, they count jobs/pages stored on the document server; this can be in document server mode (from the document server window), or from another mode, such as from a printer driver or by pressing the Store File button in the Copy mode window. Sometimes, they include occasions when the user uses a file that is already on the document server. Each counter will be discussed case by case.
O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.

The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

Keys and abbreviations in Data Log 2

Abbreviation	What it means
/	"By", e.g. "T:Jobs/Apl" = Total Jobs "by" Application
>	More (2> "2 or more", 4> "4 or more"
AddBook	Address Book
Apl	Application
B/W	Black & White
Bk	Black
C	Cyan
ColCr	Color Create
ColMode	Color Mode
Comb	Combine
Comp	Compression

Abbreviation	What it means
Deliv	Delivery
DesApl	Designated Application. The application (Copy, Fax, Scan, Print) used to store the job on the document server, for example.
Dev Counter	Development Count, no. of pages developed.
Dup, Duplex	Duplex, printing on both sides
Emul	Emulation
FC	Full Color
FIN	Post-print processing, i.e. finishing (punching, stapling, etc.)
Full Bleed	No Margins
GenCopy	Generation Copy Mode
GPC	Get Print Counter. For jobs 10 pages or less, this counter does not count up. For jobs larger than 10 pages, this counter counts up by the number that is in excess of 10 (e.g., for an 11-page job, the counter counts up 11-10 =1)
IFax	Internet Fax
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.
K	Black (YMCK)
LS	Local Storage. Refers to the document server.
LSize	Large (paper) Size
Mag	Magnification
MC	One color (monochrome)
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.
Org	Original for scanning
OrgJam	Original Jam

Abbreviation	What it means
Palm 2	Print Job Manager/Desk Top Editor: A pair of utilities that allows print jobs to be distributed evenly among the printers on the network, and allows files to move around, combined, and converted to different formats.
PC	Personal Computer
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.
PJob	Print Jobs
Ppr	Paper
PrtJam	Printer (plotter) Jam
PrtPGS	Print Pages
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.
Rez	Resolution
SC	Service Code (Error SC code displayed)
Scn	Scan
Sim, Simplex	Simplex, printing on 1 side.
S-to-Email	Scan-to-E-mail
SMC	SMC report printed with SP5990. All of the Group 8 counters are recorded in the SMC report.
Svr	Server
TonEnd	Toner End
TonSave	Toner Save
TXJob	Send, Transmission
YMC	Yellow, Magenta, Cyan
YMCK	Yellow, Magenta, Cyan, Black

Note

- All of the Group 8 SPs are able to reset by "SP5 801 1 Memory All Clear".

8001	[T:Total Jobs]	C*	These SPs count the number of times each application is used to do a job. [0 to 99999999 / - / 1/step] **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.
8002	[C:Total Jobs]	C*	
8003	[F:Total Jobs]	C*	
8004	[P:Total Jobs]	C*	
8005	[S:Total Jobs]	C*	
8006	[L:Total Jobs]	C*	

- These SPs reveal the number of times an application is used, not the number of pages processed.
- When an application is opened for image input or output, this counts as one job.
- Interrupted jobs (paper jams, etc.) are counted, even though they do not finish.
- Only jobs executed by the customer are counted. Jobs executed by the customer engineer using the SP modes are not counted.
- When using secure printing (when a password is required to start the print job), the job is counted at the time when either "Delete Data" or "Specify Output" is specified.
- A job is counted as a fax job when the job is stored for sending.
- When a fax is received to fax memory, the F: counter increments but the L: counter does not (the document server is not used).
- A fax broadcast counts as one job for the F: counter (the fax destinations in the broadcast are not counted separately).
- A fax broadcast is counted only after all the faxes have been sent to their destinations. If one transmission generates an error, then the broadcast will not be counted until the transmission has been completed.
- A printed fax report counts as one job for the F: counter.
- The F: counter does not distinguish between fax sending or receiving.
- When a copy job on the document server is printed, SP8022 also increments, and when a print job stored on the document server is printed, SP8024 also increments.
- When an original is both copied and stored on the document server, the C: and L: counters both increment.
- When a print job is stored on the document server, only the L: counter increments.
- When the user presses the Document Server button to store the job on the document server, only the L: counter increments.

- When the user enters document server mode and prints data stored on the document server, only the L: counter increments.
- When an image received from Palm 2 is received and stored, the L: counter increments.
- When the customer prints a report (user code list, for example), the O: counter increments. However, for fax reports and reports executed from the fax application, the F: counter increments.

8011	[T:Jobs/LS]	C*	These SPs count the number of jobs stored to the document server by each application, to reveal how local storage is being used for input. [0 to 9999999 / **0** / 1/step] The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8012	[C:Jobs/LS]	C*	
8013	[F:Jobs/LS]	C*	
8014	[P:Jobs/LS]	C*	
8015	[S:Jobs/LS]	C*	
8016	[L:Jobs/LS]	C*	
8017	[O:Jobs/LS]	C*	

- When a scan job is sent to the document server, the S: counter increments. When you enter document server mode and then scan an original, the L: counter increments.
- When a print job is sent to the document server, the P: counter increments.
- When a network application sends data to the document server, the O: counter increments.
- When an image from Palm 2 is stored on the document server, the O: counter increments.
- When a fax is sent to the document server, the F: counter increments.

8021	[T:Pjob/LS]	C*	These SPs reveal how files printed from the document server were stored on the document server originally. [0 to 9999999 / **0** / 1/step] The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8022	[C:Pjob/LS]	C*	
8023	[F:Pjob/LS]	C*	
8024	[P:Pjob/LS]	C*	
8025	[S:Pjob/LS]	C*	
8026	[L:Pjob/LS]	C*	
8027	[O:Pjob/LS]	C*	

- When a copy job stored on the document server is printed with another application, the C: counter increments.

- When an application like DeskTopBinder merges a copy job that was stored on the document server with a print job that was stored on the document server, the C: and P: counters both increment.
- When a job already on the document server is printed with another application, the L: counter increments.
- When a scanner job stored on the document server is printed with another application, the S: counter increments. If the original was scanned from within document server mode, then the L: counter increments.
- When images stored on the document server by a network application (including Palm 2), are printed with another application, the O: counter increments.
- When a copy job stored on the document server is printed with a network application (Web Image Monitor, for example), the C: counter increments.
- When a fax on the document server is printed, the F: counter increments.

8031	[T:Pjob/DesApl]	C*	These SPs reveal what applications were used to output documents from the document server. [0 to 9999999 / **0** / 1/step] The L: counter counts the number of jobs printed from within the document server mode screen at the operation panel.
8032	[C:Pjob/DesApl]	C*	
8033	[F:Pjob/DesApl]	C*	
8034	[P:Pjob/DesApl]	C*	
8035	[S:Pjob/DesApl]	C*	
8036	[L:Pjob/DesApl]	C*	
8037	[O:Pjob/DesApl]	C*	

- When documents already stored on the document server are printed, the count for the application that started the print job is incremented.
- When the print job is started from a network application (Desk Top Binder, Web Image Monitor, etc.) the L: counter increments.

8041	[T:TX Jobs/LS]	C*	These SPs count the applications that stored files on the document server that were later accessed for transmission over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). [0 to 9999999 / **0** / 1/step] **Note:** Jobs merged for sending are counted separately. The L: counter counts the number of jobs scanned from within the document server mode screen at the operation panel.
8042	[C:TX Jobs/LS]	C*	
8043	[F:TX Jobs/LS]	C*	
8044	[P:TX Jobs/LS]	C*	
8045	[S:TX Jobs/LS]	C*	
8046	[L:TX Jobs/LS]	C*	
8047	[O:TX Jobs/LS]	C*	

- When a stored copy job is sent from the document server, the C: counter increments.
- When images stored on the document server by a network application or Palm2 are sent as an e-mail, the O: counter increments.

8051	[T:TX Jobs/DesApl]	C*	These SPs count the applications used to send files from the document server over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). Jobs merged for sending are counted separately. [0 to 9999999 / **0** / 1/step] The L: counter counts the number of jobs sent from within the document server mode screen at the operation panel.
8052	[C:TX Jobs/DesApl]	C*	
8053	[F:TX Jobs/DesApl]	C*	
8054	[P:TX Jobs/DesApl]	C*	
8055	[S:TX Jobs/DesApl]	C*	
8056	[L:TX Jobs/DesApl]	C*	
8057	[O:TX Jobs/DesApl]	C*	

- If the send is started from Desk Top Binder or Web Image Monitor, for example, then the O: counter increments.

8061	[T:FIN Jobs]
	These SPs total the finishing methods. The finishing method is specified by the application.
8062	[P:FIN Jobs]
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.

8063	**[F:FIN Jobs]**		
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.		
8064	**[P:FIN Jobs]**		
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.		
8065	**[S:FIN Jobs]**		
	These SPs total finishing methods for scan jobs only. The finishing method is specified by the application. **Note**: Finishing features for scan jobs are not available at this time.		
8066	**[L:FIN Jobs]**		
	These SPs total finishing methods for jobs output from within the document server mode screen at the operation panel. The finishing method is specified from the print window within document server mode.		
8067	**[O:FIN Jobs]**		
	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.		
8-067-001	Sort	C*	[0 to 9999999 / **0** / 1/step] Number of jobs started in Sort mode.
8-067-002	Stack	C*	[0 to 9999999 / **0** / 1/step] Number of jobs started out of Sort mode.
8-067-003	Staple	C*	[0 to 9999999 / **0** / 1/step] Number of jobs started in Staple mode.
8-067-004	Booklet	C*	[0 to 9999999 / **0** / 1/step] Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.
8-067-005	Z-Fold	C*	[0 to 9999999 / **0** / 1/step] Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).

8-067-006	Punch	C*	[0 to 9999999 / **0** / 1/step] Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8-064-6.)
8-067-007	Other	C*	[0 to 9999999 / **0** / 1/step] (Reserved)
8-067-008	Inside-Flod	C*	[0 to 9999999 / **0** / 1/step]
8-067-009	Three-In-Fold	C*	[0 to 9999999 / **0** / 1/step]
8-067-010	Three-OUT-Fold	C*	[0 to 9999999 / **0** / 1/step]
8-067-011	Four-Fold	C*	[0 to 9999999 / **0** / 1/step]
8-067-012	KANNON-Fold	C*	[0 to 9999999 / **0** / 1/step]
8-067-013	Perfect-Bind	C*	[0 to 9999999 / **0** / 1/step]
8-067-014	Ring-Bind	C*	[0 to 9999999 / **0** / 1/step]

8071	**[T:Jobs/PGS]**
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.
8072	**[C:Jobs/PGS]**
	These SPs count and calculate the number of copy jobs by size based on the number of pages in the job.
8073	**[F:Jobs/PGS]**
	These SPs count and calculate the number of copy jobs by size based on the number of pages in the job.
8074	**[P:Jobs/PGS]**
	These SPs count and calculate the number of print jobs by size based on the number of pages in the job.
8075	**[S:Jobs/PGS]**
	These SPs count and calculate the number of scan jobs by size based on the number of pages in the job.

8076	[L:Jobs/PGS]		
	These SPs count and calculate the number of jobs printed from within the document server mode window at the operation panel, by the number of pages in the job.		
8077	[O:Jobs/PGS]		
	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.		
8-077-001	1 Page	C*	[0 to 99999999 / **0** / 1/step]
8-077-002	2 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-003	3 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-004	4 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-005	5 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-006	6 to 10 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-007	11 to 20 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-008	21 to 50 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-009	51 to 100 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-010	101 to 300 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-011	301 to 500 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-012	501 to 700 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-013	701 to 1000 Pages	C*	[0 to 99999999 / **0** / 1/step]
8-077-014	1001 to Pages	C*	[0 to 99999999 / **0** / 1/step]

- For example: When a copy job stored on the document server is printed in document server mode, the appropriate L: counter (SP8076 0xx) increments.
- Printing a fax report counts as a job and increments the F: counter (SP 8073).
- Interrupted jobs (paper jam, etc.) are counted, even though they do not finish.
- If a job is paused and re-started, it counts as one job.
- If the finisher runs out of staples during a print and staple job, then the job is counted at the time the error occurs.
- For copy jobs (SP 8072) and scan jobs (SP 8075), the total is calculated by multiplying the number of sets of copies by the number of pages scanned. (One duplex page counts as 2.)

- The first test print and subsequent test prints to adjust settings are added to the number of pages of the copy job (SP 8072).
- When printing the first page of a job from within the document server screen, the page is counted.

8111	**[T:FAX TX Jobs]**		
8-111-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8113	**[F:FAX TX Jobs]**		
8-113-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8121	**[T:IFAX TX Jobs]**		
8-121-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8123	**[T:IFAX TX Jobs]**		
8-123-001	B/W	C*	[0 to 9999999 / **0** / 1/step]

8131	**[T:S-to-Email Jobs]**		
	These SPs count the total number of jobs (color or black-and-white) scanned and attached to an e-mail, regardless of whether the document server was used or not.		
8135	**[S: S-to-Email Jobs]**		
	These SPs count the number of jobs (color or black-and-white) scanned and attached to e-mail, without storing the original on the document server.		
8-135-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-135-003	ACS	C*	[0 to 9999999 / **0** / 1/step]

- These counters count jobs, not pages.
- If the job is stored on the document server, after the job is stored it is determined to be color or black-and-white then counted.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- If several jobs are combined for sending to the Scan Router, Scan-to-Email, or Scan-to-PC, or if one job is sent to more than one destination. Each send is counted separately. For example, if the same document is sent by Scan-to-Email as well as Scan-to-PC, then it is counted twice (once for Scan-to-Email and once for Scan-to-PC).

8141	**[T:Deliv Jobs/Svr]**		
	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a Scan Router server.		
8145	**[S: Deliv Jobs/Svr]**		
	These SPs count the number of jobs (color or black-and-white) scanned in scanner mode and sent to a Scan Router server.		
8-145-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-145-002	Color	C*	[0 to 9999999 / **0** / 1/step]
8-145-003	ACS	C*	[0 to 9999999 / **0** / 1/step]

- These counters count jobs, not pages.
- The jobs are counted even though the arrival and reception of the jobs at the Scan Router server cannot be confirmed.
- If even one color image is mixed with black-and-white images, then the job is counted as a "Color" job.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be delivered, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8151	**[T:Deliv Jobs/PC]**		
	These SPs count the total number of jobs (color or black-and-white) scanned and sent to a folder on a PC (Scan-to-PC). **Note:** At the present time, 8 151 and 8 155 perform identical counts.		
8155	**[S:Deliv Jobs/PC]**		
	These SPs count the total number of jobs (color or black-and-white) scanned and sent with Scan-to-PC.		
8-155-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-155-002	Color	C*	[0 to 9999999 / **0** / 1/step]
8-155-003	ACS	C*	[0 to 9999999 / **0** / 1/step]

- These counters count jobs, not pages.

- If the job is cancelled during scanning, it is not counted.
- If the job is cancelled while it is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8161	[T:PCFAX TX Jobs]		
	-		
8-161-001	-	C*	[0 to 9999999 / **0** / 1/step]
8163	[F:PCFAX TX Jobs]		
	-		
8-163-001	-	C*	[0 to 9999999 / **0** / 1/step]

8171	[T:Deliv Jobs/WSD]		
	These SPs count the pages scanned by WS.		
8175	[S:Deliv Jobs/WSD]		
	These SPs count the pages scanned by WS.		
8-175-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-175-003	Color	C*	[0 to 9999999 / **0** / 1/step]
8-175-003	ACS	C*	[0 to 9999999 / 0 / 1/step]

8181	[T:Scan to Media Jobs]		
	These SPs count the scanned pages in a media by the scanner application.		
8185	[S:Scan to Media Jobs]		
	These SPs count the scanned pages in a media by the scanner application.		
8-185-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-185-002	Color	C*	[0 to 9999999 / **0** / 1/step]
8-185-003	ACS	C*	[0 to 9999999 / 0 / 1/step]

8191	[T:Total Scan PGS]	C*	These SPs count the pages scanned by each application that uses the scanner to scan images. [0 to 9999999 / 0 / 1/step]
8192	[C:Total Scan PGS]	C*	
8193	[F:Total Scan PGS]	C*	
8195	[S:Total Scan PGS]	C*	
8196	[L:Total Scan PGS]	C*	

- SP 8 191 to 8 196 count the number of scanned sides of pages, not the number of physical pages.
- These counters do not count reading user stamp data, or reading color charts to adjust color.
- Previews done with a scanner driver are not counted.
- A count is done only after all images of a job have been scanned.
- Scans made in SP mode are not counted.

Examples

- If 3 B5 pages and 1 A3 page are scanned with the scanner application but not stored, the S: count is 4.
- If both sides of 3 A4 sheets are copied and stored to the document server using the Store File button in the Copy mode window, the C: count is 6 and the L: count is 6.
- If both sides of 3 A4 sheets are copied but not stored, the C: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8201	[T:LSize Scan PGS]	C*	[0 to 9999999 / 0 / 1/step]
	These SPs count the total number of large pages input with the scanner for scan and copy jobs. Large size paper (A3/DLT) scanned for fax transmission is not counted. **Note:** These counters are displayed in the SMC Report, and in the User Tools display.		
8203	[F:LSize Scan PGS]	C*	[0 to 9999999 / 0 / 1/step]
	These SPs count the total number of large pages input with the scanner for scan and copy jobs. Large size paper (A3/DLT) scanned for fax transmission is not counted. **Note:** These counters are displayed in the SMC Report, and in the User Tools display.		

8205	[S:LSize Scan PGS]	C*	[0 to 9999999 / 0 / 1/step]
	These SPs count the total number of large pages input with the scanner for scan jobs only. Large size paper (A3/DLT) scanned for fax transmission is not counted. Note: These counters are displayed in the SMC Report, and in the User Tools display.		

8211	[T:Scan PGS/LS]	C*	These SPs count the number of pages scanned into the document server. [0 to 9999999 / 0 / 1/step] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen
8212	[C:Scan PGS/LS]	C*	
8213	[F:Scan PGS/LS]	C*	
8215	[S:Scan PGS/LS]	C*	
8216	[L:Scan PGS/LS]	C*	

- Reading user stamp data is not counted.
- If a job is cancelled, the pages output as far as the cancellation are counted.
- If the scanner application scans and stores 3 B5 sheets and 1 A4 sheet, the S: count is 4.
- If pages are copied but not stored on the document server, these counters do not change.
- If both sides of 3 A4 sheets are copied and stored to the document server, the C: count is 6 and the L: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8221	[ADF Org Feeds]		
	These SPs count the number of pages fed through the ADF for front and back side scanning.		
8-221-001	Front	C*	[0 to 9999999 / 0 / 1/step]
	Number of front sides fed for scanning: With an ADF that can scan both sides simultaneously, the Front side count is the same as the number of pages fed for either simplex or duplex scanning. With an ADF that cannot scan both sides simultaneously, the Front side count is the same as the number of pages fed for duplex front side scanning. (The front side is determined by which side the user loads face-up.)		

8-221-002	Back	C*	[0 to 9999999 / **0** / 1/step]
	Number of rear sides fed for scanning: With an ADF that can scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex scanning. With an ADF that cannot scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex rear-side scanning.		

- When 1 sheet is fed for duplex scanning the Front count is 1 and the Back count is 1.
- If a jam occurs during the job, recovery processing is not counted to avoid double counting. Also, the pages are not counted if the jam occurs before the first sheet is output.

8231	**[Scan PGS/Mode]**		
	These SPs count the number of pages scanned by each ADF mode to determine the work load on the ADF.		
8-231-001	Large Volume	C*	[0 to 9999999 / **0** / 1/step] Selectable. Large copy jobs that cannot be loaded in the ADF at one time.
8-231-002	SADF	C*	[0 to 9999999 / **0** / 1/step] Selectable. Feeding pages one by one through the ADF.
8-231-003	Mixed Size	C*	[0 to 9999999 / **0** / 1/step] Selectable. Select "Mixed Sizes" on the operation panel.
8-231-004	Custom Size	C*	[0 to 9999999 / **0** / 1/step] Selectable. Originals of non-standard size.
8-231-005	Platen	C*	[0 to 9999999 / **0** / 1/step] Book mode. Raising the ADF and placing the original directly on the platen.
8-231006	Mixed 1side/ 2side	C*	[0 to 9999999 / **0** / 1/step] Simplex and Duplex mode.

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.

- The user cannot select mixed sizes or non-standard sizes with the fax application so if the original's page sizes are mixed or non-standard, these are not counted.
- If the user selects "Mixed Sizes" for copying in the platen mode, the Mixed Size count is enabled.
- In the SADF mode if the user copies 1 page in platen mode and then copies 2 pages with SADF, the Platen count is 1 and the SADF count is 3.

8241	[T:Scan PGS/Org]	C*	[0 to 9999999 / **0** / 1/step]
	These SPs count the total number of scanned pages by original type for all jobs, regardless of which application was used.		
8242	[C:Scan PGS/Org]	C*	[0 to 9999999 / **0** / 1/step]
	These SPs count the number of pages scanned by original type for Copy jobs.		
8243	[C:Scan PGS/Org]	C*	[0 to 9999999 / **0** / 1/step]
	These SPs count the number of pages scanned by original type for Copy jobs.		
8245	[S:Scan PGS/Org]	C*	[0 to 9999999 / **0** / 1/step]
	These SPs count the number of pages scanned by original type for Scan jobs.		
8246	[L:Scan PGS/Org]	C*	[0 to 9999999 / **0** / 1/step]
	These SPs count the number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen		

		8241	8242	8243	8245	8246
001	Text	Yes	Yes	Yes	Yes	Yes
002	Text/Photo	Yes	Yes	Yes	Yes	Yes
003	Photo	Yes	Yes	Yes	Yes	Yes
004	GenCopy, Pale	Yes	Yes	No	Yes	Yes
005	Map	Yes	Yes	No	Yes	Yes
006	Normal/Detail	Yes	No	Yes	No	No
007	Fine/Super Fine	Yes	No	Yes	No	No
008	Binary	Yes	No	No	Yes	No
009	Grayscale	Yes	No	No	Yes	No

010	Color	Yes	No	No	Yes	No
011	Other	Yes	Yes	Yes	Yes	Yes

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.

8251	[T:Scan PGS/ImgEdt]	C*	These SPs show how many times Image Edit features have been selected at the operation panel for each application. Some examples of these editing features are: Erase> Border Erase> Center Image Repeat Centering Positive/Negative [0 to 9999999 / 0 / 1/step] Note: The count totals the number of times the edit features have been used. A detailed breakdown of exactly which features have been used is not given.
8252	[C:Scan PGS/ImgEdt]	C*	
8255	[S:Scan PGS/ImgEdr]	C*	
8256	[L:Scan PGS/ImgEdt]	C*	
8257	[O:Scan PGS/ImgEdt]	C*	

The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen.

8281	[T:Scan PGS/TWAIN]	C*	These SPs count the number of pages scanned using a TWAIN driver. These counters reveal how the TWAIN driver is used for delivery functions. [0 to 9999999 / 0 / 1/step] **Note:** At the present time, these counters perform identical counts.
8285	[S:Scan PGS/TWAIN]	C*	

8291	[T:Scan PGS/Stamp]	C*	These SPs count the number of pages stamped with the stamp in the ADF unit. [0 to 9999999 / **0** / 1/step] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen
8295	[S:Scan PGS/Stamp]	C*	

8301	[T:Scan PGS/Size]		
	These SPs count by size the total number of pages scanned by all applications. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-441].		
8302	[C:Scan PGS/Size]		
	These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-442].		
8303	[F:Scan PGS/Size]		
	These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-442].		
8305	[S:Scan PGS/Size]		
	These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445].		
8306	[L:Scan PGS/Size]		
	These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446].		
001	A3	C*	[0 to 9999999 / **0** / 1/step]
002	A4	C*	[0 to 9999999 / **0** / 1/step]
003	A5	C*	[0 to 9999999 / **0** / 1/step]

004	B4	C*	[0 to 9999999 / **0** / 1/step]
005	B5	C*	[0 to 9999999 / **0** / 1/step]
006	DLT	C*	[0 to 9999999 / **0** / 1/step]
007	LG	C*	[0 to 9999999 / **0** / 1/step]
008	LT	C*	[0 to 9999999 / **0** / 1/step]
009	HLT	C*	[0 to 9999999 / **0** / 1/step]
010	Full Bleed	C*	[0 to 9999999 / **0** / 1/step]
254	Other (Standard)	C*	[0 to 9999999 / **0** / 1/step]
255	Other (Custom)	C*	[0 to 9999999 / **0** / 1/step]

8311	T:Scan PGS/Rez	C*	[0 to 9999999/ **0** / 1/step]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.		
8315	S: Scan PGS/Rez	C*	[0 to 9999999/ **0** / 1/step]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings. Note: At the present time, SP8-311 and SP8-315 perform identical counts.		
001	1200dpi <	C*	[0 to 9999999 / **0** / 1/step]
002	600dpi to 1199dpi	C*	[0 to 9999999 / **0** / 1/step]
003	400dpi to 599dpi	C*	[0 to 9999999 / **0** / 1/step]
004	200dpi to 399dpi	C*	[0 to 9999999 / **0** / 1/step]
005	< 199dpi	C*	[0 to 9999999 / **0** / 1/step]

- Copy resolution settings are fixed so they are not counted.
- The Fax application does not allow finely-adjusted resolution settings so no count is done for the Fax application.

8381	[T:Total PrtPGS]	C*	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/step]
8382	[C:Total PrtPGS]	C*	
8383	[F:Total PrtPGS]	C*	
8384	[P:Total PrtPGS]	C*	
8385	[S:Total PrtPGS]	C*	
8386	[L:Total PrtPGS]	C*	
8387	[O:Total PrtPGS]	C*	

- 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 is counted for the application that stored them.
- These counters are used primarily to calculate charges on use of the machine, so the following pages are not counted as printed pages:
  - Blank pages in a duplex printing job.
  - Blank pages inserted as document covers, chapter title sheets, and slip sheets.
  - Reports printed to confirm counts.
  - All reports done in the service mode (service summaries, engine maintenance reports, etc.)
  - Test prints for machine image adjustment.
  - Error notification reports.
  - Partially printed pages as the result of a copier jam.

8391	LSize PrtPGS	C*	[0 to 99999999 / 0 / 1/step]
	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.		

8401	[T:PrtPGS/LS]	C*	These SPs count the number of pages printed from the document server. The counter for the application used to print the pages is incremented. The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel. [0 to 9999999 / **0** / 1/step]
8402	[C:PrtPGS/LS]	C*	
8403	[F:PrtPGS/LS]	C*	
8404	[P:PrtPGS/LS]	C*	
8405	[S:PrtPGS/LS]	C*	
8406	[L:PrtPGS/LS]	C*	

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the L: count.
- Fax jobs done with Web Image Monitor and Desk Top Binder are added to the F: count.

8411	Prints/Duplex	C*	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/step]

8421	[T:PrtPGS/Dup Comb]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.
8422	[C:PrtPGS/Dup Comb]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the copier application.
8423	[F:PrtPGS/Dup Comb]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the copier application.
8424	[P:PrtPGS/Dup Comb]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.
8425	[S:PrtPGS/Dup Comb]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the scanner application.

8426	[L:PrtPGS/Dup Comb]		
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing from within the document server mode window at the operation panel.		
8427	[O:PrtPGS/Dup Comb]		
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by Other applications		
001	Simplex> Duplex	C*	[0 to 99999999 / **0** / 1/step]
002	Duplex> Duplex	C*	[0 to 99999999 / **0** / 1/step]
003	Book> Duplex	C*	[0 to 99999999 / **0** / 1/step]
004	Simplex Combine	C*	[0 to 99999999 / **0** / 1/step]
005	Duplex Combine	C*	[0 to 99999999 / **0** / 1/step]
006	2in1	C*	[0 to 99999999 / **0** / 1/step] 2 pages on 1 side (2-Up)
007	4 in1	C*	[0 to 99999999 / **0** / 1/step] 4 pages on 1 side (4-Up)
008	6 in1	C*	[0 to 99999999 / **0** / 1/step] 6 pages on 1 side (6-Up)
009	8 in1	C*	[0 to 99999999 / **0** / 1/step] 8 pages on 1 side (8-Up)
010	9 in1	C*	[0 to 99999999 / **0** / 1/step] 9 pages on 1 side (9-Up)
011	16 in1	C*	[0 to 99999999 / **0** / 1/step] 16 pages on 1 side (16-Up)
012	Booklet	C*	[0 to 99999999 / **0** / 1/step]
013	Magazine	C*	[0 to 99999999 / **0** / 1/step]
014	2-in-1 + Booklet	C*	[0 to 99999999 / **0** / 1/step]
015	4-in-1 + Booklet	C*	[0 to 99999999 / **0** / 1/step]

016	6-in-1 + Booklet	C*	[0 to 99999999 / **0** / 1/step]
017	8-in-1 + Booklet	C*	[0 to 99999999 / **0** / 1/step]
018	9-in-1 + Booklet	C*	[0 to 99999999 / **0** / 1/step]
019	2-in-1 + Magazine	C*	[0 to 99999999 / **0** / 1/step]
020	4-in-1 + Magazine	C*	[0 to 99999999 / **0** / 1/step]
021	6-in-1 + Magazine	C*	[0 to 99999999 / **0** / 1/step]
022	8-in-1 + Magazine	C*	[0 to 99999999 / **0** / 1/step]
023	9-in-1 + Magazine	C*	[0 to 99999999 / **0** / 1/step]
024	16-in-1 + Magazine	C*	[0 to 99999999 / **0** / 1/step]

- 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]**
	These SPs count the total number of pages output with the three features below, regardless of which application was used.

8432	**[C:PrtPGS/ImgEdt]**		
	These SPs count the total number of pages output with the three features below with the copy application.		
8434	**[P:PrtPGS/ImgEdt]**		
	These SPs count the total number of pages output with the three features below with the print application.		
8436	**[L:PrtPGS/ImgEdt]**		
	These SPs count the total number of pages output from within the document server mode window at the operation panel with the three features below.		
8437	**[O:PrtPGS/ImgEdt]**		
	These SPs count the total number of pages output with the three features below with Other applications.		
001	Cover/Slip Sheet	C*	[0 to 99999999 / **0** / 1/step] Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.
002	Series/Book	C*	[0 to 99999999 / **0** / 1/step] The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.
003	User Stamp	C*	[0 to 99999999 / **0** / 1/step] The number of pages printed where stamps were applied, including page numbering and date stamping.

8441	**[T:PrtPGS/Ppr Size]**
	These SPs count by print paper size the number of pages printed by all applications.
8442	**[C:PrtPGS/Ppr Size]**
	These SPs count by print paper size the number of pages printed by the copy application.

8444	[P:PrtPGS/Ppr Size]		
	These SPs count by print paper size the number of pages printed by the printer application.		
8445	[S:PrtPGS/Ppr Size]		
	These SPs count by print paper size the number of pages printed by the scanner application.		
8446	[L:PrtPGS/Ppr Size]		
	These SPs count by print paper size the number of pages printed from within the document server mode window at the operation panel.		
8447	[O:PrtPGS/Ppr Size]		
	These SPs count by print paper size the number of pages printed by Other applications.		
001	A3	C*	[0 to 99999999 / **0** / 1/step]
002	A4	C*	[0 to 99999999 / **0** / 1/step]
003	A5	C*	[0 to 99999999 / **0** / 1/step]
004	B4	C*	[0 to 99999999 / **0** / 1/step]
005	B5	C*	[0 to 99999999 / **0** / 1/step]
006	DLT	C*	[0 to 99999999 / **0** / 1/step]
007	LG	C*	[0 to 99999999 / **0** / 1/step]
008	LT	C*	[0 to 99999999 / **0** / 1/step]
009	HLT	C*	[0 to 99999999 / **0** / 1/step]
010	Full Bleed	C*	[0 to 99999999 / **0** / 1/step]
254	Other (Standard)	C*	[0 to 99999999 / **0** / 1/step]
255	Other (Custom)	C*	[0 to 99999999 / **0** / 1/step]

- 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.

8-451-001	Bypass Tray	C*	Bypass Tray [0 to 99999999 / **0** / 1/step]
8-451-002	Tray 1	C*	Copier [0 to 99999999 / **0** / 1/step]
8-451-003	Tray 2	C*	
8-451-004	Tray 3	C*	Paper Tray Unit (Option) [0 to 99999999 / **0** / 1/step]
8-451-005	Tray 4	C*	
8-451-006	Tray 5	C*	LCT (Option) [0 to 99999999 / **0** / 1/step]
8-451-007	Tray 6	C*	Currently not used.
8-451-008	Tray 7	C*	Currently not used.
8-451-009	Tray 8	C*	Currently not used.
8-451-010	Tray 9	C*	Currently not used.
8-451-011	Tray 10	C*	Currently not used.
8-451-012	Tray 11	C*	Currently not used.
8-451-013	Tray 12	C*	Currently not used.
8-451-014	Tray 13	C*	Currently not used.
8-451-015	Tray 14	C*	Currently not used.
8-451-016	Tray 15	C*	Currently not used.

8461	**[T:PrtPGS/Ppr Type]**
	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.

8462	[C:PrtPGS/Ppr Type]		
	These SPs count by paper type the number pages printed by the copy application.		
8463	[F:PrtPGS/Ppr Type]		
	These SPs count by paper type the number pages printed by the copy application.		
8464	[P:PrtPGS/Ppr Type]		
	These SPs count by paper type the number pages printed by the printer application.		
8466	[L:PrtPGS/Ppr Type]		
	These SPs count by paper type the number pages printed from within the document server mode window at the operation panel.		
001	Normal	C*	[0 to 99999999 / **0** / 1/step]
002	Recycled	C*	[0 to 99999999 / **0** / 1/step]
003	Special	C*	[0 to 99999999 / **0** / 1/step]
004	Thick	C*	[0 to 99999999 / **0** / 1/step]
005	Normal (Back)	C*	[0 to 99999999 / **0** / 1/step]
006	Thick (Back)	C*	[0 to 99999999 / **0** / 1/step]
007	OHP	C*	[0 to 99999999 / **0** / 1/step]
008	Other	C*	[0 to 99999999 / **0** / 1/step]

8471	[PrtPGS/Mag]		
	These SPs count by magnification rate the number of pages printed.		
001	< 49%	C*	[0 to 99999999 / **0** / 1/step]
002	50% to 99%	C*	
003	100%	C*	
004	101% to 200%	C*	
005	201% <	C*	

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]	C*	[0 to 99999999 / **0** / 1/step]
8484	[P:PrtPGS/TonSave]	C*	
	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.		

8511	[T:PrtPGS/Emul]		
	These SPs count by printer emulation mode the total number of pages printed.		
8514	[P:PrtPGS/Emul]		
	These SPs count by printer emulation mode the total number of pages printed.		
001	RPCS	C*	[0 to 99999999 / **0** / 1/step]
002	RPDL	C*	[0 to 99999999 / **0** / 1/step]
003	PS3	C*	[0 to 99999999 / **0** / 1/step]
004	R98	C*	[0 to 99999999 / **0** / 1/step]
005	R16	C*	[0 to 99999999 / **0** / 1/step]
006	GL/GL2	C*	[0 to 99999999 / **0** / 1/step]
007	R55	C*	[0 to 99999999 / **0** / 1/step]
008	RTIFF	C*	[0 to 99999999 / **0** / 1/step]
009	PDF	C*	[0 to 99999999 / **0** / 1/step]
010	PCL5e/5c	C*	[0 to 99999999 / **0** / 1/step]
011	PCL XL	C*	[0 to 99999999 / **0** / 1/step]
012	IPDL-C	C*	[0 to 99999999 / **0** / 1/step]

013	BM-Links	C*	Japan Only
014	Other	C*	[0 to 99999999 / **0** / 1/step]
015	IPDS	C*	[0 to 99999999 / **0** / 1/step]

- 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]**		
	These SPs count by finishing mode the total number of pages printed by all applications.		
8522	**[C:PrtPGS/FIN]**		
	These SPs count by finishing mode the total number of pages printed by the Copy application.		
8523	**[F:PrtPGS/FIN]**		
	These SPs count by finishing mode the total number of pages printed by the Copy application.		
8524	**[P:PrtPGS/FIN]**		
	These SPs count by finishing mode the total number of pages printed by the Print application.		
8525	**[S:PrtPGS/FIN]**		
	These SPs count by finishing mode the total number of pages printed by the Scanner application.		
8526	**[L:PrtPGS/FIN]**		
	These SPs count by finishing mode the total number of pages printed from within the document server mode window at the operation panel.		
001	Sort	C*	[0 to 99999999 / **0** / 1/step]
002	Stack	C*	[0 to 99999999 / **0** / 1/step]
003	Staple	C*	[0 to 99999999 / **0** / 1/step]
004	Booklet	C*	[0 to 99999999 / **0** / 1/step]
005	Z-Fold	C*	[0 to 99999999 / **0** / 1/step]

006	Punch	C*	[0 to 99999999 / **0** / 1/step]
007	Other	C*	[0 to 99999999 / **0** / 1/step]
008	Inside Fold	C*	[0 to 99999999 / **0** / 1/step]
	Half-Fold (FM2) (Multi Fold Unit)		
009	Three-IN-Fold	C*	[0 to 99999999 / **0** / 1/step] Letter Fold-in (FM4) (Multi Fold Unit)
010	Three-OUT-Fold	C*	[0 to 99999999 / **0** / 1/step] Letter Fold-out (FM3) (Multi Fold Unit)
011	Four Fold	C*	[0 to 99999999 / **0** / 1/step] Double Parallel Fold (FM5) (Multi Fold Unit)
012	KANNON-Fold	C*	[0 to 99999999 / **0** / 1/step] Gate Fold (FM6) (Multi Fold Unit)
013	Perfect-Bind	C*	[0 to 99999999 / **0** / 1/step] Perfect Binder
014	Ring-Bind	C*	[0 to 99999999 / **0** / 1/step] 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]**	C*	This SP counts the amount of staples used by the machine. [0 to 9999999 / **0** / 1/step]

8551	**[T:FIN Books]**		
8-551-001	Perfect-Bind	C*	Booklet finishing
8-551-002	Ring-Bind	C*	Not used

8552	[C:FIN Books]		
8-552-001	Perfect-Bind	C*	Booklet finishing
8-552-002	Ring-Bind	C*	Not used

8554	[P:FIN Books]		
8-554-001	Perfect-Bind	C*	Booklet finishing
8-554-002	Ring-Bind	C*	Not used

8556	[L:FIN Books]		
8-556-001	Perfect-Bind	C*	Booklet finishing
8-556-002	Ring-Bind	C*	Not used

8561	[T:A Sheet Of Paper]		
8-561-001	Total: Over A3/DLT	C*	-
8-561-002	Total: Under A3/DLT	C*	-
8-561-003	Duplex: Over A3/DLT	C*	-
8-561-004	Duplex: Under A3/DLT	C*	-

8562	[C:A Sheet Of Paper]		
8-562-001	Total: Over A3/DLT	C*	-
8-562-002	Total: Under A3/DLT	C*	-
8-562-003	Duplex: Over A3/DLT	C*	-
8-562-004	Duplex: Under A3/DLT	C*	-

8563	[F:A Sheet Of Paper]		
8-563-001	Total: Over A3/DLT	C*	-
8-563-002	Total: Under A3/DLT	C*	-
8-563-003	Duplex: Over A3/DLT	C*	-

8-563-004	Duplex: Under A3/DLT	C*	-

8564	[P:A Sheet Of Paper]		
8-564-001	Total: Over A3/DLT	C*	-
8-564-002	Total: Under A3/DLT	C*	-
8-564-003	Duplex: Over A3/DLT	C*	-
8-564-004	Duplex: Under A3/DLT	C*	-

8566	[L:A Sheet Of Paper]		
8-566-001	Total: Over A3/DLT	C*	-
8-566-002	Total: Under A3/DLT	C*	-
8-566-003	Duplex: Over A3/DLT	C*	-
8-566-004	Duplex: Under A3/DLT	C*	-

8567	[O:A Sheet Of Paper]		
8-567-001	Total: Over A3/DLT	C*	-
8-567-002	Total: Under A3/DLT	C*	-
8-567-003	Duplex: Over A3/DLT	C*	-
8-567-004	Duplex: Under A3/DLT	C*	-

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.		
8-581-001	Total	C*	[0 to 99999999 / **0** / 1/step]
8-581-031	Total: B/W (A3)	C*	

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.		
8-591-001	A3/DLT	C*	[0 to 99999999 / **0** / 1/step]
8-591-002	Duplex	C*	

8601	[T:CoverageCounter]		
	These SPs count the total coverage for each color and the total printout pages for each printing mode.		
8-601-001	B/W	C*	[0 to 2147483647 / **0** / 1%/step]
8-601-011	B/W Printing Page	C*	[0 to 9999999 / **0** / 1/step]

8602	[C:Coverage Counter]		
	-		
8-602-001	B/W	C*	[0 to 2147483647 / **0** / 1%/step]

8603	[F:Coverage Counter]		
	-		
8-603-001	B/W	C*	[0 to 2147483647 / **0** / 1%/step]

8604	[P:Coverage Counter]		
	-		
8-604-001	B/W	C*	[0 to 2147483647 / **0** / 1%/step]

8606	[L:Coverage Counter]		
	-		
8-606-001	B/W	C*	[0 to 2147483647 / **0** / 1%/step]

8617	[SDK Apli Counter]		
	These SPs count the total printout pages for each SDK application.		
8-617-001	SDK-1	C*	[0 to 99999999 / **0** / 1/step]
8-617-002	SDK-2	C*	
8-617-003	SDK-3	C*	
8-617-004	SDK-4	C*	
8-617-005	SDK-5	C*	
8-617-006	SDK-6	C*	

8621	[Func Use Counter]		
	-		
8-621-001	Function-001	C*	[0 to 99999999 / **0** / 1/step]
8-621-002	Function-002	C*	
8-621-003	Function-003	C*	
8-621-004	Function-004	C*	
8-621-005	Function-005	C*	
8-621-006	Function-006	C*	[0 to 99999999 / **0** / 1/step]
8-621-007	Function-007	C*	
8-621-008	Function-008	C*	
8-621-009	Function-009	C*	
8-621-010	Function-010	C*	
8-621-011	Function-011	C*	[0 to 99999999 / **0** / 1/step]
8-621-012	Function-012	C*	
8-621-013	Function-013	C*	
8-621-014	Function-014	C*	
8-621-015	Function-015	C*	

8-621-016	Function-016	C*	[0 to 99999999 / **0** / 1/step]
8-621-017	Function-017	C*	
8-621-018	Function-018	C*	
8-621-019	Function-019	C*	
8-621-020	Function-020	C*	
8-621-021	Function-021	C*	[0 to 99999999 / **0** / 1/step]
8-621-022	Function-022	C*	
8-621-023	Function-023	C*	
8-621-024	Function-024	C*	
8-621-025	Function-025	C*	
8-621-026	Function-026	C*	[0 to 99999999 / **0** / 1/step]
8-621-027	Function-027	C*	
8-621-028	Function-028	C*	
8-621-029	Function-029	C*	
8-621-030	Function-030	C*	
8-621-031	Function-031	C*	[0 to 99999999 / **0** / 1/step]
8-621-032	Function-032	C*	
8-621-033	Function-033	C*	
8-621-034	Function-034	C*	
8-621-035	Function-035	C*	
8-621-036	Function-036	C*	
8-621-037	Function-037	C*	
8-621-038	Function-038	C*	
8-621-039	Function-039	C*	
8-621-040	Function-040	C*	

8-621-041	Function-041	C*	[0 to 99999999 / **0** / 1/step]
8-621-042	Function-042	C*	
8-621-043	Function-043	C*	
8-621-044	Function-044	C*	
8-621-045	Function-045	C*	
8-621-046	Function-046	C*	
8-621-047	Function-047	C*	
8-621-048	Function-048	C*	
8-621-049	Function-049	C*	
8-621-050	Function-050	C*	
8-621-051	Function-051	C*	[0 to 99999999 / **0** / 1/step]
8-621-052	Function-052	C*	
8-621-053	Function-053	C*	
8-621-054	Function-054	C*	
8-621-055	Function-055	C*	
8-621-056	Function-056	C*	
8-621-057	Function-057	C*	
8-621-058	Function-058	C*	
8-621-059	Function-059	C*	
8-621-060	Function-060	C*	
8-621-061	Function-061	C*	[0 to 99999999 / **0** / 1/step]
8-621-062	Function-062	C*	
8-621-063	Function-063	C*	
8-621-064	Function-064	C*	

8631	[T:FAX TX PGS]		
	-		
8-631-001	B/W	C*	[0 to 9999999 / **0** / 1/step]

8633	[F:FAX TX PGS]		
	-		
8-633-001	B/W	C*	[0 to 9999999 / **0** / 1/step]

8641	[T:IFAX TX PGS]		
	-		
8-641-001	B/W	C*	[0 to 9999999 / **0** / 1/step]

8643	[T:IFAX TX PGS]		
	-		
8-643-001	B/W	C*	[0 to 9999999 / **0** / 1/step]

8651	[T:S-to-Email PGS]		
	These SPs count by color mode the total number of pages attached to an e-mail for both the Scan and document server applications.		
8-651-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-652-002	Color	C*	[0 to 9999999 / **0** / 1/step]

8655	[S:S-to-Email PGS]		
	These SPs count by color mode the total number of pages attached to an e-mail for both the Scan and document server applications.		
8-655-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-655-002	Color	C*	[0 to 9999999 / **0** / 1/step]

Note

- The count for B/W and Color pages is done after the document is stored on the HDD. If the job is cancelled before it is stored, the pages are not counted.
- If Scan-to-Email is used to send a 10-page document to 5 addresses, the count is 10 (the pages are sent to the same SMTP server together).
- If Scan-to-PC is used to send a 10-page document to 5 folders, the count is 50 (the document is sent to each destination of the SMB/FTP server).
- Due to restrictions on some devices, if Scan-to-Email is used to send a 10-page document to a large number of destinations, the count may be divided and counted separately. For example, if a 10-page document is sent to 200 addresses, the count is 10 for the first 100 destinations and the count is also 10 for the second 100 destinations, for a total of 20.).

8661	[T:Deliv PGS/Svr]		
	These SPs count by color mode the total number of pages sent to a Scan Router server by both Scan and LS applications.		
8-661-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-661-002	Color	C*	[0 to 9999999 / **0** / 1/step]

8665	[S:Deliv PGS/Svr]		
	These SPs count by color mode the total number of pages sent to a Scan Router server by the Scan application.		
8-665-001	B/W	C*	[0 to 9999999 / **0** / 1/step]
8-665-002	Color	C*	[0 to 9999999 / **0** / 1/step]

Note

- The B/W and Color counts are done after the document is stored on the HDD of the Scan Router server.
- If the job is canceled before storage on the Scan Router server finishes, the counts are not done.
- The count is executed even if regardless of confirmation of the arrival at the Scan Router server.

8671	[T:Deliv PGS/PC]
	These SPs count by color mode the total number of pages sent to a folder on a PC (Scan-to-PC) with the Scan and LS applications.

8675	[S: Deliv PGS/PC]		
	These SPs count by color mode the total number of pages sent with Scan-to-PC with the Scan application.		
001	B/W	C*	[0 to 9999999 / 0 / 1/step]
002	Color	C*	

8681	[T:PCFAX TXPGS]		
	-		
8-681-001	B/W	C*	[0 to 9999999 / 0 / 1/step]
8-681-002	Color	C*	

8683	[F:PCFAX TXPGS]		
	-		
8-683-001	B/W	C*	[0 to 9999999 / 0 / 1/step]
8-683-002	Color	C*	

8691	[T:TX PGS/LS]	C*	These SPs count the number of pages sent from the document server. The counter for the application that was used to store the pages is incremented. [0 to 9999999/ 0 / 1/step] 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.
8692	[C:TX PGS/LS]	C*	
8693	[F:TX PGS/LS]	C*	
8694	[P:TX PGS/LS]	C*	
8695	[S:TX PGS/LS]	C*	
8696	[L:TX PGS/LS]	C*	

Note

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the count.
- If several documents are merged for sending, the number of pages stored are counted for the application that stored them.
- When several documents are sent by a Fax broadcast, the F: count is done for the number of pages sent to each destination.

8701	[TX PGS/Port]		
	These SPs count the number of pages sent by the physical port used to send them. For example, if a 3-page original is sent to 4 destinations via ISDN G4, the count for ISDN (G3, G4) is 12.		
8-701-001	PSTN-1	C*	[0 to 9999999/ **0** / 1/step]
8-701-002	PSTN-2	C*	[0 to 9999999/ **0** / 1/step]
8-701-003	PSTN-3	C*	[0 to 9999999/ **0** / 1/step]
8-701-004	ISDN (G3,G4)	C*	[0 to 9999999/ **0** / 1/step]
8-701-005	Network	C*	[0 to 9999999/ **0** / 1/step]

8711	[T:Scan PGS/Comp]		
8715	[S:Scan PGS/Comp]		
	These SPs count the number of pages sent by each compression mode.		
001	JPEG/JPEG2000	C*	[0 to 9999999/ **0** / 1/step]
002	TIFF(Multi/Single)	C*	[0 to 9999999/ **0** / 1/step]
003	PDF	C*	[0 to 9999999/ **0** / 1/step]
004	Other	C*	[0 to 9999999/ **0** / 1/step]
005	PDF/Comp	C*	[0 to 9999999/ **0** / 1/step]
006	PDF/A	C*	[0 to 9999999/ **0** / 1/step]
007	PDF(OCR)	C*	[0 to 9999999/ **0** / 1/step]
008	PDF/Comp(OCR)	C*	[0 to 9999999/ **0** / 1/step]

8721	[T:Deliv PGS/WSD]		
8725	[S: Dvliv PGS/WSD]		
	These SPs count the number of pages scanned by each scanner mode.		
001	B/W	C*	[0 to 9999999/ **0** / 1/step]
002	Color	C*	

8731	[T:Scan PGS/Media]		
8735	[S:Scan PGS/Media]		
	These SPs count the number of pages scanned and saved in a media by each scanner mode.		
001	B/W	C*	[0 to 9999999/ **0** / 1/step]
002	Color	C*	

8741	[RX PGS/Port]		
	These SPs count the number of pages received by the physical port used to receive them.		
001	PSTN-1	C*	[0 to 9999999/ **0** / 1/step]
002	PSTN-2	C*	[0 to 9999999/ **0** / 1/step]
003	PSTN-3	C*	[0 to 9999999/ **0** / 1/step]
004	ISDN (G3,G4)	C*	[0 to 9999999/ **0** / 1/step]
005	Network	C*	[0 to 9999999/ **0** / 1/step]

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	C*	[0 to 99999999 / **0** / 1/step]

8781	[Toner_Botol_Info.]	E*	[0 to 9999999 / **0** / 1/step]
	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	

8791	[LS Memory Remain] This SP displays the percent of space available on the document server for storing documents.

001	-	C*	[0 to 100 / **0** / 1/step]

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).		
8-801-001	K	C*	[0 to 100 / **0** / 1% /step]

8811	**[Eco Counter]**		
	-		
8-811-001	Eco Total	C*	[0 to 99999999 / **0** / 1/step]
8-811-004	Duplex	C*	
8-811-005	Combine	C*	
8-811-008	Duplex (%)	C*	[0 to 100 / **0** / 1%/step]
8-811-009	Combine (%)	C*	
8-811-010	Paper Cut (%)	C*	
8-811-101	Eco Totalr:Last	C*	[0 to 99999999 / **0** / 1/step]
8-811-104	Duplex:Last	C*	
8-811-105	Combine:Last	C*	
8-811-108	Duplex (%):Last	C*	[0 to 100 / **0** / 1%/step]
8-811-109	Combine (%):Last	C*	[0 to 100 / **0** / 1%/step]
8-811-110	Paper Cut (%):Last	C*	[0 to 100 / **0** / 1%/step]

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%.		
8-851-011	0 to 2%: BK	E*	[0 to 99999999 / **0** / 1/step]

8-851-021	3 to 4%: BK	E*	[0 to 99999999 / **0** / 1/step]
8-851-031	5 to 7%: BK	E*	[0 to 99999999 / **0** / 1/step]
8-851-041	8 to 10%: BK	E*	[0 to 99999999 / **0** / 1/step]

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%.		
8-861-001	BK	E*	[0 to 99999999 / **0** / 1/step]

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%.		
8-871-001	BK	E*	[0 to 99999999 / **0** / 1/step]

8881	**[Cvr Cnt: 31%-]**		
	These SPs display the number of scanned sheets on which the coverage of each color is 31% or higher.		
8-881-001	BK	E*	[0 to 99999999 / **0** / 1/step]

8891	**[Page/Toner Bottle]**		
	These SPs display the amount of the remaining current toner for each color.		
8-891-001	BK	E*	[0 to 99999999 / **0** / 1/step]

8901	**[Page/Toner_prev1]**		
	These SPs display the amount of the remaining previous toner for each color.		
8-901-001	BK	E*	[0 to 99999999 / **0** / 1/step]

8911	**[Page/Toner_prev2]**		
	These SPs display the amount of the remaining 2nd previous toner for each color.		
8-911-001	BK	E*	[0 to 99999999 / **0** / 1/step]

8921	[Cvr Cnt/Total]		
	Displays the total coverage and total printout number for each color.		
8-921-001	Coverage (%) Bk	C*	[0 to 2147483647 / **0** / 1%/step]
8-921-011	Coverage /P: Bk	C*	[0 to 99999999 / **0** / 1/step]

8941	[Machine Status]		
	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.		
8-941-001	Operation Time	C*	[0 to 99999999 / **0** / 1/step] Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).
8-941-002	Standby Time	C*	[0 to 99999999 / **0** / 1/step] Engine not operating. Includes time while controller saves data to HDD. Does not include time spent in Energy Save, Low Power, or Off modes.
8-941-003	Energy Save Time	C*	[0 to 99999999 / **0** / 10/step] Includes time while the machine is performing background printing.
8-941-004	Low Power Time	C*	[0 to 99999999 / **0** / 1/step] Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.
8-941-005	Off Mode Time	C*	[0 to 99999999 / **0** / 1/step] Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.
8-941-006	SC	C*	[0 to 99999999 / **0** / 1/step] Total time when SC errors have been staying.

8-941-007	PrtJam	C*	[0 to 99999999 / **0** / 1/step] Total time when paper jams have been staying during printing.
8-941-008	OrgJam	C*	[0 to 99999999 / **0** / 1/step] Total time when original jams have been staying during scanning.
8-941-009	Supply PM Unit End	C*	[0 to 99999999 / **0** / 1/step] Total time when toner end has been staying

8951	**[AddBook Register]**		
	These SPs count the number of events when the machine manages data registration.		
8-951-001	User Code/User ID	C*	[0 to 9999999/ **0** / 1/step] User code registrations.
8-951-002	Mail Address	C*	[0 to 9999999/ **0** / 1/step] Mail addresses registrations.
8-951-003	Fax Destination	C*	[0 to 9999999/ **0** / 1/step] Fax destination registrations.
8-951-004	Group	C*	[0 to 9999999/ **0** / 1/step] Group destination registrations.
8-951-005	Transfer Request	C*	[0 to 9999999/ **0** / 1/step] Fax relay destination registrations for relay TX.
8-951-006	F-Code	C*	[0 to 9999999/ **0** / 1/step] F-Code box registrations
8-951-007	Copy Program	C*	[0 to 255 / **0** / 255/step] Copy application registrations with the Program (job settings) feature.
8-951-008	Fax Program	C*	[0 to 255 / **0** / 255/step] Fax application registrations with the Program (job settings) feature.

8-951-009	Printer Program	C*	[0 to 255 / **0** / 255/step] Printer application registrations with the Program (job settings) feature.
8-951-010	Scanner Program	C*	[0 to 255 / **0** / 255/step] Scanner application registrations with the Program (job settings) feature.

8961	**[Electricity Status]**		
	-		
8-961-001	Ctrl Standby Time	C*	[0 to 99999999 / **0** / 1/step]
8-961-002	STR Time	C*	
8-961-003	Main Power Off Time	C*	
8-961-004	Reading and Printing Time	C*	
8-961-005	Printing Time	C*	[0 to 99999999 / **0** / 1/step]
8-961-006	Reading Time	C*	
8-961-007	Eng Waiting Time	C*	
8-961-008	Low Power State Time	C*	
8-961-009	Silent State Time	C*	
8-961-010	Heater Off State Time	C*	
8-961-011	LCD on Time	C*	

8971	**[Unit Control]**		
	-		
8-971-001	Engine Off Recovery Count	C*	[0 to 99999999 / 0 / 1/step]
8-971-002	Power Off Count	C*	
8-971-003	Force Power Off Count	C*	

8999	[Admin. Counter List]		
	-		
8-999-001	Total	C*	[0 to 99999999 / 0 / 1/step]
8-999-003	Copy: BW	C*	[0 to 99999999 / 0 / 1/step]
8-999-007	Printer:BW	C*	[0 to 99999999 / 0 / 1/step]
8-999-010	Fax Print: BW	C*	[0 to 99999999 / 0 / 1/step]
8-999-012	A3/DLT	C*	[0 to 99999999 / 0 / 1/step]
8-999-013	Duplex	C*	[0 to 99999999 / 0 / 1/step]
8-999-023	Copy: BW(%)	C*	[0 to 99999999 / 0 / 1/step]
8-999-027	Printer: BW(%)	C*	[0 to 99999999 / 0 / 1/step]
8-999-030	Fax Print: BW(%)	C*	[0 to 99999999 / 0 / 1/step]
8-999-101	Transmission Total: Color	C*	[0 to 99999999 / 0 / 1/step]
8-999-102	Transmission Total: BW	C*	[0 to 99999999 / 0 / 1/step]
8-999-103	FAX Transmission	C*	[0 to 99999999 / 0 / 1/step]
8-999-104	Scanner Transmission: Color	C*	[0 to 99999999 / 0 / 1/step]
8-999-105	Scanner Transmission: BW	C*	[0 to 99999999 / 0 / 1/step]

Input and Output Check

Input Check

5803	[Input Check] Displays the signals received from the sensors and switches		
5-803-001	Tray 1: Paper Size Sensor	E	[0 to 15 / **0** / 1/step] 0: Not detected 1: Detected
5-803-002	Tray 2: Paper Size Sensor	E	[0 to 7 / **0** / 1/step] 0: Not detected 1: Detected
5-803-003	Tray 1: Tray Set Sensor	E	[0 or 1 / **0** / 1/step] 0: Set 1: Unset
5-803-004	Tray 2: Tray Set Sensor	E	
5-803-005	Tray 1: Paper Height Sensor 1	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
5-803-006	Tray 1: Paper Height Sensor 2	E	
5-803-007	Tray 2: Paper Height Sensor 1	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
5-803-008	Tray 2: Paper Height Sensor 2	E	
5-803-009	Tray 1: Paper End Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
5-803-010	Tray 2: Paper End Sensor	E	
5-803-011	Tray 1: Paper Lift Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
5-803-012	Tray 2 Paper Lift Sensor	E	

5-803-013	1st Paper Leading Edge Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-014	2nd Paper Leading Edge Sensor	E	
5-803-015	By-pass: Paper Size Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
5-803-016	By-pass: Paper End Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-017	By-pass: Paper Length Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-018	By-pass: Home Position Sensor	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
5-803-019	Paper Exit Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-020	Paper Feed Sensor 1	E	
5-803-021	Paper Feed Sensor 2	E	
5-803-022	Registration Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
5-803-023	Interchange Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-024	Duplex: Exit Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-025	Duplex: Entrance Sensor	E	

5-803-026	Paper Overflow Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-027	Front Safety Sw – 24V	E	[0 or 1 / **0** / 1/step] 0: OFF 1: ON
5-803-028	Front Safety Sw – 5V	E	[0 or 1 / **0** / 1/step] 0: ON 1: OFF
5-803-029	Right Cover Open	E	[0 or 1 / **0** / 1/step] 0: Close 1: Open
5-803-030	Duplex Fan Lock	E	[0 or 1 / **0** / 1/step] 0: Running 1: Stopped, or locked
5-803-031	CTL Fan Lock	E	[0 or 1 / **0** / 1/step] 0: Running 1: Stopped, or locked
5-803-032	Sub Fan lock	E	[0 or 1 / **0** / 1/step] 0: Running 1: Stopped, or locked
5-803-033	Fan Lock	E	[0 or 1 / **0** / 1/step] 0: Running 1: Stopped, or locked
5-803-034	Bottle Motor Lock	E	[0 or 1 / **0** / 1/step] 0: Running 1: Stopped, or locked
5-803-035	Main Motor Lock	E	[0 or 1 / **0** / 1/step] 0: Running 1: Stopped, or locked

5-803-036	Interchange Unit Set	E	[0 or 1 / **0** / 1/step] 0: Set 1: Unset
5-803-037	PCU Set	E	[0 or 1 / **0** / 1/step] 0: Unset 1: Set
5-803-038	Fusing Unit Set	E	[0 or 1 / **0** / 1/step] 0: Set 1: Unset
5-803-039	Key Card Set	E	[0 or 1 / **0** / 1/step] 0: Set 1: Unset
5-803-040	Mechanical Counter Set	E	[0 or 1 / **0** / 1/step] 0: Unset 1: Set
5-803-041	Key Counter Set	E	[0 or 1 / **0** / 1/step] 0: Set 1: Unset
5-803-042	BCU Version	E	[0 or 1 / **0** / 1/step]
5-803-043	Sab2 Fan Lock	E	[0 or 1 / **0** / 1/step] 0: Running 1: Stopped, or locked
5-803-087	BANK_VFEEDSNS1	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
5-803-088	BANK_VFEEDSNS2	E	
5-803-089	BANK_FEEDSNS1	E	
5-803-090	BANK_FEEDSNS2	E	
5-803-091	BANK_VFEEDCOVER	E	[0 or 1 / **0** / 1/step] 0: Close 1: Open

5-803-200	Scanner HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
5-803-201	Platen Cover Sensor	E	

6007	**[ARDF (D779) Input Check]** Displays the signals received from the sensors and switches of the ARDF.		
6-007-001	Original Length 1 (B5 Detection Sensor)	E	[0 or 1 / **0** / 1/step] 0: Paper detected 1: Paper not detected
6-007-002	Original Length 2 (A4 Detection Sensor)	E	
6-007-003	Original Length 3 (LG Detection Sensor)	E	
6-007-004	Original Width 1	E	[0 or 1 / **0** / 1/step] 0: Paper detected 1: Paper not detected
6-007-005	Original Width 2	E	
6-007-006	Original Width 3	E	
6-007-007	Original Width 4	E	
6-007-008	Original Width 5	E	
6-007-009	Original Detection	E	[0 or 1 / **0** / 1/step] 0: Paper not detected 1: Paper detected
6-007-011	Skew Correction	E	[0 or 1 / **0** / 1/step] 0: Paper detected 1: Paper not detected
6-007-013	Registration Sensor	E	
6-007-014	Exit Sensor	E	0 or 1 / **0** / 1/step] 0: Paper not detected 1: Paper detected
6-007-015	Feed Cover Sensor	E	[0 or 1 / **0** / 1/step] 0: Cover close 1: Cover open

6-007-016	Lift Up Sensor	E	[0 or 1 / **0** / 1/step] 0: Lift up 1: Lift down
6-007-023	Rear Edge Detection	E	[0 or 1 / **0** / 1/step] 0: Paper not detected 1: Paper detected

6145	**[1000-sheet FIN (D686/D687) INPUT Check]** Displays the signals received from the sensors and switches of the 1000-sheet finisher.		
6-145-001	Entrance Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-002	Upper Cover Open/Close Sensor	E	[0 or 1 / **0** / 1/step] 0: Open 1: Close
6-145-003	Proof Tray Exit Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-004	Proof Tray Full Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-005	Shift HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-006	Exit Guide Plate Open/Close HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-007	Shift Paper Exit (Lift Tray Exit) Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected

6-145-008	Positioning Roller HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-009	Lift Tray Paper Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-145-010	Jogger HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-011	Feed Out HP Sensor	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-145-012	Lift Tray Lower Limit Sensor (Upper)	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-145-013	Lift Tray Lower Limit Sensor (Lower)	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-145-014	Staple Tray Paper Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-015	Stapler Moving HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-016	Near End Sensor (Common: Corner/Bklt Stplr)	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-145-017	Self Priming Sensor (Common: Crnr/Bklt Stplr)	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected

6-145-018	Driver HP Sensor (Corner/ Booklet Stapler)	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-145-019	Driver Timing Sensor(Corner/Booklet Stapler)	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-020	Clincher HP Sensor (Corner/ Booklet Stapler)	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-145-021	Clincher Timing Sensor (Corner/Bklt Stapler)	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-022	Stapler Retraction Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-145-023	Punch HP Sensor	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-145-024	Punch RP Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-025	Punch Hopper Full Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-026	Punch Move HP Sensor	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-145-027	S-to-S Registration Detection HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP

6-145-028	S-to-S Registration Detection Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-029	Punch Selection DIPSW 1	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-030	Punch Selection DIPSW 2	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-031	ITB Transport Sensor: Right	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-032	ITB Transport Sensor: Left	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-033	Stack Transport Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-034	Stack Trans Upper pressure Release HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-035	Stack Trans Lower Pressure Release HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-036	Fold Blade HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-145-037	Fold Cam HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP

6-145-038	TE Stopper Transport Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-039	TE Stopper HP Sensor	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-145-040	Booklet Folder Exit Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-041	Booklet Folder Tray Full Sensor:Upper	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-145-042	Booklet Folder Tray Full Sensor:Lower	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-145-043	Door Open/Close SW	E	[0 or 1 / **0** / 1/step] 0: Close 1: Open
6-145-044	Lift Tray Upper Limit SW	E	[0 or 1 / **0** / 1/step] 0: OFF 1: ON

6146	**[Internal FIN (D586) INPUT Check]** Displays the signals received from the sensors and switches of the internal finisher.		
6-146-001	Entrance Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-146-002	Carry Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected

6-146-003	Feed Clutch	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-146-004	Staple Tray Paper Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-146-005	Front Jogger HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-006	Rear Jogger HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-007	Sft Roller HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-008	Hitroll HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-009	Ext Guide Plate HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-010	Staple Moving HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-011	Shift Tray Paper sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-146-012	Shift Tray Limit Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected

6-146-013	Staple Rotation Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-146-014	Stapler Near End Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-146-015	Self Priming Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-146-016	Stopper HP Sensor	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-146-017	Punch HP Sensor	E	[0 or 1 / **0** / 1/step] 0: HP 1: Not HP
6-146-018	Punch Pluse Count Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-146-019	Punch Chad Full Sensor	E	[0 or 1 / **0** / 1/step] 0: Not detected 1: Detected
6-146-020	Punch Moving HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-021	Punch Registration Detection HP Sensor	E	[0 or 1 / **0** / 1/step] 0: Not HP 1: HP
6-146-022	Punch Registration Detection Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected

6-146-023	Slide Door SW	E	[0 or 1 / **0** / 1/step] 0: Close 1: Open
6-146-024	Shift Tray Upper Limit SW	E	[0 or 1 / **0** / 1/step] 0: On 1: Off

6150	**[Bridge Unit (D584) INPUT Check]** Displays the signals received from sensors and switches of the bridge unit.		
6-150-001	Relay: Paper Exit Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-150-002	Relay: Paper Feed Sensor	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected
6-150-003	Relay/Shift Unit Set	E	[0 or 3 / **0** / 1/step]
6-150-004	Relay: Exit Cover Sensor	E	[0 or 1 / **0** / 1/step] 0: Open 1: Close
6-150-005	Relay: Feed Cover Sensor	E	[0 or 1 / **0** / 1/step] 0: Open 1: Close

6152	**[Shift Tray (D583) INPUT Check]** Displays the signals received from sensors and switches of the shift tray.		
6-152-002	ShiftTray: Position Sensor	E	[0 or 1 / **0** / 1/step]

6154	**[1-bin Tray (D582) INPUT Check]** Displays the signals received from sensors and switches of the 1-bin tray.

6-154-001	1 bin: Set Detection	E	[0 or 1 / **0** / 1/step] 0: Set 1: Unset
6-154-002	1BIN: Paper Feed Sensor	E	[0 or 1 / **0** / 1/step]\ 0: Detected 1: Not detected
6-154-003	1BIN: Paper Remain	E	[0 or 1 / **0** / 1/step] 0: Detected 1: Not detected

Output Check

5804	**[OUTPUT Check]** Turns on electrical components individually for test purposes.		
5-804-002	Main Motor: CW	E	[0 or 1 / **0** / 1/step]
5-804-004	Main Motor: CCW	E	
5-804-006	Duplex Motor: CCW: 416.96	E	[0 or 1 / **0** / 1/step]
5-804-008	Duplex Motor: CCW: 149.05	E	
5-804-010	Interchange Motor: CW: 417	E	[0 or 1 / **0** / 1/step]
5-804-012	Interchange Motor: CW: 152	E	
5-804-014	Interchange Motor: CCW: 417	E	
5-804-016	Interchange Motor: CCW: 152	E	
5-804-018	By-pass Feed Motor: CW: Low	E	[0 or 1 / **0** / 1/step]
5-804-019	By-pass Feed Motor: CCW	E	

5-804-020	Toner Bottle Motor	E	[0 or 1 / **0** / 1/step]
5-804-021	1st Tray Up	E	
5-804-022	1st Tray Down	E	
5-804-023	2nd Tray Up	E	
5-804-024	2nd Tray Down	E	
5-804-025	Exhaust Fan Motor: High	E	[0 or 1 / **0** / 1/step]
5-804-026	Exhaust Fan Motor: Low	E	
5-804-027	Duplex Fan	E	
5-804-028	CTL Fan	E	
5-804-029	PSU Fan	E	
5-804-030	Sub Fan Motor: High	E	
5-804-031	Sub Fan Motor: Low	E	
5-804-032	Registration CL	E	[0 or 1 / **0** / 1/step]
5-804-033	1st Paper Feed CL	E	
5-804-034	2nd Paper Feed CL	E	
5-804-035	Paper Transport CL1	E	
5-804-036	Paper Transport CL2	E	
5-804-037	Pick Up SOL1	E	[0 or 1 / **0** / 1/step]
5-804-038	Pick Up SOL2	E	
5-804-039	Interchange SOL	E	
5-804-040	Fusing SOL	E	
5-804-041	Dehumidification Heater	E	[0 or 1 / **0** / 1/step]

5-804-042	PP.: Image Transfer: -	E	[0 or 1 / **0** / 1/step]
5-804-043	PP.: Image Transfer: +	E	
5-804-044	PP.: Separation Voltage	E	
5-804-045	PP.: Development	E	
5-804-046	PP.: Charge	E	
5-804-047	P Sensor	E	[0 or 1 / **0** / 1/step]
5-804-048	Anti-static LED	E	
5-804-049	Polygon Motor: High	E	
5-804-050	Polygon Motor: Low	E	
5-804-051	LD On	E	
5-804-052	Sub2 Fan Motor: High	E	
5-804-053	Sub2 Fan Motor: Low	E	
5-804-163	BANK_MT:203mm/s	E	[0 or 1 / **0** / 1/step]
5-804-165	BANK_MT:150mm/s	E	
5-804-169	BANK_FEEDCL1	E	
5-804-170	BANK_FEEDCL2	E	
5-804-171	BANK_PICKUPSOL1	E	
5-804-172	BANK_PICKUPSOL2	E	
5-804-202	Scanner Lamp	E	

6008	**[ARDF (D779) Output Check]** Turns on electrical components individually for test purposes.		
6-008-003	Feed Motor Forward	E	[OFF or ON / - / 1/step]
6-008-004	Feed Motor Reverse	E	[OFF or ON / - / 1/step]
6-008-005	Relay Motor Forward	E	[OFF or ON / - / 1/step]
6-008-006	Relay Motor Reverse	E	[OFF or ON / - / 1/step]

6-008-011	Inverter Solenoid	E	[OFF or ON / - / 1/step]
6-008-012	Stamp	E	[OFF or ON / - / 1/step]
6-008-013	Fan Motor	E	[OFF or ON / - / 1/step]
6-008-014	Feed Clutch	E	[OFF or ON / - / 1/step]
6-008-015	Feed Solenoid	E	[OFF or ON / - / 1/step]

6147	[1000-sheet FIN (D686/D687) OUTPUT Check] Turns on electrical components individually for test purposes.		
6-147-001	Entrance TransportMotor	E	[0 or 1 / 0 / 1/step]
6-147-002	Proof Transport Motor	E	
6-147-003	Paper Feed/Positioning & Move Roller Motor	E	
6-147-004	Junction Solenoid	E	
6-147-005	Shift Motor	E	
6-147-006	Jogger Motor	E	[0 or 1 / 0 / 1/step]
6-147-007	Exit Guide Plate Open/ Close Motor	E	
6-147-008	Feed-out Motor	E	
6-147-009	Tray Lift Motor	E	
6-147-010	Positioning Roller Motor	E	
6-147-011	Stapler Shift Motor	E	[0 or 1 / 0 / 1/step]
6-147-012	Stapler Motor	E	
6-147-013	Punch Motor	E	
6-147-014	Punch Move Motor	E	
6-147-015	S-to-S Registration Detection Move Motor	E	

6-147-016	Stack Transport Motor: Upper	E	[0 or 1 / **0** / 1/step]
6-147-017	Stck Trns Uppr Prss Rls/ Stndrd Fence Rtrct M	E	
6-147-018	Stack Lower Pressure Release Motor	E	
6-147-019	Folder Transport Motor	E	
6-147-020	TE Stopper Motor	E	
6-147-021	Folder Blade Motor	E	
6-147-022	Navigation LED (All)	E	

6149	**[Internal FIN (D586) OUTPUT Check]** Turns on electrical components individually for test purposes.		
6-149-001	Entrance Motor	E	[0 or 1 / **0** / 1/step]
6-149-002	Carry Motor	E	
6-149-003	Exit Motor	E	
6-149-004	Front Jogger Motor	E	
6-149-005	Rear Jogger Motor	E	
6-149-006	Shift Motor	E	[0 or 1 / **0** / 1/step]
6-149-007	Hitroll Motor	E	
6-149-008	Exit Guide Plate Motor	E	
6-149-009	Staple Moving Motor	E	
6-149-010	Tray Motor	E	

6-149-011	Staple Motor	E	[0 or 1 / **0** / 1/step]
6-149-012	Stopper Motor	E	
6-149-013	Punch Motor	E	
6-149-014	Punch Moving Motor	E	
6-149-015	Punch Registration Moving Motor	E	

6151	**[Bridge Unit (D584) OUTPUT Check]** Turns on electrical components individually for test purposes.		
6-151-001	Relay: Feed Motor: Reset	E	[0 or 1 / **0** / 1/step]
6-151-002	Relay: Feed Motor: Enable	E	[0 or 1 / **0** / 1/step]
6-151-004	Relay: Feed Motor: CCW	E	[0 or 1 / **0** / 1/step]
6-151-005	Relay: Junction Gate SOL	E	[0 or 1 / **0** / 1/step]

6153	**[Shift Tray (D583) OUTPUT Check]** Turns on electrical components individually for test purposes.		
6-153-001	ShiftTray: Motor	E	[0 or 1 / **0** / 1/step]

6155	**[1-bin Tray (D582) OUTPUT Check]** Turns on electrical components individually for test purposes.		
6-155-001	1BIN: Reversal Output Signal	E	[0 or 1 / **0** / 1/step]

Printer Service Mode

SP1-XXX (Service Mode)

1001	[Bit Switch]			
1-001-001	Bit Switch 1 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**No I/O Timeout**	**Disabled**	Enabled
		Enables/Disables MFP I/O Timeouts. If enabled, the MFP I/O Timeout setting will have no affect. I/O Timeouts will never occur.		
	bit 4	**SD Card Save Mode**	**Disabled**	Enabled
		If this bit switch is enabled, print jobs will be saved to the GW SD slot and not output to paper.		
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	**[RPCS,PCL]: Printable area frame border**	**Disabled**	Enabled
		Prints all RPCS and PCL jobs with a border around the printable area.		

1001	[Bit Switch]

1-001-002	Bit Switch 2 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**Applying a Collate Type**	**Shift Collate**	Normal Collate
		A collate type (shift or normal) will be applied to all jobs that do not explicitely define a collate type. **Note:** If #5-0 is enabled, this BitSwitch has no effect.		
	bit 3	**[PCL5e/c,PS]: PDL Auto Switching**	**Enabled**	Disabled
		Enables/Disables the MFPs ability to change the PDL processor mid-job. Some host systems submit jobs that contain both PS and PCL5e/c. If Auto PDL switching is disabled, these jobs will not be printed properly.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	**DFU**	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**

1-001-003	Bit Switch 3 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	**[PCL5e/c]: Legacy HP compatibility**	**Disabled**	Enabled
		Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually "<ESC>*r0A") will be changed to "<ESC>*r1A".		
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**

1-001-004	Bit Switch 4 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	**IPDS print-side reversal**	**Disabled**	Enabled
		If enabled, the simplex pages of IPDS jobs will be printed on the front side because of printing on the back side of the page. This might reduce printing speed.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	[Bit Switch]

1-001-005	Bit Switch 5 Settings		0	1
	bit 0	**Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.**	**Disabled**	Enabled
		If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available Types will depend on the device and configured options. After enabling this BitSw, the settings will appear under: "User Tools > Printer Features > System"		
	bit 1	**Multiple copies if a paper size or type mismatch occurs**	**Disabled (single copy)**	Enabled (multiple)
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.		
	bit 2	**Prevent SDK applications from altering the contents of a job.**	**Disabled**	Enabled
		If this BitSw is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter". **Note**: The main purpose of this BitSw is for troubleshooting the effects of SDK applications on data.		

1-001-005	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.		
	bit 4	**Increase max. number of stored jobs.**	**Disabled (100)**	Enabled (750)
		Changes the maximum number of jobs that can be stored on the HDD. The default (disabled) is 100. If this is enabled, the max. will be raised to 750.		
	bit 5	DFU	-	-
	bit 6	**Method for determining the image rotation for the edge to bind on.**	**Disabled**	Enabled
		If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs. The old models are below: - PCL: Pre-04A models - PS/PDF/RPCS:Pre-05S models		
	bit 7	**Letterhead mode printing**	**Disabled**	Enabled (Duplex)
		Routes all pages through the duplex unit. If this is disabled, simplex pages or the last page of an odd-paged duplex job, are not routed through the duplex unit. This could result in problems with letterhead/pre-printed pages. Only affects pages specified as Letterhead paper.		

1001	[Bit Switch]

1-001-006	Bit Switch 6 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	[Bit Switch]

1-001-007	Bit Switch 7 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	[Bit Switch]

1-001-008	Bit Switch 8 Settings		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	**[PDF]: Orientation Auto Detect Fuction**	**Enabled**	Disabled
		Automatically chooses page orientations of PDF jobs (Landscape or Portrait) based on the content.		

1001	**[Bit Switch]**

1-001-009	Bit Switch 9 Settings		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	**PCL/PS bypass tray paper rotation (SEF/LEF)**	**Disabled**	Enabled
		This bitsw causes the device to revert to the behavior of previous generations. It only takes effect if "Bypass Tray Setting Priority" = "Driver/Command". Previous spec (bitsw=1): If a standard sized paper mismatch occurred in the bypass tray, the MFP always prompted for SEF paper. If this bitsw=0 (default) then in the event of a standard sized paper mismatch, the MFP will always prompt for paper of the rotation (SEF/LEF) determined by the MFP bypass tray paper setting or by the bypass tray sensor.		

1-001-009	bit 4	**Timing of the PJL Status ReadBack (JOB END) when printing multiple collated copies.**	**Disabled**	Enabled
		This bitsw determines the timing of the PJL USTATUS JOB END sent when multiple collated copies are being printed. 0 (default): JOB END is sent by the device to the client after the first copy has completed printing. This causes the page counter to be incremented after the first copy and then again at the end of the job. 1: JOB END is sent by the device to the client after the last copy has finished printing. This causes the page counter to be incremented at the end of each job.		
	bit 5	**Display UTF-8 text in the operation panel**	**Enabled**	Disabled
		Enabled (=0): Text composed of UTF-8 characters can be displayed in the operation panel. Disabled (=1): UTF-8 characters cannot be displayed in the operation panel. For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this BitSw is enabled (=0).		
	bit 6	**Disable super option**	**Disabled**	Enabled
		Switches super option disable on / off. It this is On, multiple jobs are grouped at LPR port. PJL settings are enabled even jobs that are specified queue names are sent.		
	bit 7	**Enable/Disable Print from USB/SD's Preview function**	Enabled	**Disabled**
		Determines whether Print from USB/SD will have the Preview function. Enabled (=0): Print from USB/SD will have the Preview function. Disabled (=1): Print from USB/SD will not have the Preview function.		

1001	**[Bit Switch]**

1-001-010	Bit Switch A Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	**Store and Skip Errored Job locks the queue**	**Queue is not locked after SSEJ**	Queue locked after SSEJ
		If this is 1, then after a job is stored using Store and Skip Errored Job (SSEJ), new jobs cannot be added to the queue until the stored job has been completely printed.		
1-001-010	bit 6	**Allow use of Store and Skip Errored Job if connected to an external charge device.**	**Does not allow SSEJ with ECD**	Allows SSEJ with ECD
		If this is 0, Store and Skip Errored Job (SSEJ) will be automatically disabled if an external charge device is connected. **Note**: We do not officially support enabling this bitsw (1). Use it at your own risk.		
	bit 7	**Job cancels remaining pages when the paid-for pages have been printed on an external charge device**	**Job does not cancel**	Job cancels
		When setting 1 is enabled, after printing the paid-for pages on an external charge device, the job that includes any remaining pages will be canceled. This setting will prevent the next user from printing the unnecessary pages from the previous user's print job.		

1001	**[Bit Switch]**

1-001-011	Bit Switch B Settings		0	1
	bit 0	**Show Menu List**	**Hide Menu List**	Show Menu List
		If this is 0, the Menu List button will be removed from Printer Features.		
	bit 1	**Print job interruption**	**Does not allow interruption**	Allow interruption
		0 (default): Print jobs are not interrupted. If a job is promoted to the top of the print queue, it will wait for the currently printing job to finish. 1: If a job is promoted to the top of the queue, it will interrupt the currently printing job and start printing immediately.		
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	**[Bit Switch]**

1-001-012	Bit Switch C Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1003	**[Clear setting]** -		
1-003-001	Initialize Printer System	C*	[- / - / -] [Execute]

1003	**[Clear setting]** -		
1-003-003	Delete Program	C*	[- / - / -] [Execute]

1004	**[Print Summary]** Prints the service summary sheet (a summary of all the controller settings).		
1-004-001	Print Printer Summary	C	[- / - / -]

1005	[Display Version] Displays the version of the controller firmware.		
1-005-001	-	C	[- / - / -]

1006	[Sample/Locked Print] -		
1-006-001	0:Link with Doc. Srv 1:Enable	C*	[0 or 1 / **0** / 1/step] 0: Linked, 1: On Enables and disables the document server. When you select "0," the document server is enabled or disabled in accordance with Copy Service Mode SP5-967. When you select "1," the document server is enabled regardless of Copy Service Mode SP5-967.

1110	[Media Print Device Setting] Selects the setting for the media print device.		
1-110-002	0: Disable 1: Enable	C*	[0 or 1 / **1** / 1/step] Sets Enabled/disabled front I/F(USB/SD) device at media print function. It is required restart after the setting. Initial value is as follows by front I/F(SD/USB). I/F(SD/USB) initial value Option loading machine 0: Disabled Standard loading machine 1: Enabled

1111	[All Job Delete Mode] -		
1-111-001	0:excluding New Job 1:including New Job	C*	[0 or 1 / **1** / 1/step] 0: Excluding New Job 1: Including New JobSelects whether to include an image processing job in jobs subject to full cancellation from the SCS job list.

Scanner SP Mode

SP1-XXX (System and Others)

1001	**[Scan Nv Version]** Displays the scanner firmware version stored in NVRAM in a 9-digit format: Func. Name_Model Name_History No.		
1-001-005	-	C*	[- / **-** / -] Operates following two operation simultaneously for prevent forgot to initialize when initialization of scanner NV is required. : Automatic initialization by individual version control. : Writes the message "initialization is required" at history, and then instructs initialization by release notification. (Only operates this way in current situation.)

1005	**[Erase Margin(Remote scan)]** -		
1-005-001	-	C*	[0 to 5 / **0** / 1/step] Creates an erase margin for all edges of the scanned image. If the machine has scanned the edge of the original, create a margin. This SP is activated only when the machine uses TWAIN scanning.

1009	**[Remote scan disable]** -		
1-009-001	-	C*	[0 or 1 / **0** / 1 /step] This SP switches the TWAIN scanner function on/off. This is one of the scanner application functions. 0: ON (enabled) 1: OFF (disabled)

1010	[Non Display Clear Light PDF] -		
1-010-001	-	C*	[0 or 1 / **0** / 1 /step] Display or Non display remote scan. 0: Display, 1: No display

1011	[Org Count Display] -		
1-011-001	-	C*	[0 or 1 / **0** / 1 /step] 0: OFF (no display) 1: ON (count displays) This SP codes switches the original count display on/off.

1012	[UserInfo Release] -		
1-012-001	-	C*	[0 or 1 / **1** / 1 /step] 1: Release 0: Do not release This SP code sets the machine to release or not release the following items at job end. • Destination (E-mail/Folder/CS) • Sender name • Mail Text • Subject line • File name

1013	[Scan to Media Device Setting] -

1-013-002	-	C*	0 or 1 / **1** / 1 /step] 0: Disable 1: Enable This SP code enables/disables the multi-media function option (USB 2.0/SD Slot) mounted on the front of the machine. Operators can scan documents to either an SD card or a USB memory device inserted into this unit. This SP must be enabled (set to "1") in order for the device to function.

1014	**[Scan to Folder Pass Input Set]** -		
1-014-001	-	C*	[0 or 1 / **0** / 1 /step] 0: Disable 1: Enable Enables / Disables to input password for Scan To Folder.

1041	**[Scanner FlairAPI Function Setting]**		
001	0x00 – 0xff	C*	* see BitSwitch below:
	Sets Scanner FlairAPI Function enable / disable. This SP is set by BitSwitch and needs to reboot the machine after making changes.		

bit	Setting	meanings		Description
		0	1	
bit 0	Start of FlairAPI Server	**Off (Do not Start)**	On (Start)	Sets whether to start exclusive FlairAPI http server. If it is 0, scanning FlairAPI function and simple UI function will be disabled. The machine installed Android operating panel option, set "1", others set "0".

bit 1	Access permission of FlairAPI from outside of the machine	**Disabled**	Enabled	If it is "0", accessing is limited from the machine only, such as operating panel, SDK/J, MFP browsers etc... If it is "1", accessing is allowed from outside of FlairAPI such as PC, Remote UI, and IT-Box etc...
bit 2	Reserved	-	-	-
bit 3	Reserved	-	-	-
bit 4	Simple UI Function	**Disabled**	Enabled	If it is "1", the machine can be used Scanner Simple UI. If it is "0", requesting URL of Simple UI returns "404 Not Found"
bit 5	Accessing permission of Simple UI from outside of the machine	**Disabled**	Enabled	If it is "0", accessing is limited from the machine only (operating panel and MFP browser). If it is "1", accessing is allowed from outside of Simple UI such as PC, mobile devices, and so on.
bit 6	Reserved	-	-	-
bit 7	Reserved	-	-	-

2021	**[Compression Level (Gray-scale)]** Selects the compression ratio for grayscale processing mode (JPEG) for the five settings that can be selected at the operation panel.		
2-021-001	Comp1:5-95	C*	[5 to 95 / **20** / 1 /step] Sets compression ratio when "Comp1" was selected when using multi-level compression. Comp1 of 5grades notch. 5"low: low image quality" -> ->95(high: high quality)
2-021-002	Comp2:5-95	C*	[5 to 95 / **40** / 1 /step] Sets compression ratio when "Comp2" was selected when using multi-level compression. Comp2 of 5grades notch.

2-021-003	Comp3:5-95	C*	[5 to 95 / **65** / 1 /step] Sets compression ratio when "Comp3" was selected when using multi-level compression. Comp3 of 5grades notch.
2-021-004	Comp4:5-95	C*	[5 to 95 / **80** / 1 /step] Sets compression ratio when "Comp4" was selected when using multi-level compression. Comp4 of 5grades notch.
2-021-005	Comp5:5-95	C*	[5 to 95 / **95** / 1 /step] Sets compression ratio when "Comp55" was selected when using multi-level compression. Comp55 of 5grades notch.

2024	**[Compression ratio of ClearLight PDF]** Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.		
2-024-001	Compression Ratio (Normal)	C*	[5 to 95 / **25** / 1/step] Sets the compression rate when you select "normal" clear light when using PDF. 5"low: low image quality" ->->95"high: high image".
2-024-002	Compression Ratio (High)	C*	[5 to 95 / **20** / 1/step] Set the compression rate when you select "High" clear light when using PDF.

2025	**[Compression ratio of ClearLightPDF JPEG2000]** -		
2-025-001	Compression Ratio (Normal) JPEG2000	C*	[5 to 95 / **25** / 1/step] Sets the compression rate when you select "normal" clear light when using clear right PDF JPEG2000. 5"low: low image quality" ->->95"high: high image".

2-025-002	Compression Ratio (High) JEPG2000	C*	[5 to 95 / **20** / 1/step] Sets the compression rate when you select "high" clear light when using clear right PDF JPEG2000.

2030	**[OCR PDF DetectSens]** -		
2-030-001	White Lumi Value: 0 – 255	C*	[0 to 255 / **250** / 1/step] Sets brightness that consider a white: Information of detection level 5 at white paper detection enable of PDF setting with OCR "Transparent text". 1 (low: low sensitivity) <-->4(high: high sensitivity) Sensitive 5 can be set fine setting sensitive information by user.
2-030-002	White Pix Ratio: 0 – 100	C*	[0 to 100 / **80** / 1/step] Sets part 2: Information of detection level 5 at white paper detection enable of PDF setting with OCR "Transparent text".
2-030-003	White Tile Ratio: 0 - 100	C*	[0 to 100 / **80** / 1/step] Sets part 3: Information of detection level 5 at white paper detection enable of PDF setting with OCR "Transparent text".

Test Pattern Printing

Test Pattern Printing

Printing Test pattern: SP2-109

Some of these test patterns are used for copy image adjustments but most are used primarily for design testing.

Note

- Do not operate the machine until the test pattern is printed out completely. Otherwise, an SC occurs.

1. Enter the SP mode and select **SP2-109-001**.
2. Enter the number for the test pattern that you want to print and press [#].
3. When you want to change the density of printing a test pattern, select the density with SP2-109-002.
4. When you are prompted to confirm your selection, touch "Yes" to select the test pattern for printing.
5. Touch "Copy Window" to open the copy window, then select the settings for the test print (paper size etc.).
6. Press the "Start" key to start the test print.
7. After checking the test pattern, touch "SP Mode" on the LCD to return to the SP mode display.
8. Reset all settings to the default values.
9. Touch "Exit" twice to exit SP mode.

No.	Pattern	No.	Pattern
0	None	11	Independent Pattern (1dot)
1	Vertical Line (1 dot)	12	Independent Pattern (2dot)
2	Vertical Line (2dot)	13	Independent Pattern (4dot)
3	Horizontal Line (1dot)	14	Trimming Area
4	Horizontal Line (2 dot)	15	Black Band (Horizontal)
5	Grid Vertical Line	16	Black Band (Vertical)
6	Grid Horizontal Line	17	Checker Flag Pattern
7	Grid Pattern Small	18	Grayscale (Vertical)

8	Grid Pattern Large	19	Grayscale (Horizontal)
9	Argyle Pattern Small	20	Full Dot Pattern
10	Argyle Pattern Large	21	All White Pattern

MEMO

MEMO

MEMO