

Model TI-P1
Machine Code: M109
Field Service Manual

18 December, 2012

Important Safety Notices

Important Safety Notices

Prevention of Physical Injury

1. Before disassembling or assembling parts of the main machine and peripherals, make sure that the power cord of the main machine is unplugged.
2. The wall outlet 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. 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.

WARNING

- To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.

Health Safety Conditions

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

Observance of Electrical Safety Standards

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

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.

WARNING







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

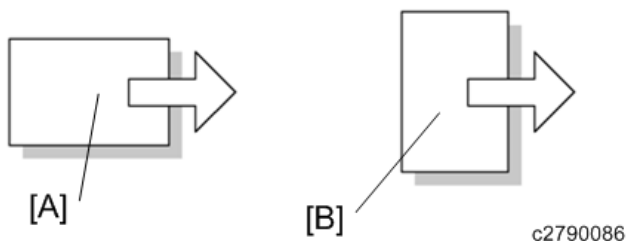
Safety and Ecological Notes for Disposal

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

Symbols, Abbreviations and Trademarks

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

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



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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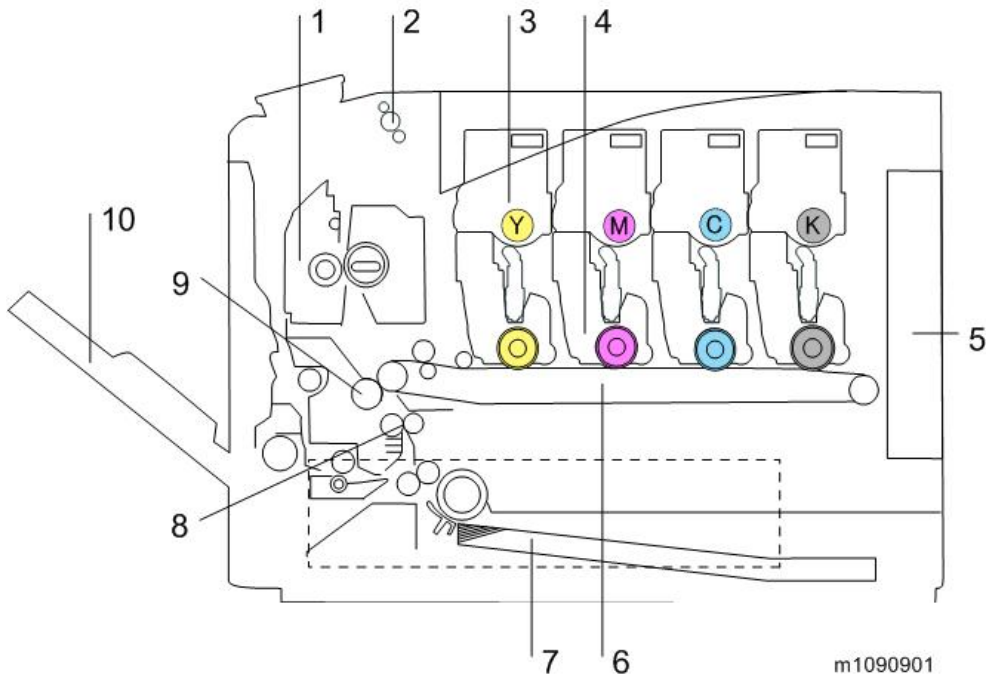


1. Product Information

Product Overview

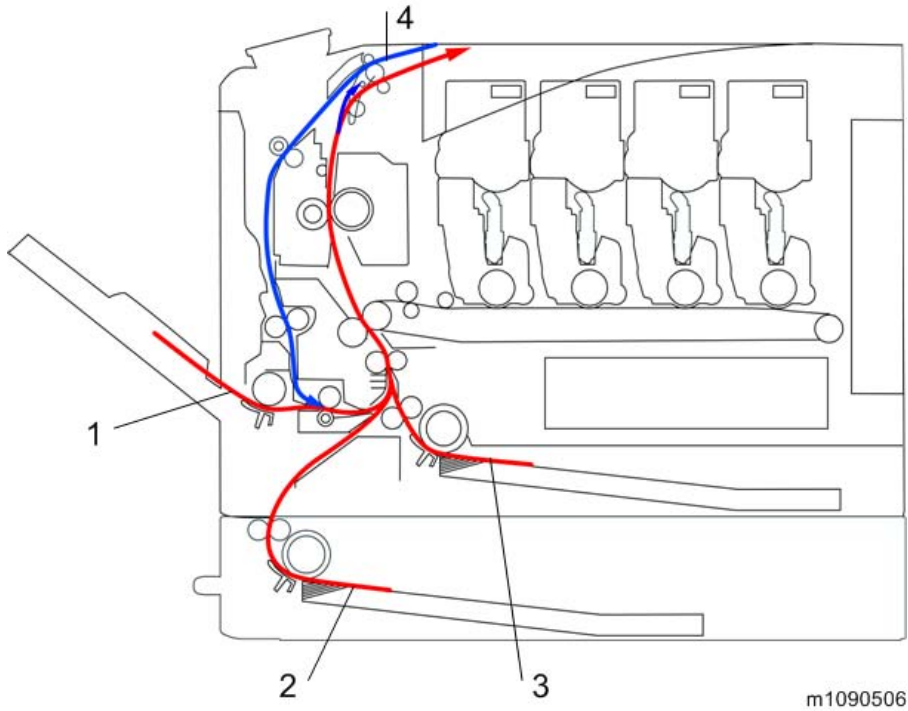
1

Component Layout



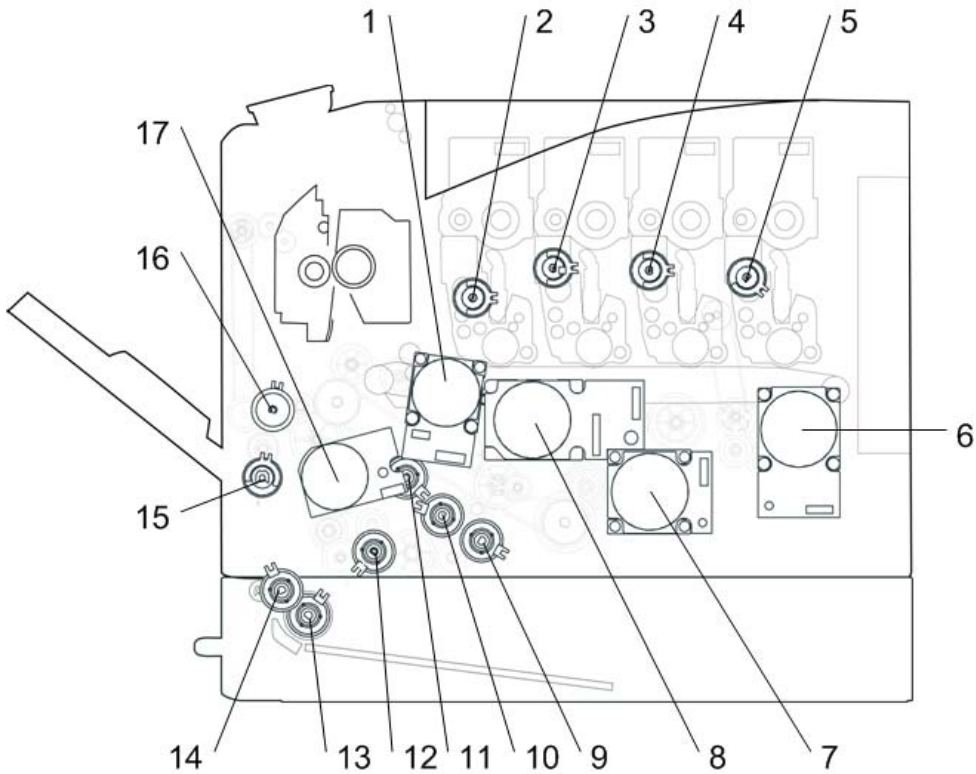
1. Fusing Unit
2. Paper Exit/Reverse Roller
3. Toner Bottle
4. PCDU
5. Engine Board/Controller Board
6. Image Transfer Belt Unit
7. Paper Feed Tray
8. Registration Roller
9. Transfer Roller
10. Bypass Tray Unit

Paper Path



1. Bypass Tray
2. Optional Paper Feed Tray
3. Standard Paper Feed Tray
4. Duplex Feed Path

Drive Layout



m1093020

1. Image Transfer Unit Motor
2. Toner Supply Clutch (Y)
3. Toner Supply Clutch (M)
4. Toner Supply Clutch (C)
5. Toner Supply Clutch (K)
6. Drum Motor: K
7. Fusing Motor
8. Drum Motor: CMY
9. Paper Feed Clutch
10. Relay Clutch
11. ITB (Image Transfer Belt) Contact Clutch
12. Registration Clutch
13. Paper Feed Clutch

- 14. Grip Roller Clutch
- 15. Duplex Intermediate Clutch
- 16. Bypass Clutch
- 17. Paper Feed Motor

Machine Codes and Peripheral Configuration

Main Frame

item	Machine Code	Remarks
SP C730DN	M109	NEW

Options

item	Machine Code	Remarks
Paper Feed Unit TK2000	M406	NEW
Hard Disk Drive Option Type C730	M417-01	NEW
Memory Unit Type N 1GB	M417-03	NEW
IEEE802.11 Interface Unit Type O	M417-06	NEW, *1
IPDS Unit Type C730	M417-10(NA) M417-11(EU) M417-12(Asia/CHN)	NEW
Camera Direct Print Card Type L	M417-15	NEW
SD card for NetWare printing Type M	M417-16	NEW
IEEE1284 Interface Board Type A	B679	*1
VM CARD Type W	M417-19(NA) M417-20(EU) M417-21(Asia/CHN)	NEW, *2

*1: You can only install one of these at a time.

*2: You cannot install this without the HDD.

Specifications

1

See "Appendices" for the following information:

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

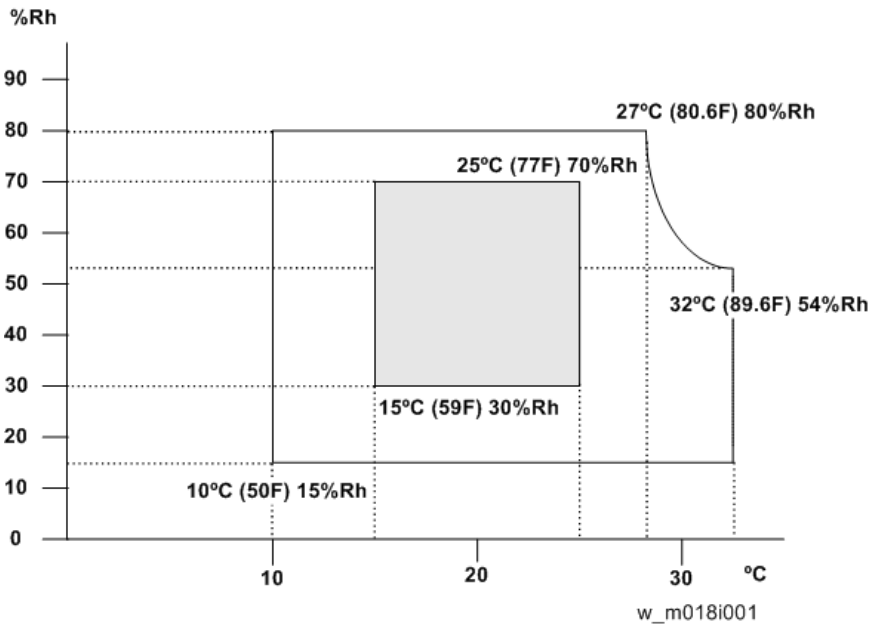
2. Installation

Installation Requirements

Check Image Quality / Setting

This machine is installed by the user.

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 2,000 lux (do not expose to direct sunlight)
4. Ventilation: 3 times/hr/person
5. Do not install the machine at locations over the following heights above sea level.
All areas except for China: 2,500 m (8,125 ft.)
China: 2,000 m (6,562 ft.)
6. Atmospheric pressure: more than 740 hPa.

Moving the Machine

WARNING

- It is dangerous to handle the power cord plug with wet hands. Doing so could result in electric shock.

CAUTION

- Unplug the power cord from the wall outlet before you move the machine. While moving the machine, take care that the power cord is not damaged under the machine. Failing to take these precautions could result in fire or electric shock.

CAUTION

- When disconnecting the power cord from the wall outlet, always pull the plug, not the cord. Pulling the cord can damage the power cord. Use of damaged power cords could result in fire or electric shock.

CAUTION

- The printer weighs approximately 40 kg (88.2 lb.). When moving the printer, use the inset grips on both sides, and lift slowly in pairs. The printer will break or cause injury if dropped.

CAUTION

- When moving the printer after use, do not take out any of the toners, nor the waste toner bottle to prevent toner spill inside the printer.

CAUTION

- Do not hold the control panel while moving the printer. Doing so may damage the control panel, cause a malfunction, or result in injury.

Important

- **Be careful when moving the printer. Take the following precautions:**
- Turn off the main power.
- Close all covers and trays, including the front cover and bypass tray.
- If optional paper feed units are attached, remove them from the printer and move them separately
- Be sure to place the printer on a smooth and stable place.
- Keep the printer level and carry it carefully, taking care not to jolt or tip it. Rough handling may cause a malfunction or damage the hard disk or memory, resulting in loss of stored files.
- Protect the printer from strong shocks. Impact can damage the hard disk and cause stored files to be lost. As a precautionary measure, files should be copied to another computer.

1. Be sure to check the following:

The power switch is turned off.

The power cord is unplugged from the wall outlet.

The interface cable is unplugged from the printer.

2. If Paper Feed Unit are attached, remove them.**3. Lift the printer with two people by using the inset grips on both sides of the printer, and then move it horizontally to the place where you want to install it.****4. If you removed Paper Feed Unit, reattach them.****↓ Note**

- Be sure to move the printer horizontally. To prevent toner from scattering, move the printer slowly.

3. Preventive Maintenance

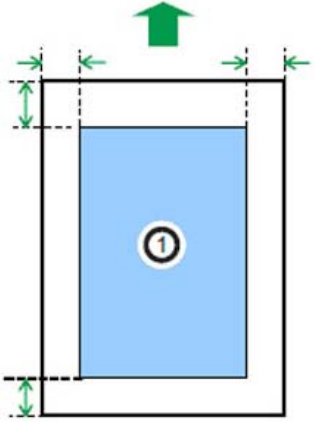
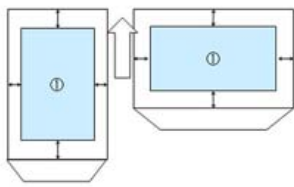
Preventive Maintenance Tables

See "Appendices" for the following information:

- Preventive Maintenance Items

Image Quality Standards

3

Item	Specification	Remarks
Assured Image Area	<p>Except Envelopes</p> <p>The standard print area of a sheet is the area enclosed by margins of 4.3 mm from all sides of the sheet.</p> <p>Envelopes</p> <p>The 15mm excluding the flap portion from the rear end / tip of the sheet, except for the region of the left and right ends 10mm.</p>	<p>Except Envelopes</p>  <p>Envelopes</p> 
Magnification Error	<p>Main: $\pm 0.50\%$ or more</p> <p>Sub: $\pm 0.50\%$ or less</p>	Scale

Paper Transfer Quality Standards

Item	Specification	Remarks
Registration	<p>Single Side: Width: 0 ± 2.0mm (Main Scan Direction) Vertical: Office / All Environments 0 ± 2.0mm (Sub Scan Direction) (In an environment of 23 deg C / 50% is vertical: 0 ± 1.5mm)</p> <p>Duplex: Width: 0 ± 3.0mm (Main Scan Direction) Vertical: Office / All Environments 0 ± 4.0mm (Sub Scan Direction) (In an environment of 23 deg C / 50% is vertical: 0 ± 3.5mm)</p>	Scale
Skew	<p>Single Side: ± 1.0mm/100mm or less (Less than B5 SEF) ± 1.0mm/200mm or less (B5 SEF or more, tray 1 / Bypass tray) ± 1.2mm/200mm or less (B5 SEF or more, Optional Tray)</p> <p>Duplex: ± 1.5mm/100mm or less (Less than B5 SEF) ± 1.0mm/100mm or less (B5 SEF or more)</p>	Except if the paper is longer than 432mm.

These standards are determined using the standard paper with the standard conditions. The value may change depend on the environmental conditions such as temperature, humidity, and used paper, etc.

Preparation for PM

See "Appendices" for the following information:

- Meter Click Mode

Cleaning Points

See "Appendices".

4. Replacement and Adjustment

General Cautions

- Do not hold down the power switch for 6 seconds or longer when turning off the machine. Doing so may result in damage to the hard disk or memory, leading to malfunctions.
- Before disassembling or assembling parts of the main machine and peripherals, make sure that the power cord of the main machine is unplugged. Since this machine uses a DC switch, there is a weak current even after the power cord is unplugged.

Follow the steps below when disassembling the machine.

- 1. Press the power switch off.**
- 2. Unplug the power cord.**
- 3. Press the power switch once to discharge the remaining current.**

When the power cord is plugged in, the machine may power itself on even though the power switch button is not pressed.

Special Tools

Part Number	Description	Q'ty
B6455010	SD Card 128MB	1
B6455020	SD Card 1GB	1

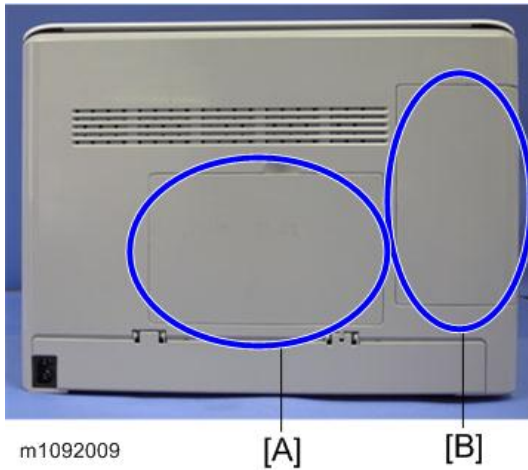
Note

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

Exterior Covers

Rear Cover

1. Memory/HDD cover [A]
2. Cable cover [B]



3. Rear cover (6)



m1092010

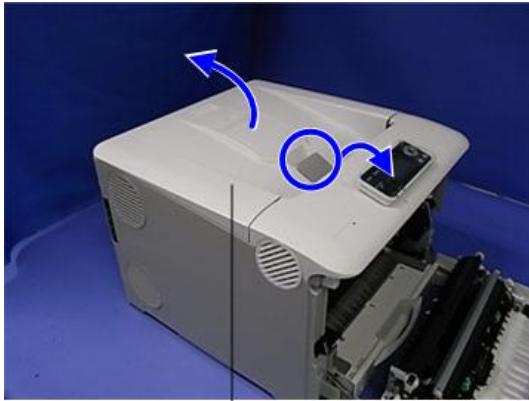
Paper Exit Cover (with Operation Panel)

1. Open the Front cover [A]



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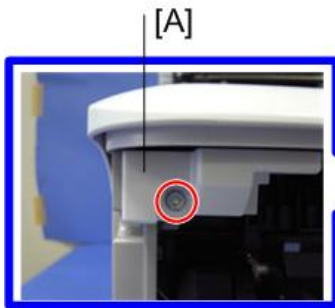
2. Open the Upper cover [A]



[A]

m1092004

3. Connector cover [A] (⚙️×1)

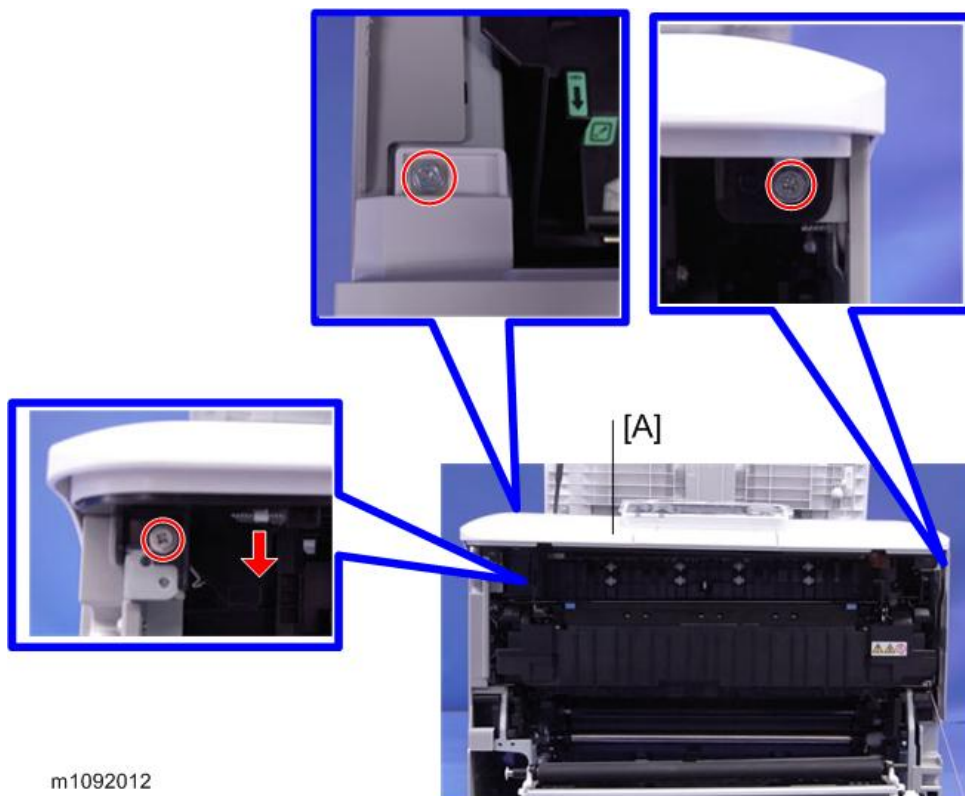


[A]

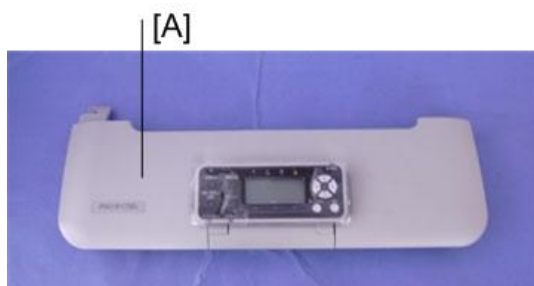


m1092011

4. Paper exit cover [A] (🔩×3, 📄×1)



m1092012

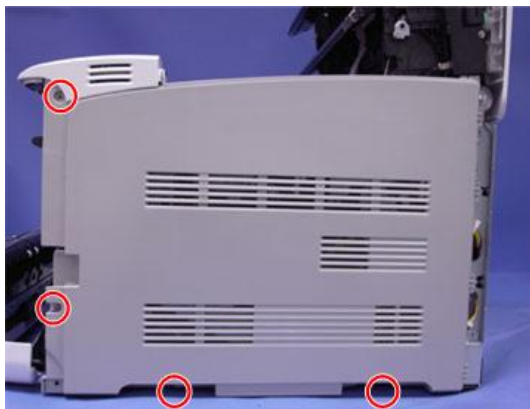


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Right Cover

1. Paper exit cover (📄 page 32)
2. Rear cover (📄 page 31)
3. Open the inner cover

4. Right cover (🔧×4)



m1092185

4

Left Cover

⚠ CAUTION

- Remove the Waste Toner Bottle before you remove the Left Cover, so as not to disperse the toner.

1. Waste toner bottle. (🔧 page 114)
2. Paper exit cover (🔧 page 32)
3. Rear cover (🔧 page 31)
4. Left cover (🔧×3)

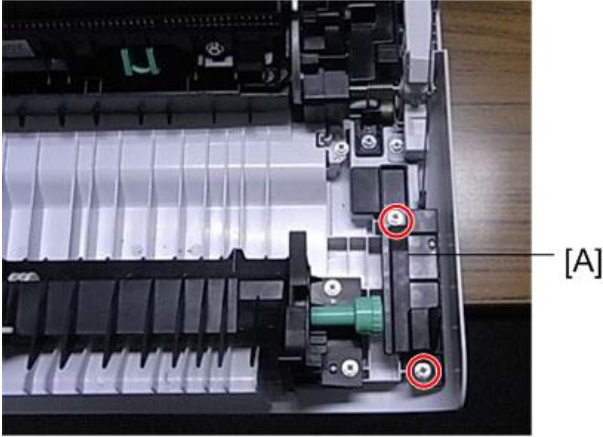


m1092014

Front Cover Unit

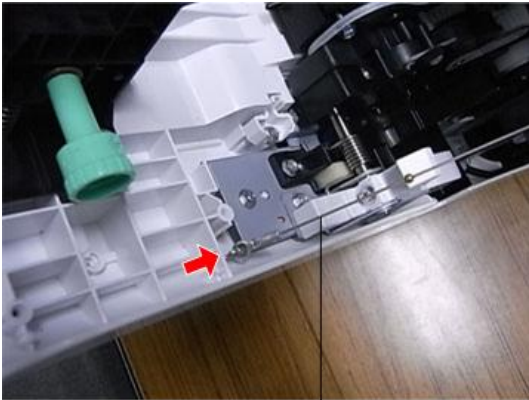
1. Bypass tray unit (🔧 page 88)

- 2. Open the Front cover.
- 3. Bracket [A] (⚙️×2)



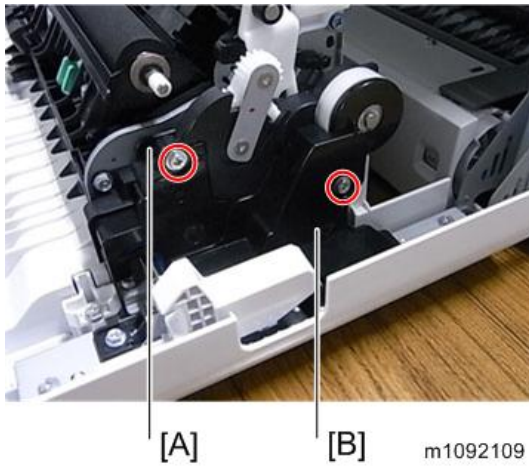
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- 4. Close the Front cover slightly, and then remove the wire [A].

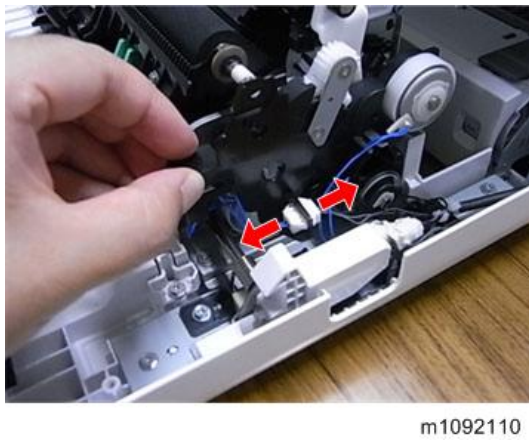


[A] m1092108

5. Brackets [A] and [B]. (⌀×2)

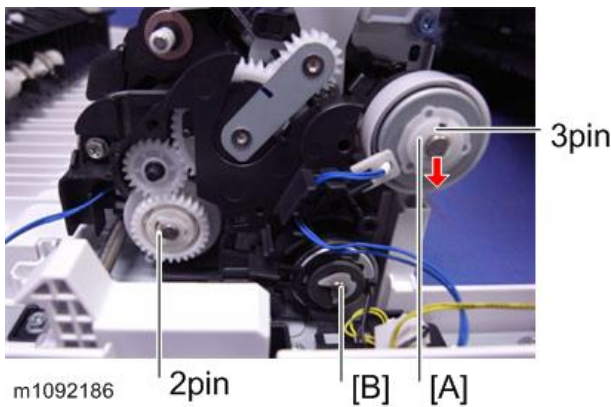


6. Connectors (⌀×2)

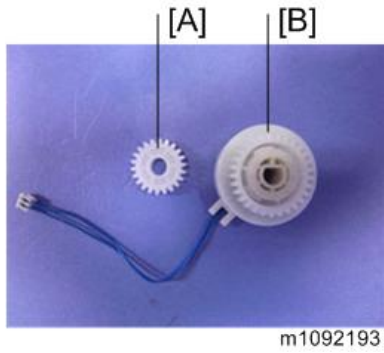
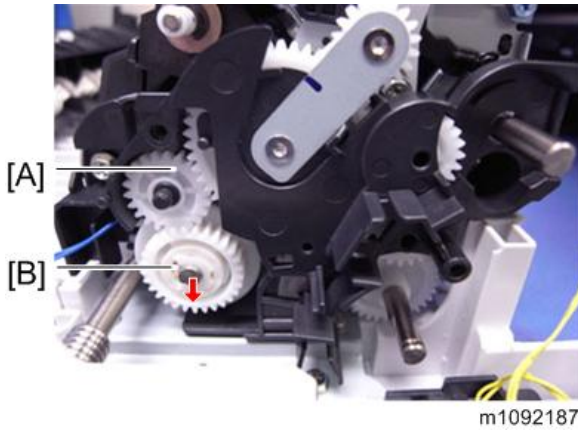


7. Duplex paper exit clutch [A](⌀×1)

8. Bypass clutch [B](⌀×1)



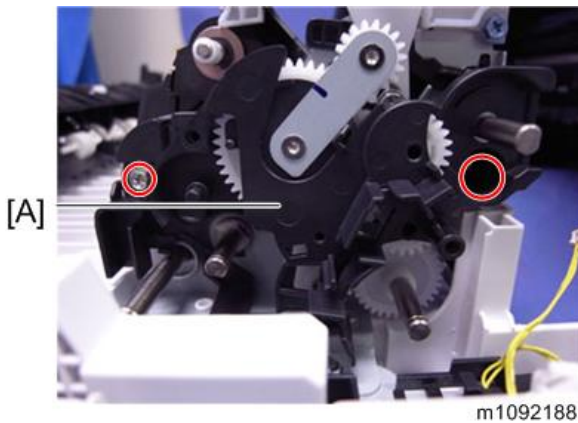
9. Gear [A] and Duplex intermediate clutch [B] (各×1)



↓ Note

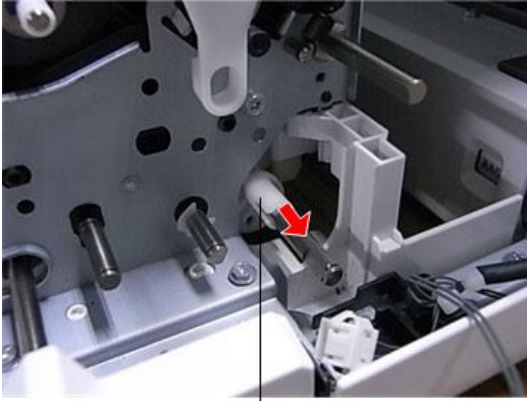
- [A]: Gear (This gear has a round hole.)
- [B]: Duplex intermediate clutch

10. Gear unit [A] (各×2)



11. Spacer [A]

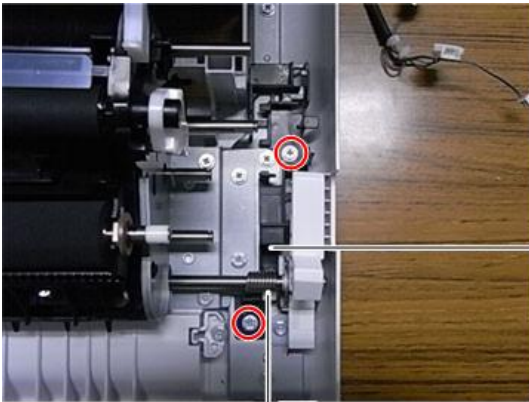
13. Cam [A]



[A]

m1092114

14. Loosen the tension of the spring [A], and then remove the Harness guide [B]. (⚙️×2)

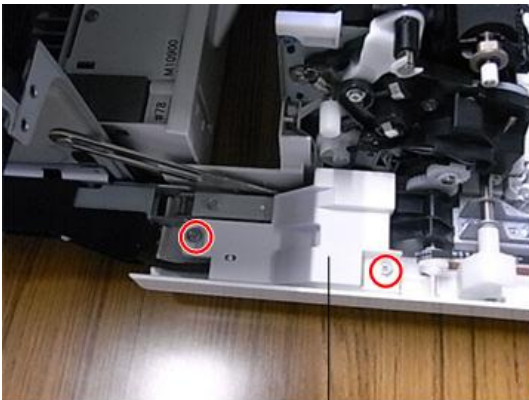


[A]

[B]

m1092115

15. Cover [A] (⚙️×2)

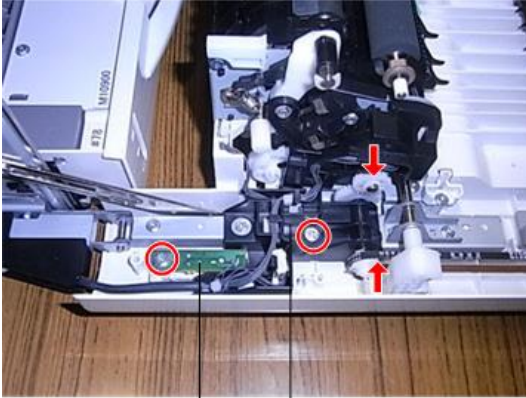


[A]

m1092131

16. Power switch [A] (🔧×1)

17. Harness guide [B] (🔧×1, 🛠️×1)

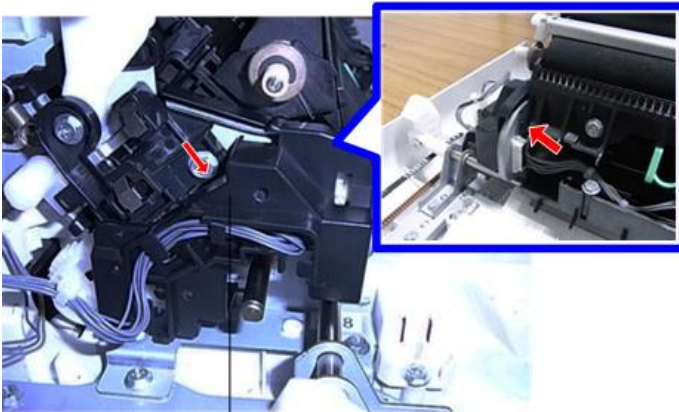


[A]

[B]

m1092116

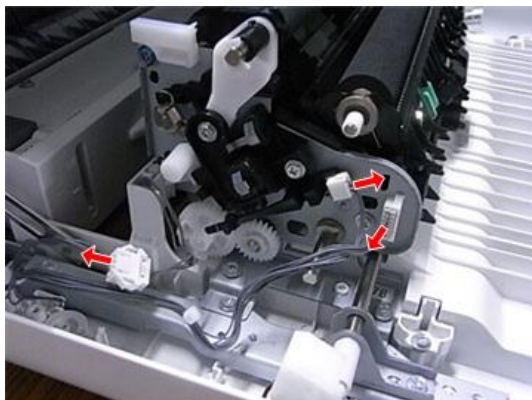
18. Harness guide [A] (hook×2)



[A]

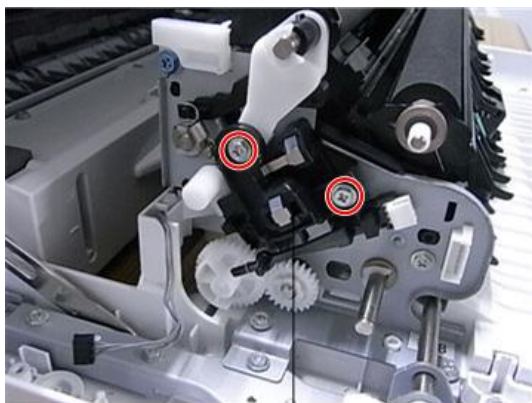
m1092117

19. Connectors (🔌×3)



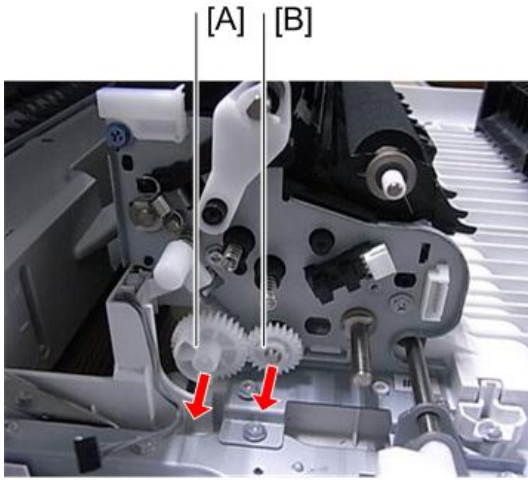
m1092118

20. Ground plate [A] (🔩×2)

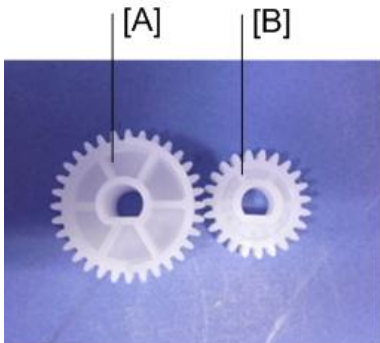


[A]

m1092119

21. Gears [A], [B] ($\overline{\text{D}} \times 1$)

m1092120



m1092203

Note

- The hole in the gears [A] and [B] is in the form of a 'D'.

22. Bearing [A]



[A]

m1092121

23. Close the Front cover slightly.



m1092122

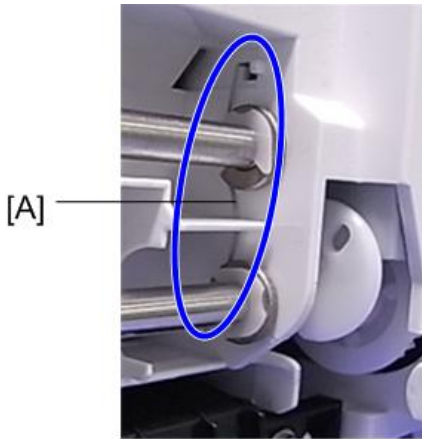
24. Paper feed roller (👉 page 87)

25. Snaps (☞×3)



4

m1092123



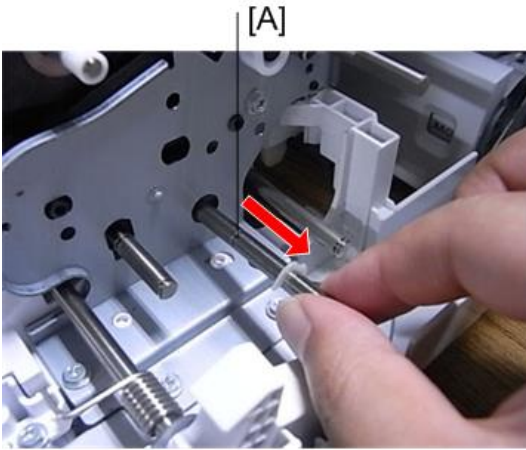
m1092204

↓ Note

- Be careful not to lose the spring [A].

26. Open the Front cover.

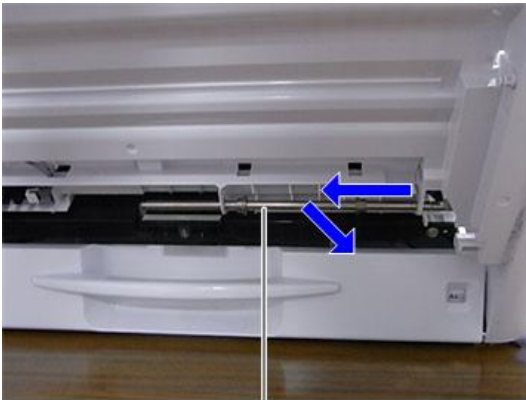
27. Shaft [A]



m1092124

28. Close the Front cover slightly.

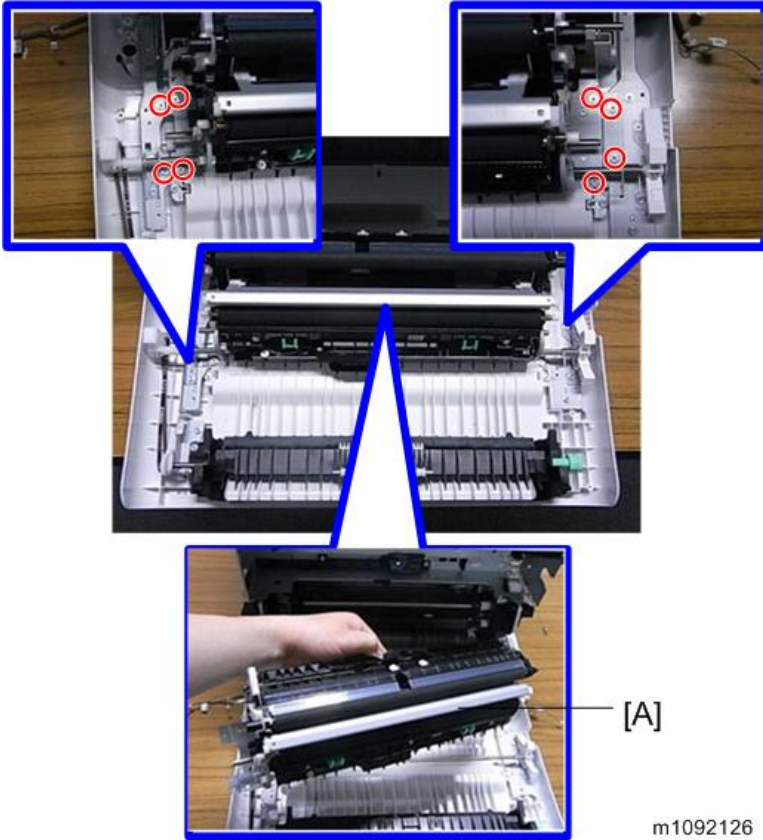
29. Shaft [A]



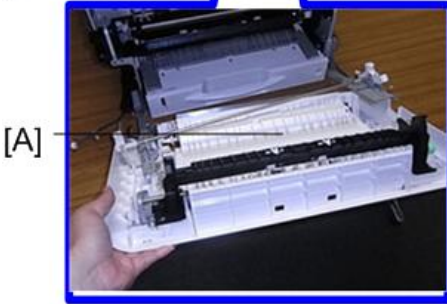
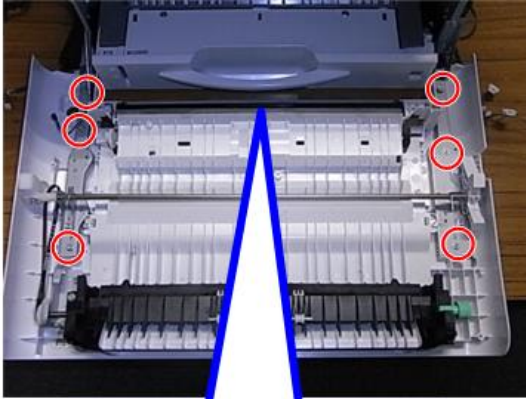
m1092125

30. Open the Front cover.

31. Transport unit [A] (8x)



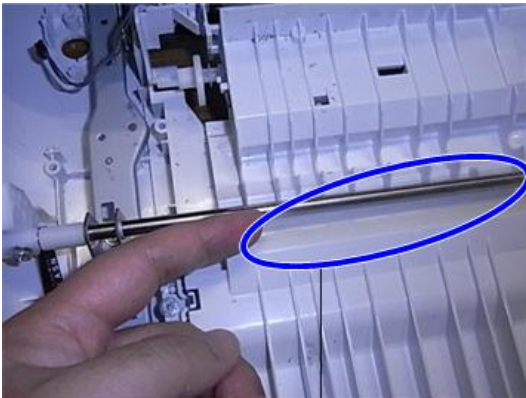
32. Front cover unit [A] (6×6)



m1092128

↓ Note

- Be careful not to break the Mylar [A] during the exchange.



[A] m1092129

LED Optics

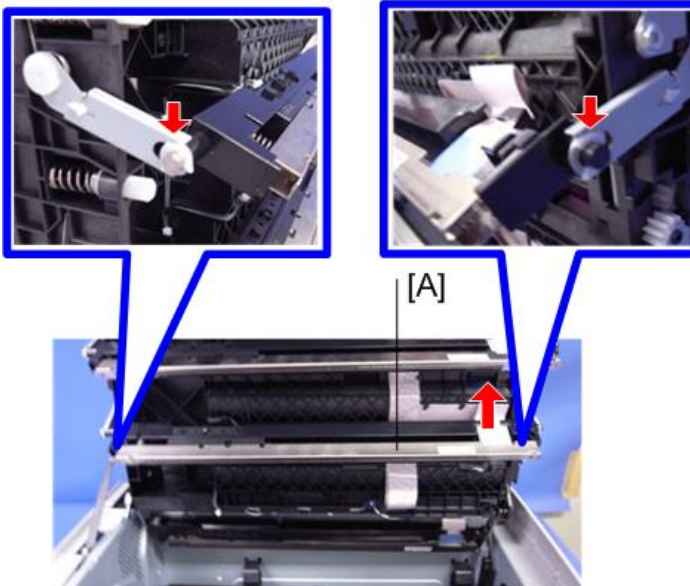
LED Head

1. Open the Upper inner cover, and then cover the PCDUs with a sheet of paper, to prevent foreign objects from falling into the PCDUs. (☛ page 52)



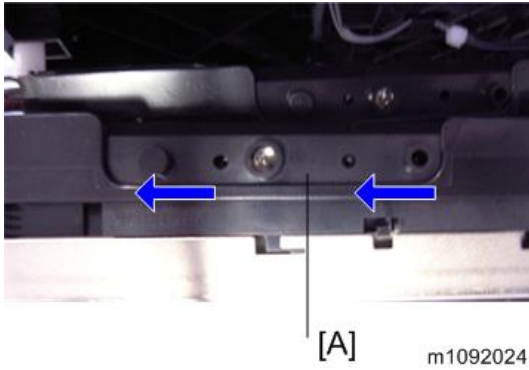
m1092191

2. Remove the snaps and flat cable from the LED head [A].



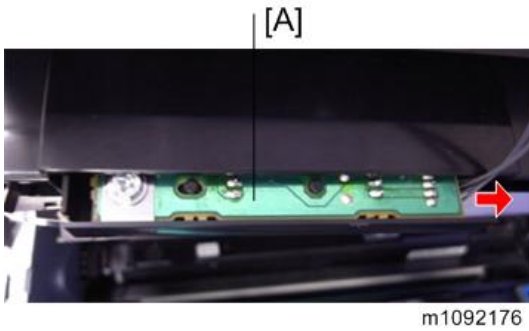
m1092023

3. Slide the Toner end sensor unit [A].

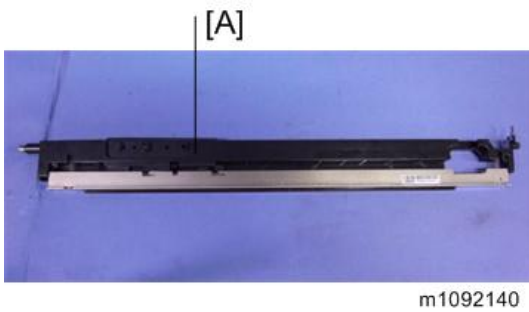


4

4. Remove the connector from the Toner end sensor [A].



5. LED head [A]



↓ Note

- The Flat cables of the LED heads have different colors. They have a fixed order.
- If you remove the Flat cables of the LED heads, during re-assembly connect them so that they overlap in the order of Y / M / C / K.



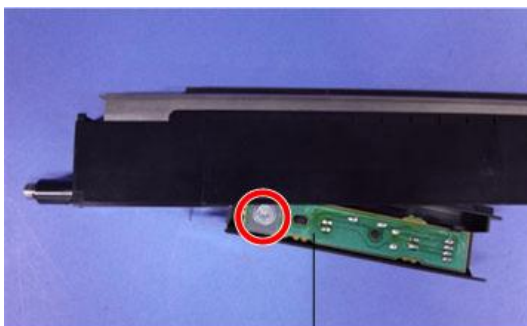
m1092141

- [A]: Flat cable: EGB: LED head Y
- [B]: Flat cable: EGB: LED head M
- [C]: Flat cable: EGB: LED head C
- [D]: Flat cable: EGB: LED head K

4

Toner End Sensor

1. LED head (🔗 page 49)
2. Toner end sensor [A] (🔧×1)



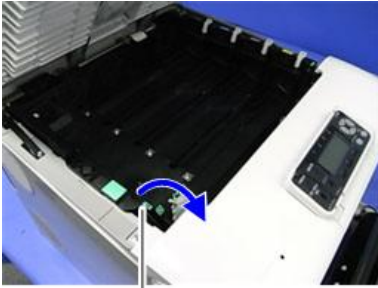
[A]

m1092025

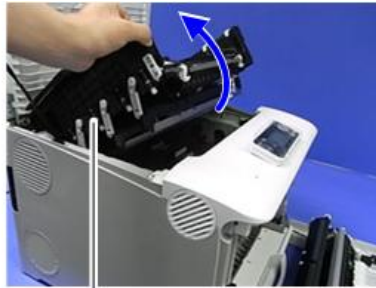
PCDU

PCDU

1. Open the Upper cover.
2. Release the lock [A], and open the Upper inner cover [B].



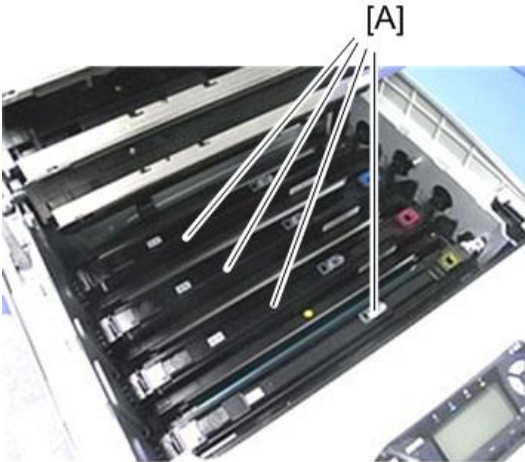
[A]



[B]

m1092005

3. PCDUs [A]



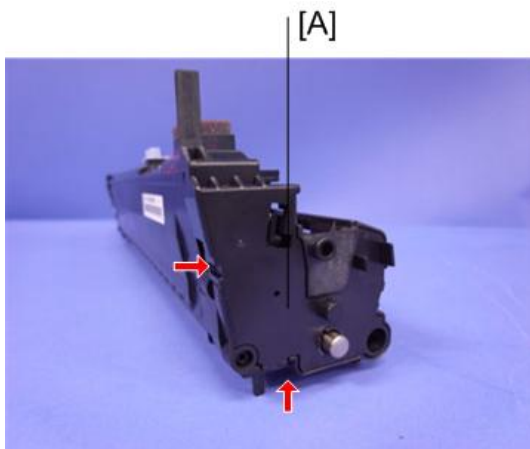
m1092006

Note

- All PCDUs (Cyan, Magenta, Yellow, and Black) have a new unit detecting mechanism. Technicians do not need to reset counters after replacing, even if not all the PCDUs are replaced at the same time.

PCDU Cover (Right)

1. PCDU (page 52)
2. PCDU cover [A] (hook x2)



m1092026

Image Transfer

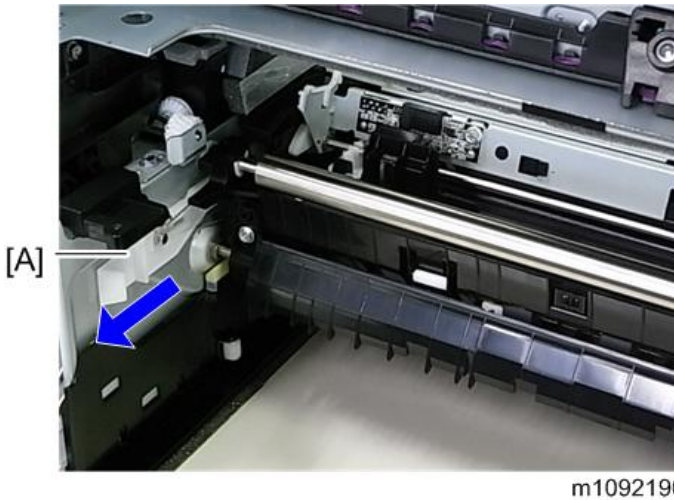
Image Transfer Belt Unit

1. Open the Front cover.
2. Fusing unit (☛ page 76)
3. Release the locks [A], and then pull out the Image transfer belt unit [B].



Note

- Before you install the image transfer belt, make sure that the white lever [A] is pulled out to the position shown in this photo.



After installing a new Image Transfer Belt Unit

★ Important

- Print out the logging data using SP5-990-004 before you replace either the transfer belt unit or the transfer roller.

↓ Note

- The Image Transfer Belt Unit as a supply part is equipped with a new unit detection mechanism and does not require counter reset. The Paper Transfer Roller as a supply part is kitted together with the Image Transfer Belt unit and does not require counter reset, since it will be replaced at the same time as the Image Transfer Belt Unit.

	Part replaced	Action
1	Image Transfer Belt Unit	<ol style="list-style-type: none"> 1. Execute SP7-804-017 and SP7-804-060 2. Turn off the machine, and then turn it back on.
2	Paper Transfer Roller	<ol style="list-style-type: none"> 1. Execute SP7-804-022 and SP7-804-061 2. Turn off the machine, and then turn it back on

4

As mentioned above, action is necessary only in the following two cases:

1.If you are replacing the image transfer belt unit

SP7-804-017 (PM Counter Clear ITB Unit)

SP7-804-060 (PM Counter Clear Life: ITB Unit)

If you are replacing the image transfer belt unit, you should execute SP7-804-017, for correct control depending on the rotation distance. But, if you execute only SP7-804-017, the counter for displaying the unit life is not cleared. So you must also clear the counter by executing SP7-804-060 (PM Counter Clear Life: ITB Unit).

2.If you are replacing the paper transfer roller

SP7-804-022 (PM Counter Clear PTR Unit)

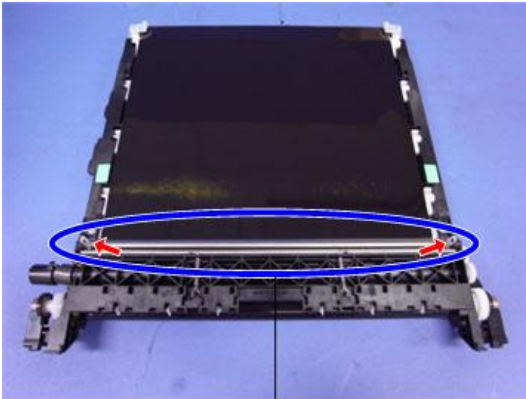
SP7-804-061 (PM Counter Clear Life: PTR Unit)

If you are replacing the paper transfer roller, you should execute SP7-804-022, for correct control depending on the rotation distance. But, if you execute only SP7-804-022, the counter for displaying the unit life is not cleared. So you must also clear the counter by executing SP7-804-061 (PM Counter Clear Life: PTR Unit).

Image Transfer Belt Cleaning Unit

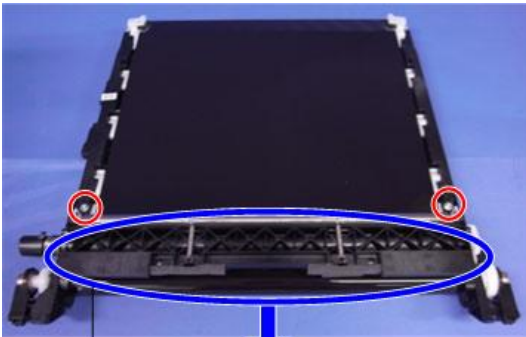
1. Image transfer belt unit (🖨️ page 54)

2. Belt guide roller [A] (hook×2)



[A] m1092148

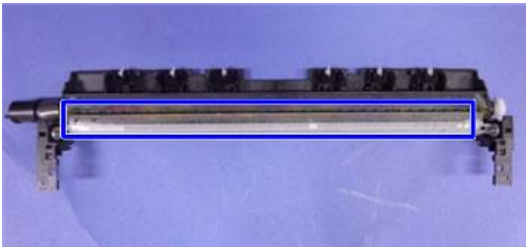
3. Image transfer belt cleaning unit [A] (⌀×2)



[A] m1092016

Note

- When you change the Transfer belt cleaning unit, dust the new one with toner as a lubricant.

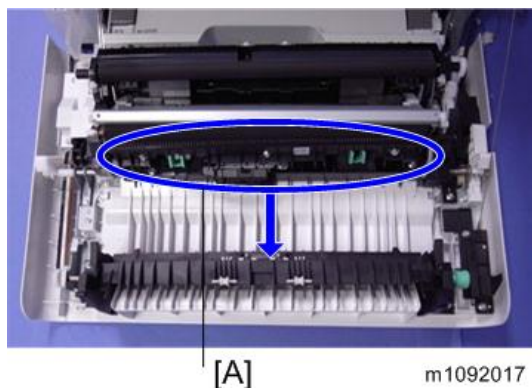


m1092105

Transfer Roller

1. Open the Front cover.

2. Remove the Transfer roller [A] with green handles.



After installing a new Transfer Roller

★ Important

- Print out the logging data using SP5-990-004 before you replace either the transfer belt unit or the transfer roller.

	Part replaced	Action
1	Image transfer belt unit	1. Execute SP7-804-017 and SP7-804-060 2. Turn off the machine, and then turn it back on.
2	Paper transfer roller	1. Execute SP7-804-022 and SP7-804-061 2. Turn off the machine, and then turn it back on

As mentioned above, action is necessary only in the following two cases:

1.If you are replacing the image transfer belt unit

SP7-804-017 (PM Counter Clear ITB Unit)

SP7-804-060 (PM Counter Clear Life: ITB Unit)

If you are replacing the image transfer belt unit, you should execute SP7-804-017, for correct control depending on the rotation distance. But, if you execute only SP7-804-017, the counter for displaying the unit life is not cleared. So you must also clear the counter by executing SP7-804-060 (PM Counter Clear Life: ITB Unit).

2.If you are replacing the paper transfer roller

SP7-804-022 (PM Counter Clear PTR Unit)

SP7-804-061 (PM Counter Clear Life: PTR Unit)

If you are replacing the paper transfer roller, you should execute SP7-804-022, for correct control depending on the rotation distance. But, if you execute only SP7-804-022, the counter for displaying the unit life is not cleared. So you must also clear the counter by executing SP7-804-061 (PM Counter Clear Life: PTR Unit).

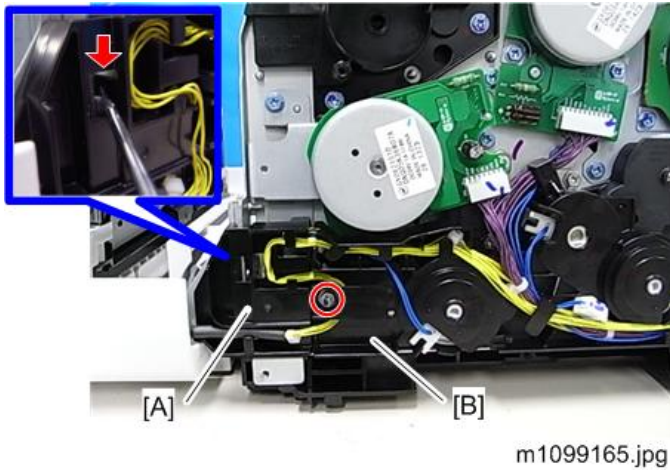
 **Note**

- The Paper Transfer Roller as a supply part is kitted together with the Image Transfer Belt unit and does not require counter reset, since it will be replaced at the same time as the Image Transfer Belt Unit.

Drive Unit

Paper Feed Motor

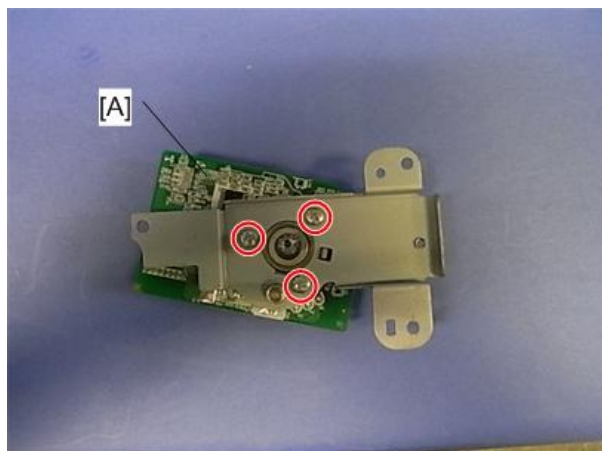
1. Right cover (☛ page 34)
2. Bracket (☛ page 60 "Image Transfer Unit Motor")
3. Harness guide [A] (hook x1)
4. Release the harness guide [B] (🔧x1).



5. Bracket [A] (☛ x1, 🔧x3)



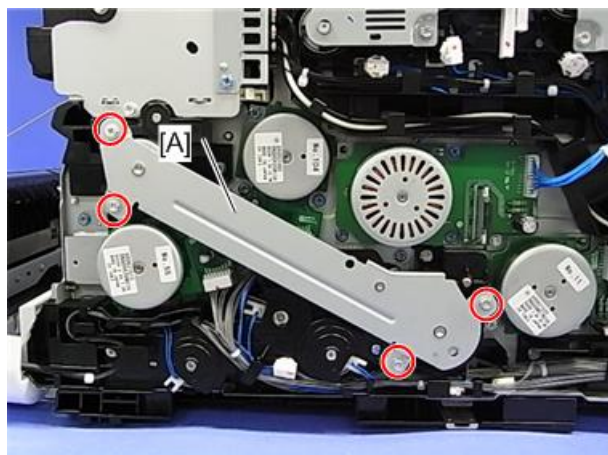
6. Paper feed motor [A] (⚙️×3)



m1099031.jpg

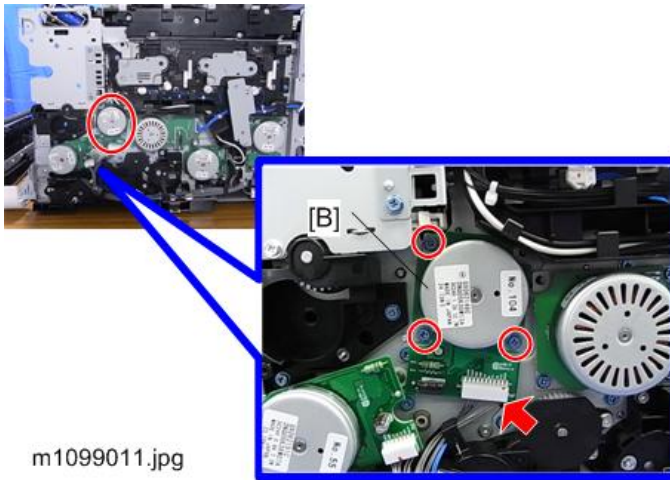
Image Transfer Unit Motor

1. Right cover (🔧 page 34)
2. Bracket [A] (⚙️×4)



m1099012.jpg

3. Image transfer unit motor [A] (Ⓜ×1, ⚙×3)

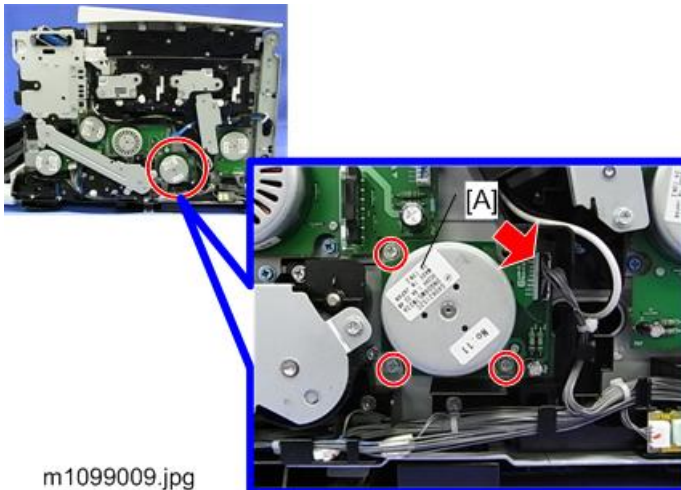


m1099011.jpg

4

Fusing Motor

1. Right cover (🔧 page 34)
2. Fusing motor [A] (Ⓜ×1, ⚙×3)

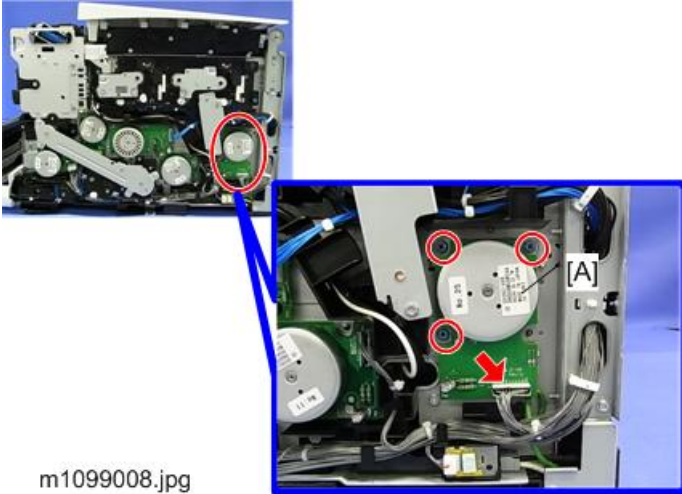


m1099009.jpg

Drum Motor: K

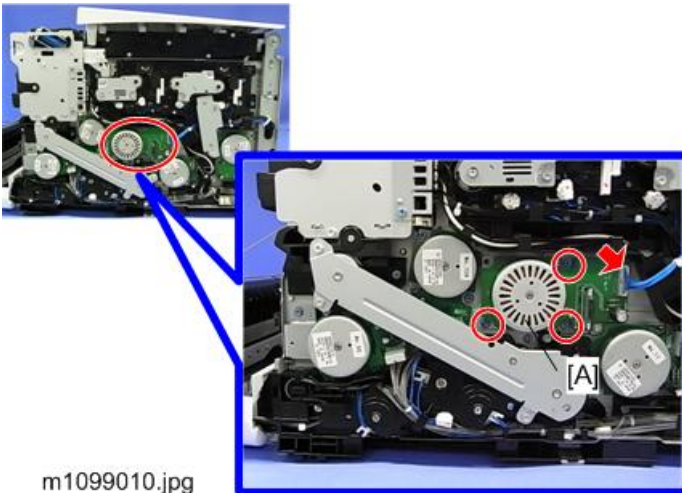
1. Right cover (🔧 page 34)

2. Drum motor: K (🔧×1, 🛠️×3)



Drum Motor: CMY

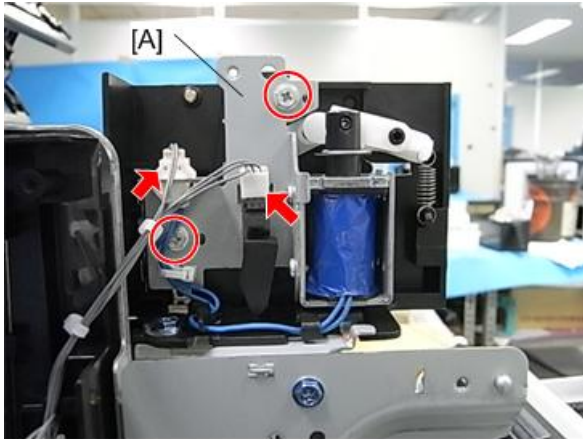
1. Right cover (🔧 page 34)
2. Drum motor: CMY [A] (🔧×1, 🛠️×3)



Duplex Junction Gate Solenoid

1. Fusing fan (🔧 page 134)

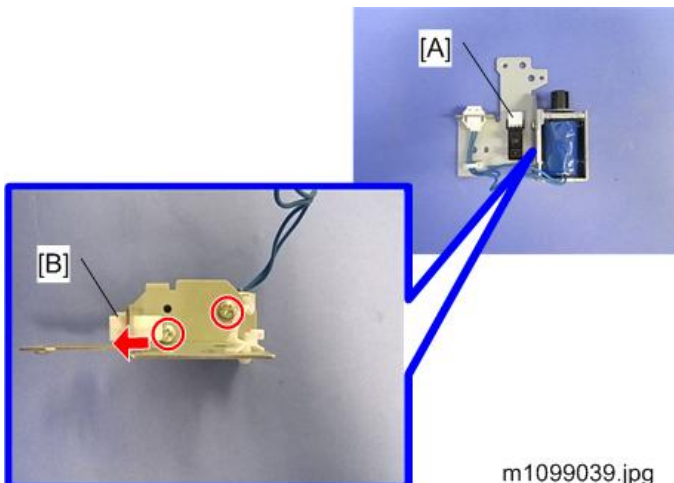
2. Bracket [A] (□×2, ⚙×2)



m1099038.jpg

3. Sensor [A]

4. Remove the solenoid from the bracket (⚙×2, □×1, □×1).

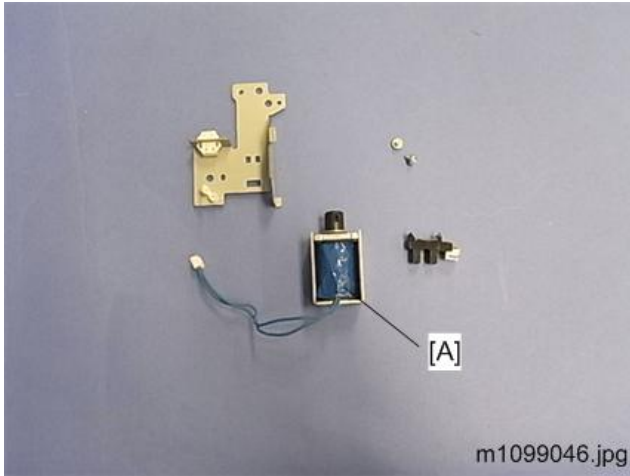


m1099039.jpg

↓ Note

- Push the connector holder [B] out to facilitate access to the screw with a screwdriver.

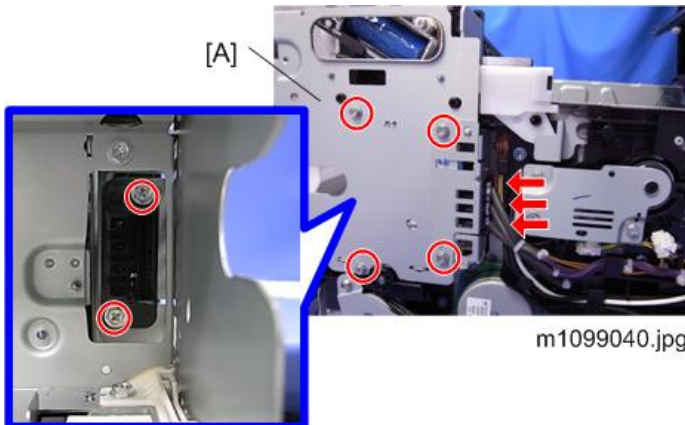
5. Duplex junction gate solenoid [A]



4

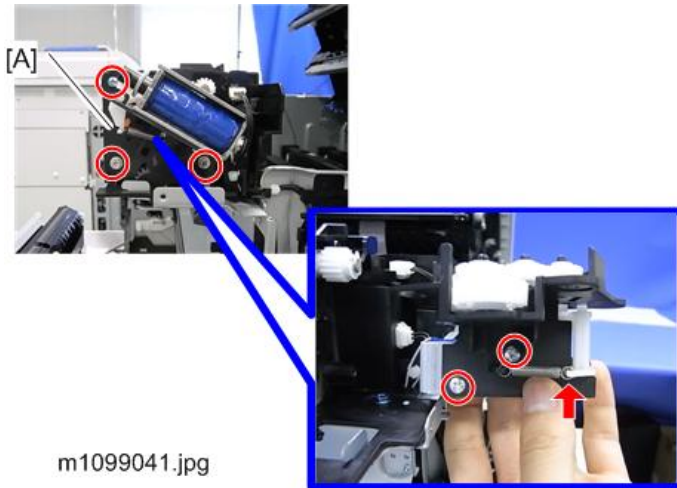
Duplex Inverter Solenoid

- 1. Right cover (🔧 page 34)
- 2. Bracket [A] (🔧x6, 📏x 3)



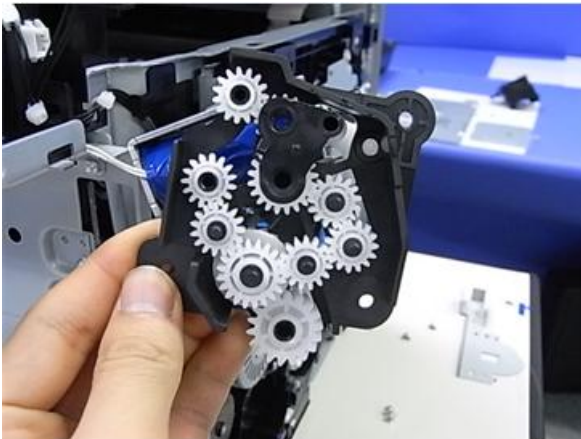
- 3. Gear box bracket [A] (🔧x3)

4. Remove the solenoid from the bracket [B] (⚙️×5, Spring ×1).

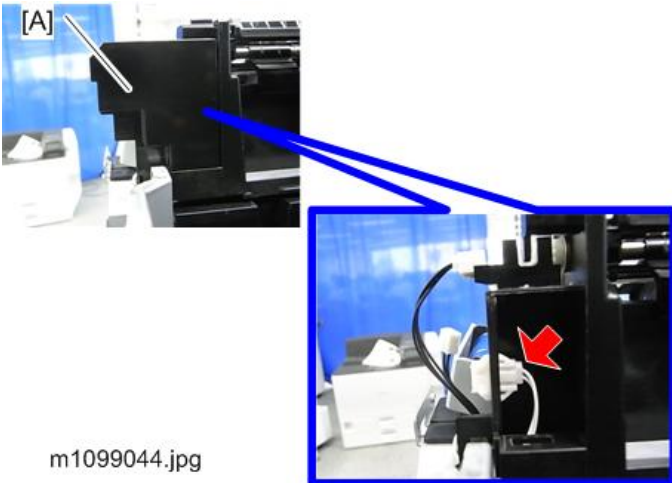
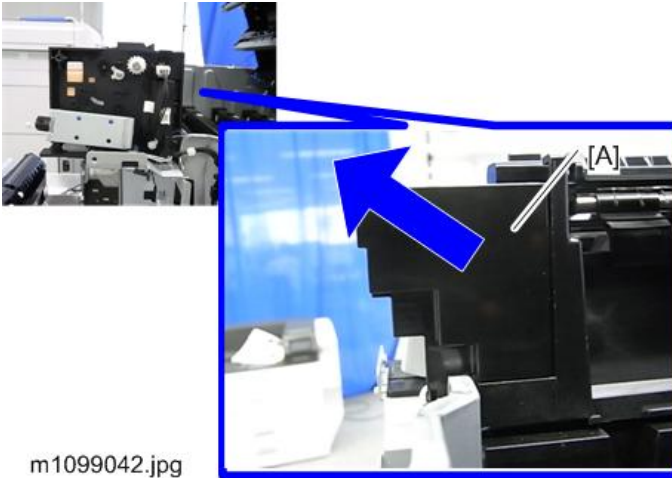


↓ **Note**

- Be careful not to let gears fall out of the box and become lost.
- Refer to the picture below showing the location of each gear.



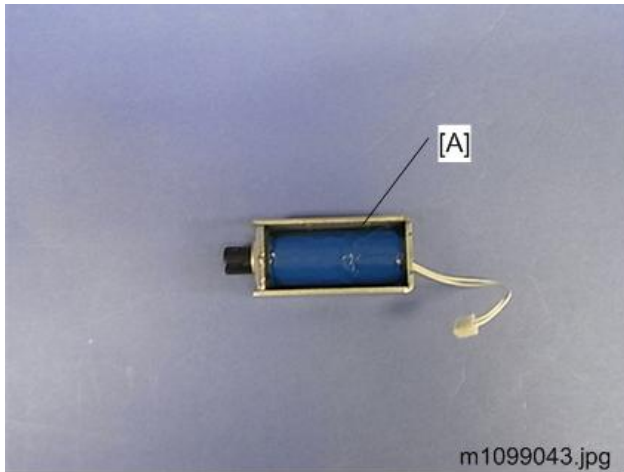
5. Remove the cover [A] to pull the connector out.



Note

- To remove the cover [A], pull it diagonally as shown by the blue arrow in the picture above. This cover is fixed by hooks on the lower and right sides.

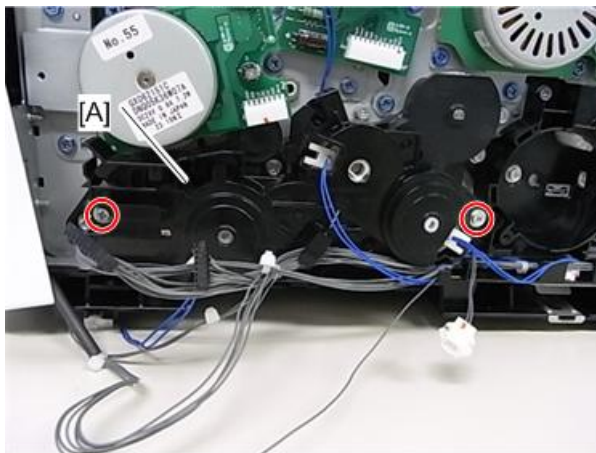
6. Duplex inverter solenoid [A]



4

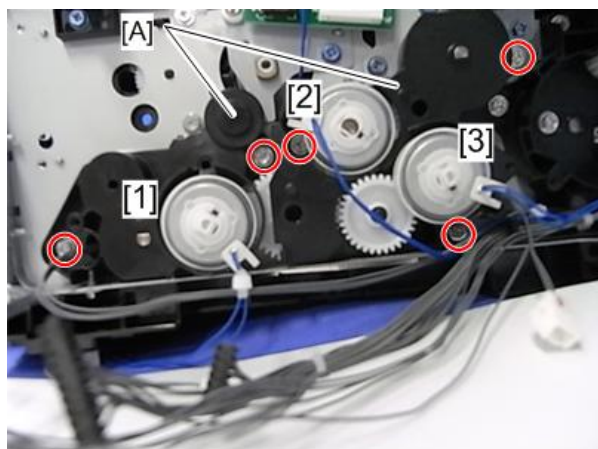
Drive Gears and Clutches

1. Right cover (☛ page 34)
2. Paper feed motor (☛ page 59)
3. Harness guide [A] (🔧×2)



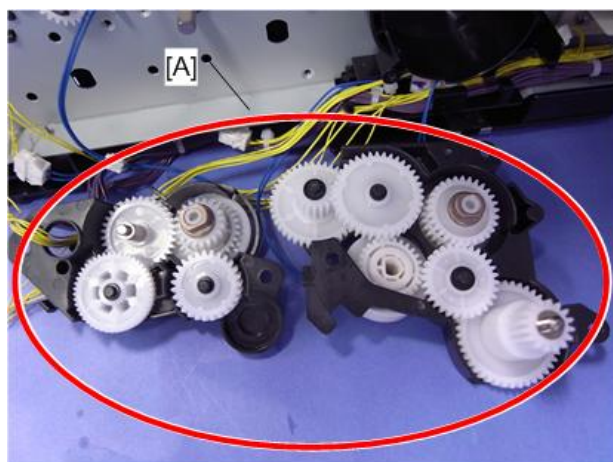
4. Harness guide (inner) [A] (🔧×5)

1. Relay clutch
2. Paper feed clutch
3. ITB (image transfer belt) Contact Clutch



m1099028a.jpg

5. Drive gears and clutches [A]

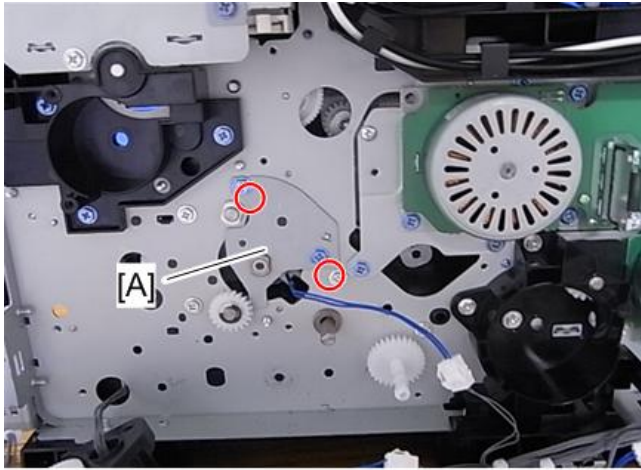


m1099029.jpg

Registration Clutch

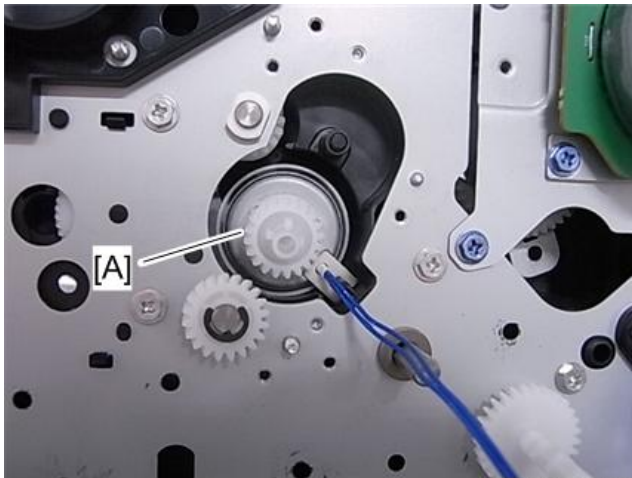
1. Image transfer unit motor (🔍 page 60)
2. Paper feed motor (🔍 page 59)
3. Drive gears and clutches (🔍 page 67)

4. Bracket [A] (2)



m1099101.jpg

5. Registration clutch [A]

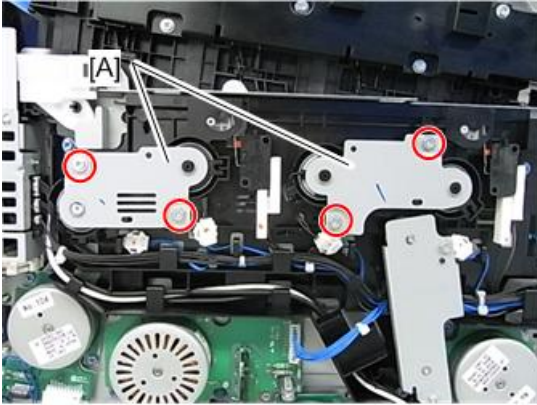


m1099102.jpg

Toner Supply Clutch

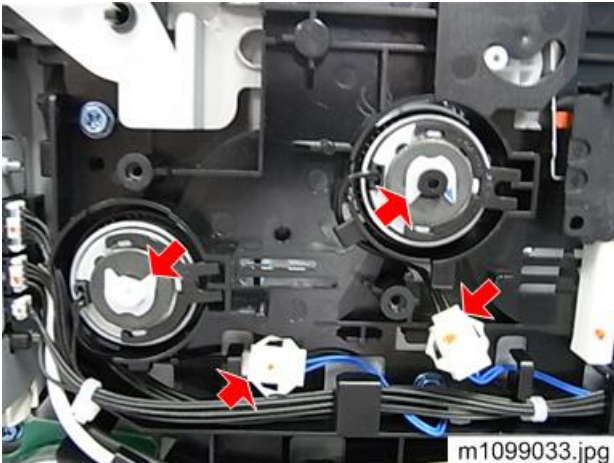
1. Right cover (page 34)

2. Cover brackets [A] (🔩×2 each)



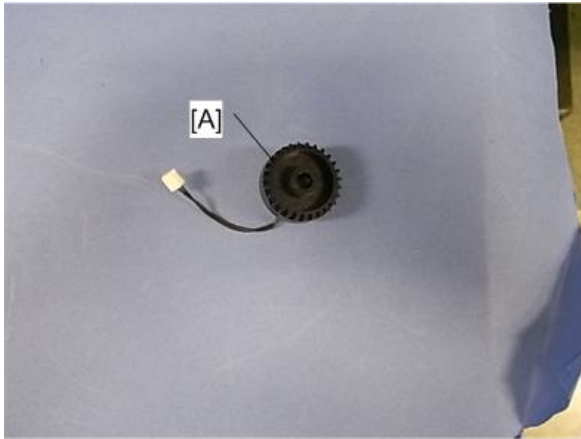
m1099032.jpg

3. Clips and connectors (🔗×1, 📌×1 each)



m1099033.jpg

4. Toner supply clutch [A]



m1099034.jpg

4

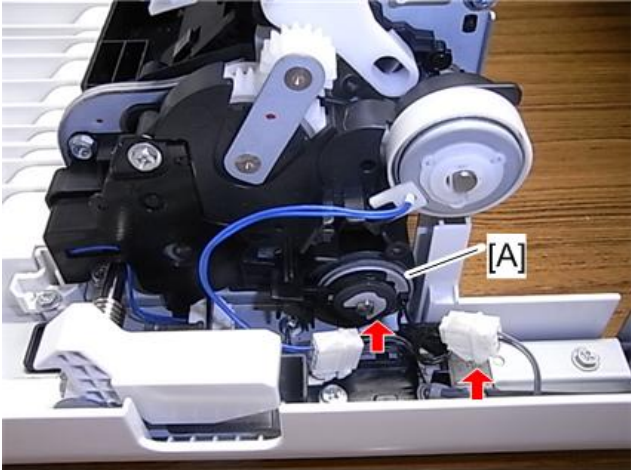
Bypass Clutch

1. Open the front cover.
2. Bracket [A] (🔧x1)



m1099103.jpg

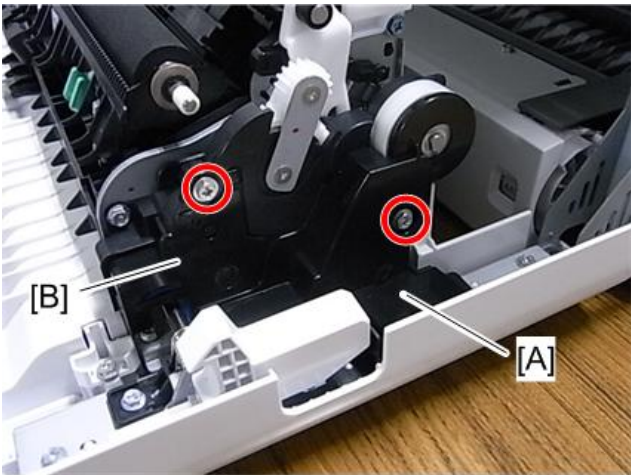
3. Bypass clutch [A] (⚙️x1, ⚙️x1)



m1099105.jpg

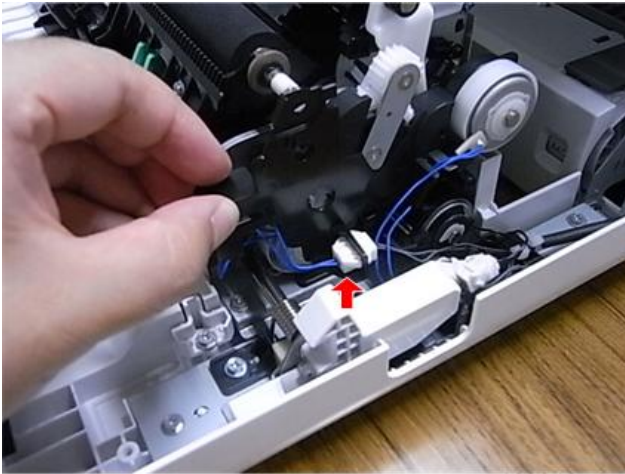
Duplex Intermediate Clutch

- 1. Open the front cover.
- 2. Brackets [A] [B] (⚙️x2)



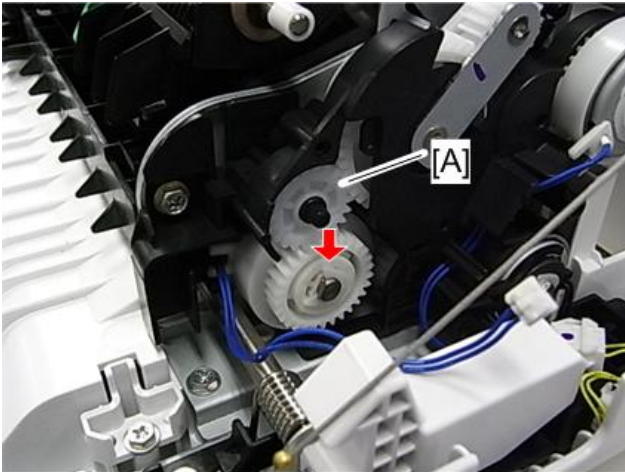
m1099106.jpg

3. Connector x1



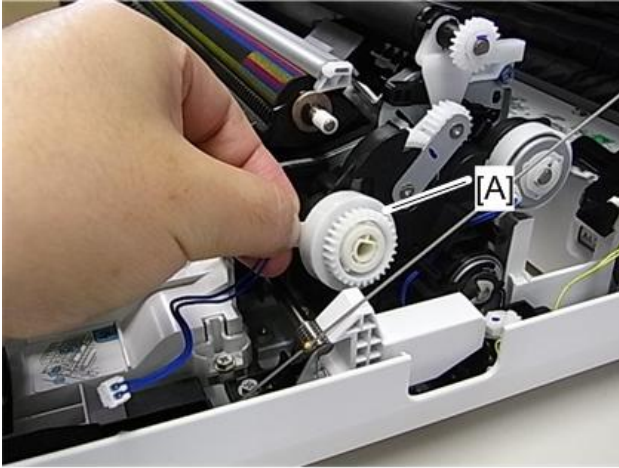
m1099107.jpg

4. Gear [A] and clip

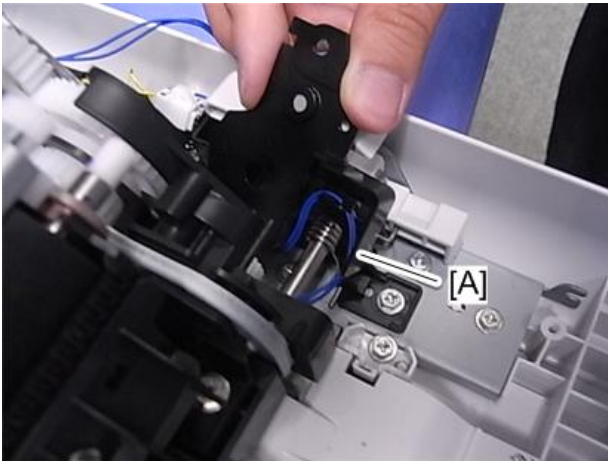


m1099108.jpg

5. Duplex intermediate clutch [A]



m1099109.jpg



M1099184.jpg

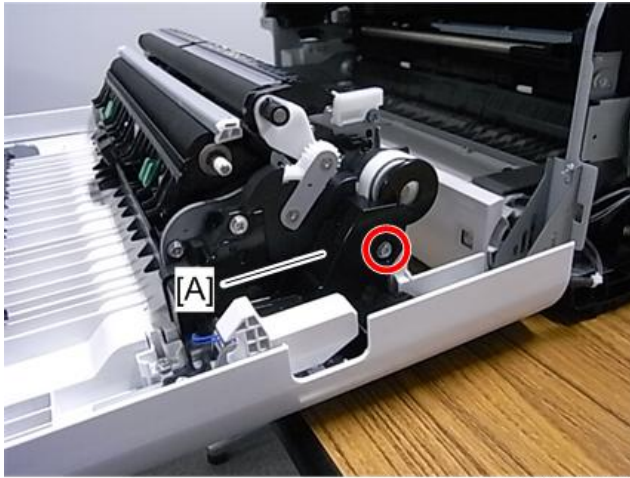
Note

- Make sure that the harness [A] is installed as shown above when reinstalling the duplex intermediate clutch.

Duplex Paper Exit Clutch

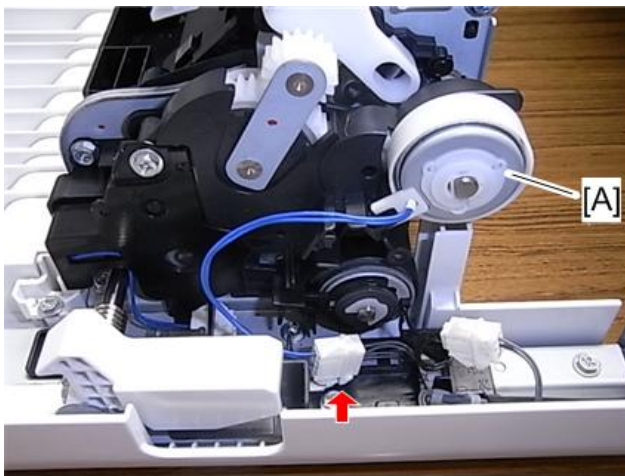
1. Open the front cover.

2. Bracket [A] (🔧x1)



m1099103.jpg

3. Duplex paper exit clutch [A] (🔧x1)



m1099104.jpg

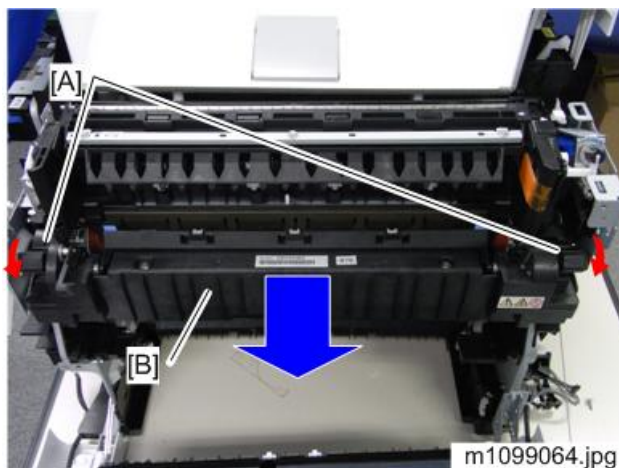
Fusing

⚠ CAUTION

- Make sure that the fusing unit is cool before you touch it. The fusing unit can be very hot. Make sure to restore the insulators, shields, etc after you service the fusing unit.

Fusing Unit

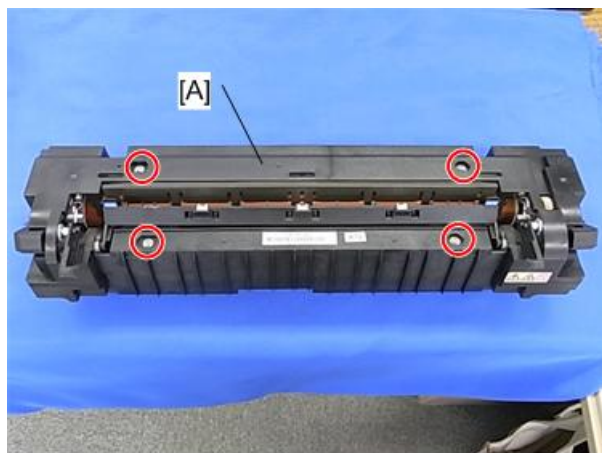
1. Open the front cover.
2. Hold the fusing unit lock levers [A] while pulling out the fusing unit.
3. Fusing unit [B]



Thermistor

1. Fusing unit (👉 page 76)

2. Fusing upper cover [A] (Stepped screw×4)

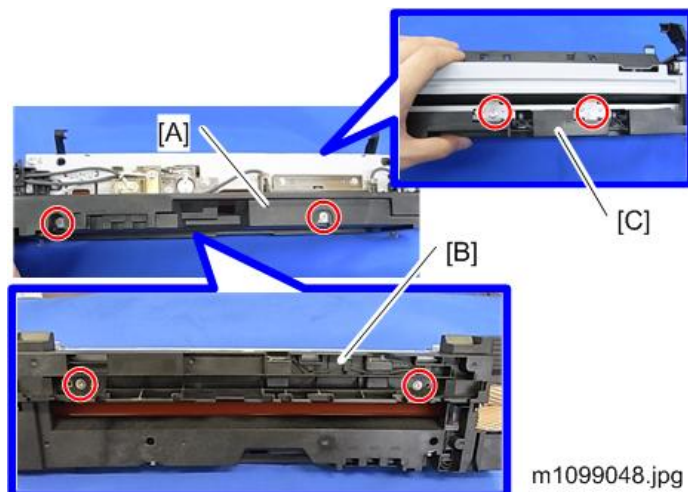


m1099047.jpg

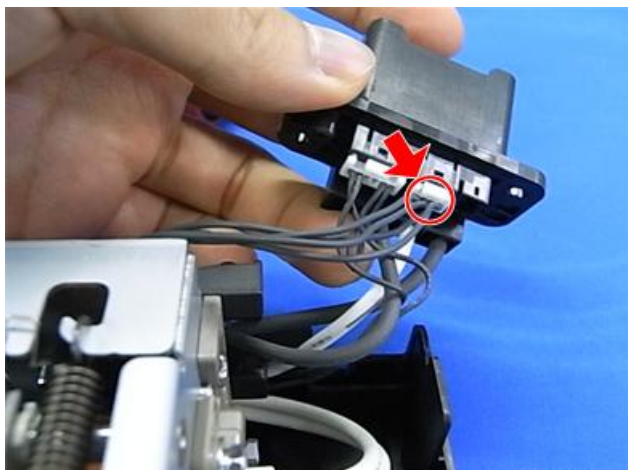
3. Fusing lower cover [A] (Stepped screw ×2, ×1)

4. Fusing entrance guide [B] (Stepped screw ×2)

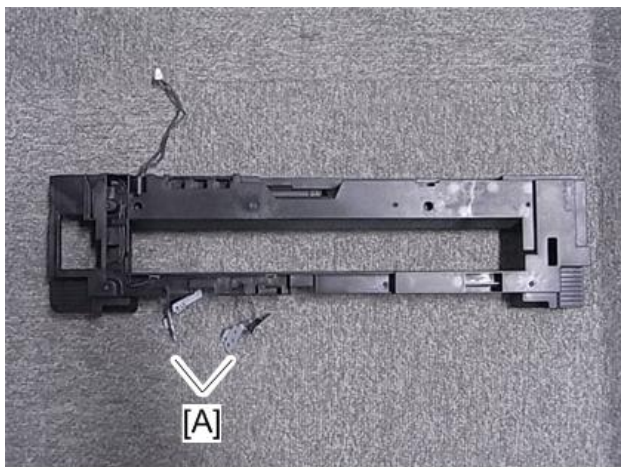
5. Thermistor bracket [C] (×2)



m1099048.jpg



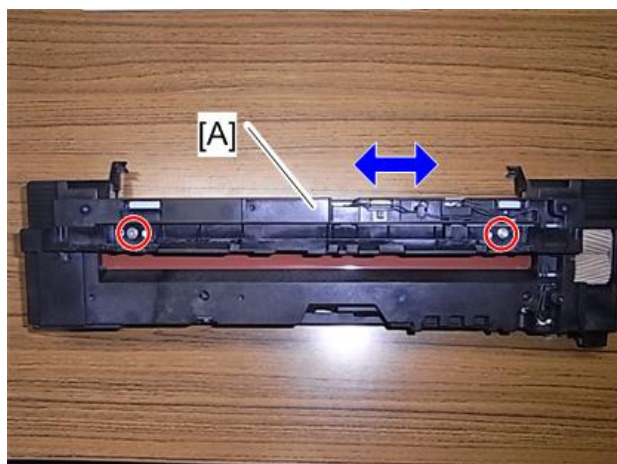
m1099059.jpg



m1099120.jpg

Note

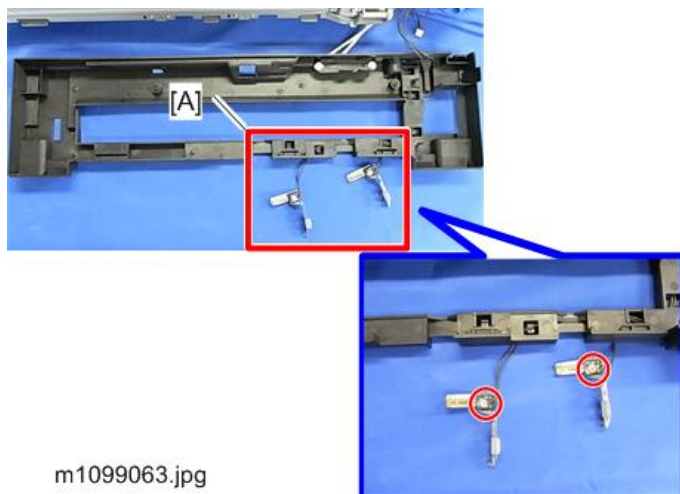
- Put the fusing lower cover as shown above in order to prevent damaging the thermistor [A].



m1099121.jpg

Note

- The guide [A] of the fusing lower cover can be adjusted to right and left by removing the two screws.

6. Thermistor ×2 [A] (🔧×1 each)

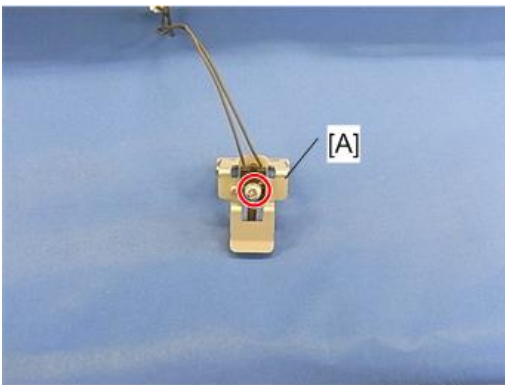
m1099063.jpg

7. Thermistor bracket [A] (🔩×1, 📎×1)



m1099049.jpg

8. Thermistor [A] (🔩×1)



m1099050.jpg

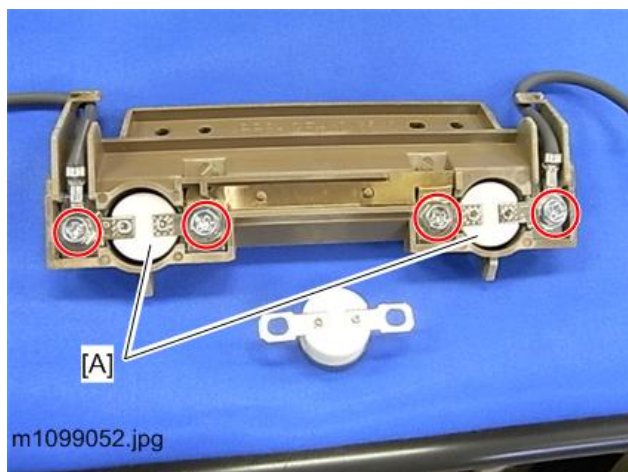
Thermostat

1. Fusing unit (📄 page 76)
2. Fusing upper cover (📄 page 76 "Thermistor")
3. Fusing lower cover (📄 page 76 "Thermistor")
4. Thermostat (left) [A] (🔩×2)

5. Thermostat bracket [B] (⚙️×3)



6. Thermostat (right) [A] (⚙️×2 each)



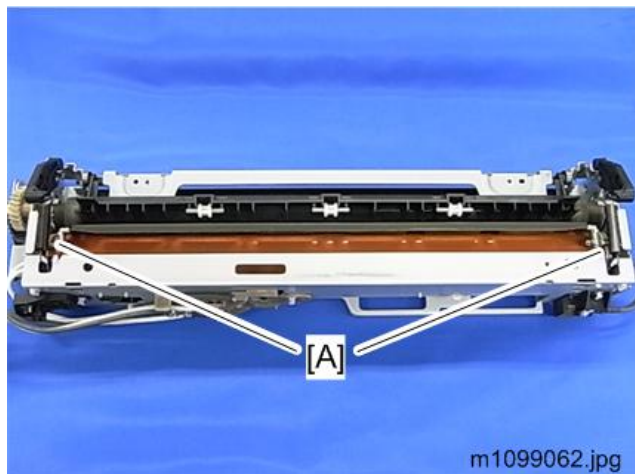
⚠️ Note

- The thermostat (right) cannot be attached to the socket for the thermostat (left). But the thermostat (left) can be attached to the socket for the thermostat (right).

Fusing Belt Unit

1. Fusing unit (🔧 page 76)
2. Fusing upper cover (🔧 page 76 "Thermistor")
3. Fusing lower cover (🔧 page 76 "Thermistor")

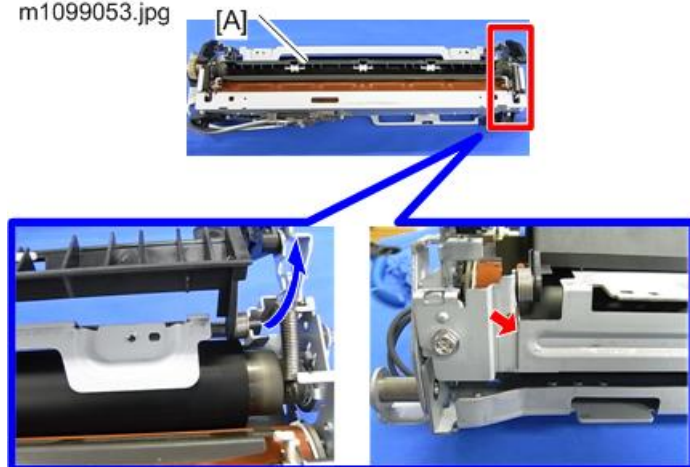
4. Spring ×2 [A]



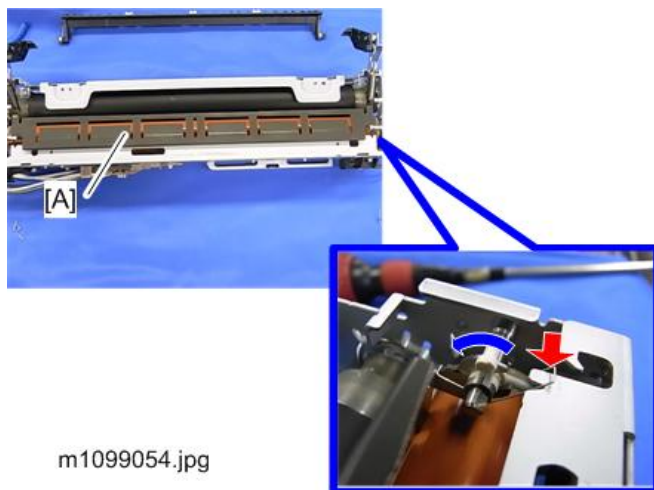
4

5. Guide [A] (spring ×2, hook ×2)

m1099053.jpg



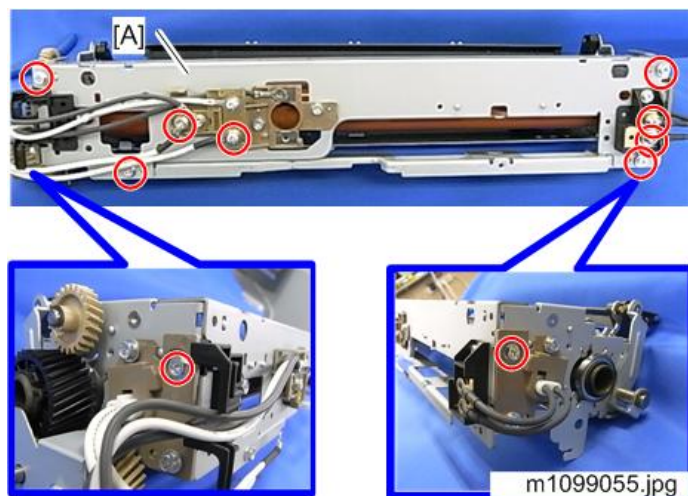
6. Guide plate [A] (spring ×2, hook ×2)



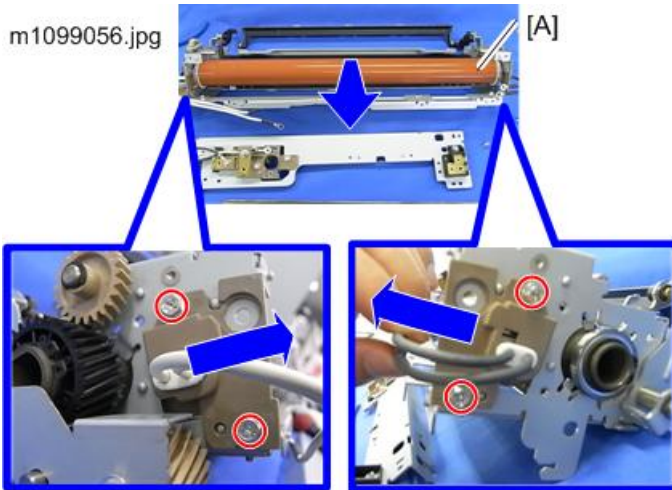
Note

- Push the lever backward as shown by the blue arrow in the picture above. Then pay attention to the shape (D-shape) of the joints in order to pull the guide plate off the axis smoothly.

7. Bracket [A] (⚙️×10)

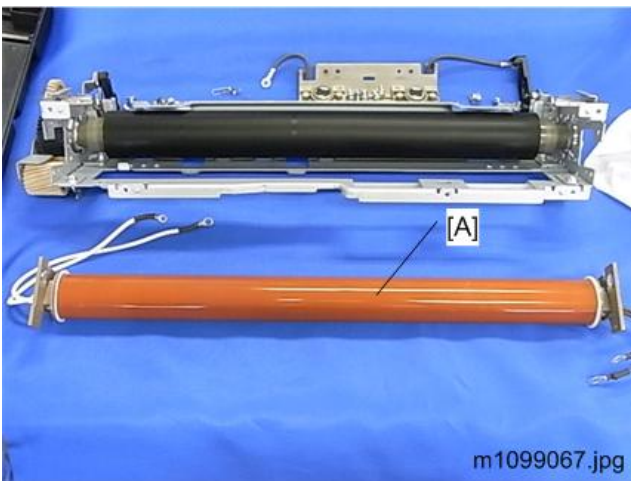


8. Fusing belt unit [A] (🔧 × 4)



⚠ Note

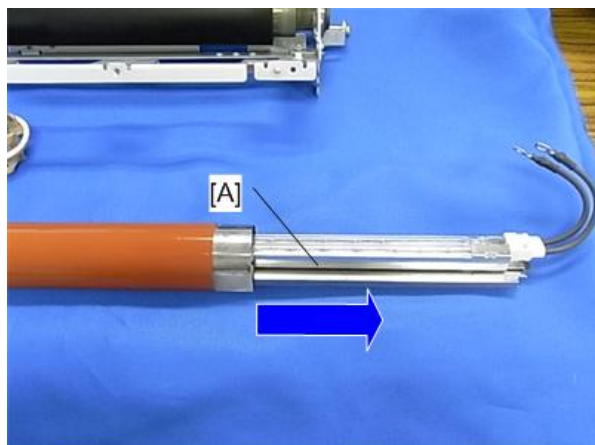
- To detach easily, move the ends of the fusing belt unit sideways to release the hold. Then try to pull it out.



Fusing Lamp

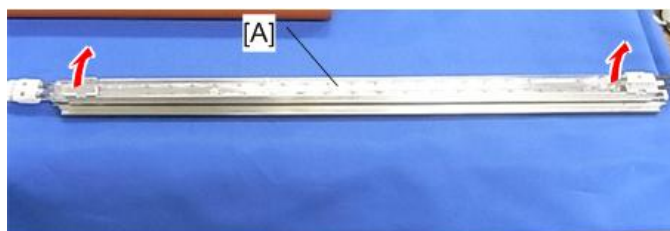
1. Fusing belt unit (🔧 page 81)

2. Pull out the fusing lamp with the base [A] from the belt assembly.



m1099057.jpg

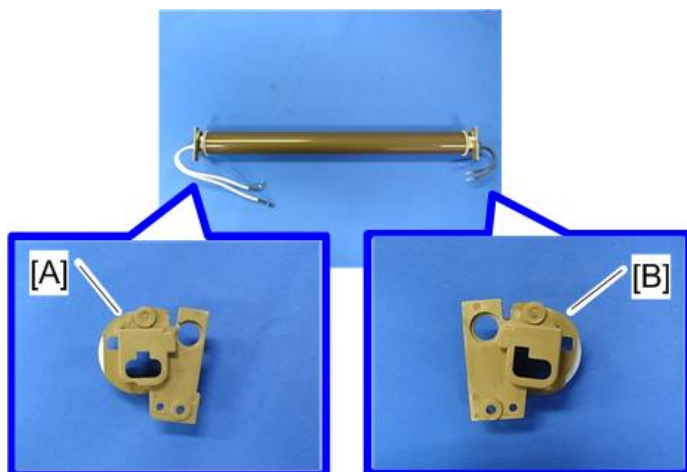
3. Remove the fusing lamp [A] from the base.



m1099060.jpg

Note

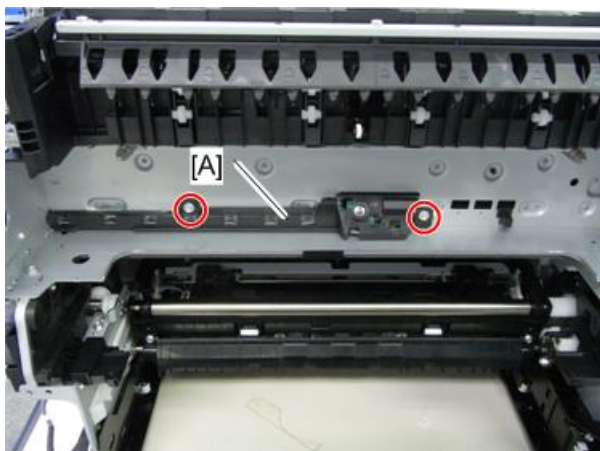
- When you reassemble, pay attention to the shape (bracket [A] and [B]) as shown in the picture below.



m1099061a.jpg

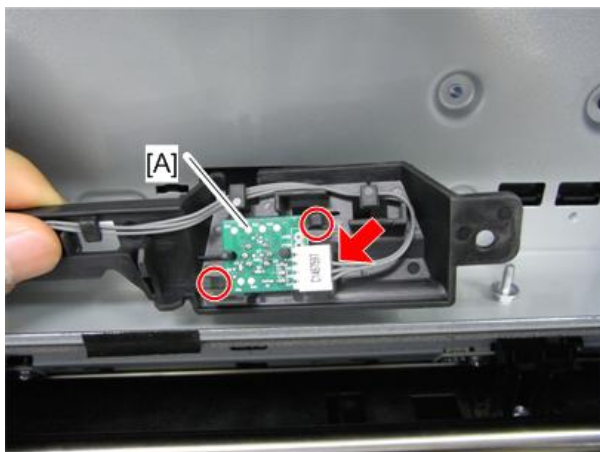
Thermopile

1. Fusing unit (☛ page 76)
2. Thermopile bracket [A] (🔧×2)



m1099065.jpg

3. Thermopile [A] (🔧×1, hook ×2)

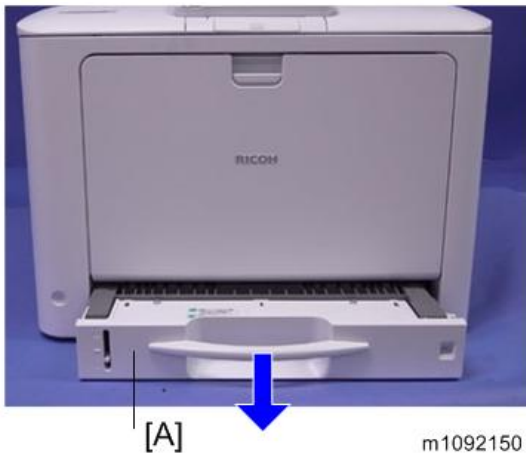


m1099066.jpg

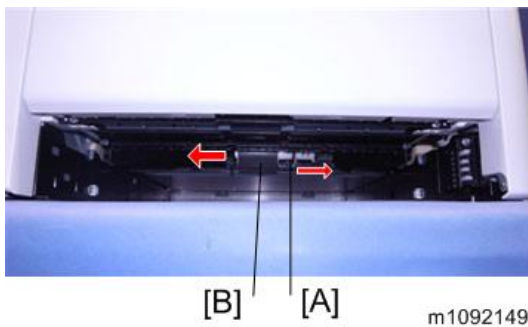
Paper Feed

Paper Feed Roller

1. Pull out the Standard paper tray [A].



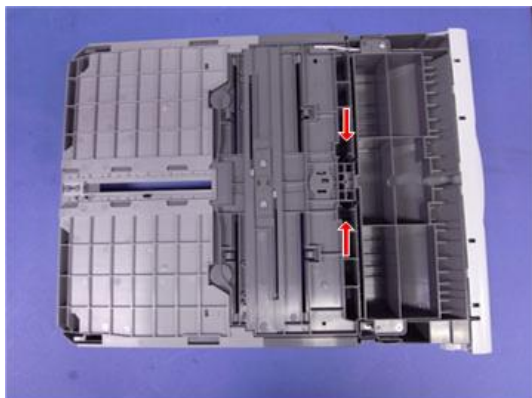
2. Slide the Paper feed shaft [A] to the right side, and then slide the Paper feed roller [B] to the left side, and remove it.



Friction Pad

1. Remove the Paper tray unit from the machine before removing the Friction pad.

2. Friction pad [A] (hook×2)



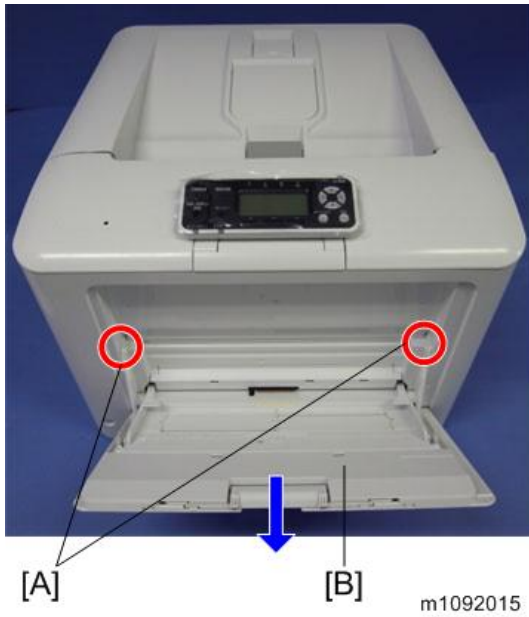
[A]

m1092028

Bypass Tray Unit

1. Open the Front cover.
2. Remove the snaps [A] from the Shaft, and then remove the shaft. (Ⓔ×2)

3. Pull out the Front cover Unit [B].



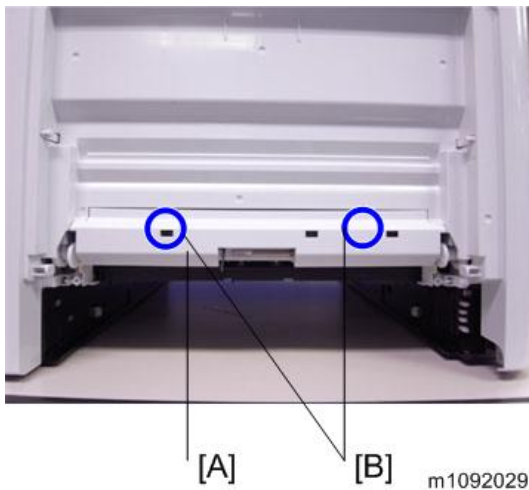
4

Bypass Feed Roller

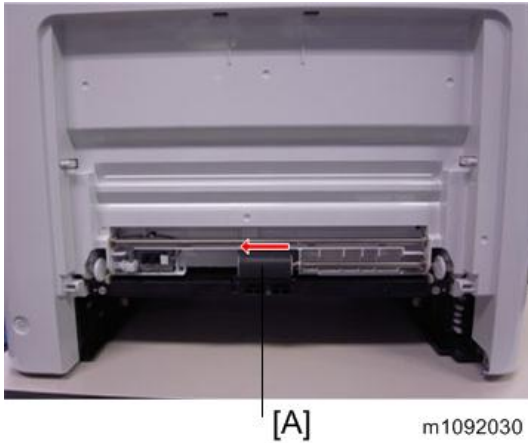
1. Bypass tray unit (☛ page 88)
2. Bypass feed roller cover [A]

↓ Note

- Take off the claws [B] on the back of the cover.



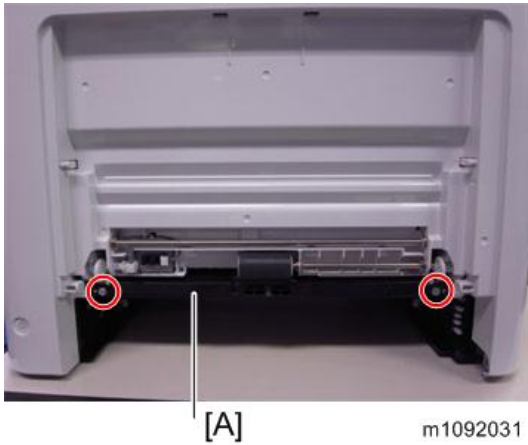
3. Bypass feed roller [A]



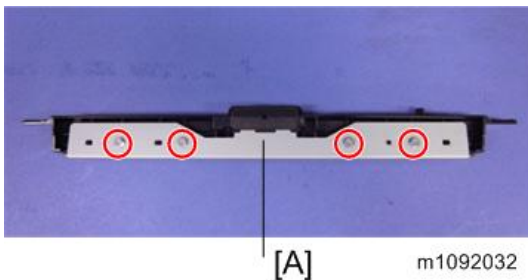
4

Bypass Friction Pad

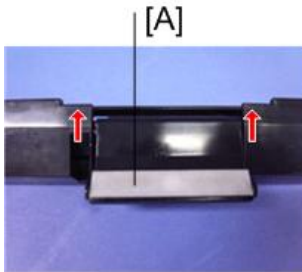
- 1. Bypass feed roller (☛ page 89)
- 2. Guide [A] (🔩x2)



- 3. Plate [A] (🔩x4)



4. Bypass friction pad [A]

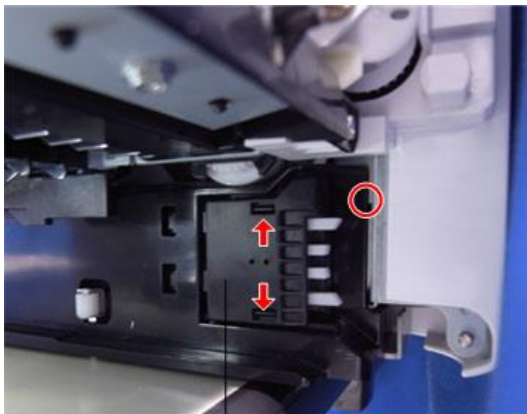


m1092033

Paper Size Switch

4

1. Standard paper tray (☛ page 89)
2. Paper size switch [A] (☛ x1, hook x2)



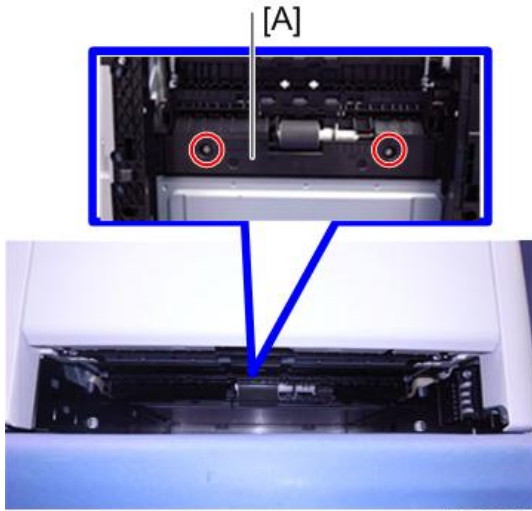
[A]

m1092034

Paper End Sensor

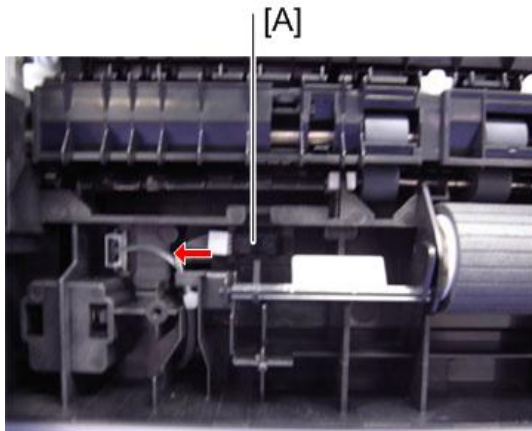
1. Standard paper tray (☛ page 87 "Paper Feed Roller")

2. Sensor cover [A] (⚙️×2)



m1092036

3. Paper end sensor [A] (📄×1, hook×2)

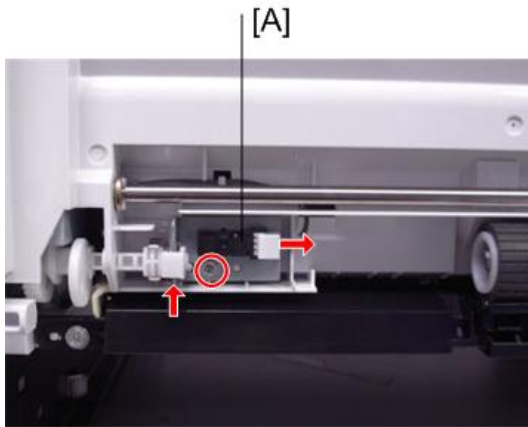


m1092037

Bypass Paper End Sensor

1. Bypass tray unit (📄 page 88)
2. Bypass feed roller cover (📄 page 89 "Bypass Feed Roller")

3. Bypass paper end sensor [A] (⚙️×1, 📄×1, 🔄×1)

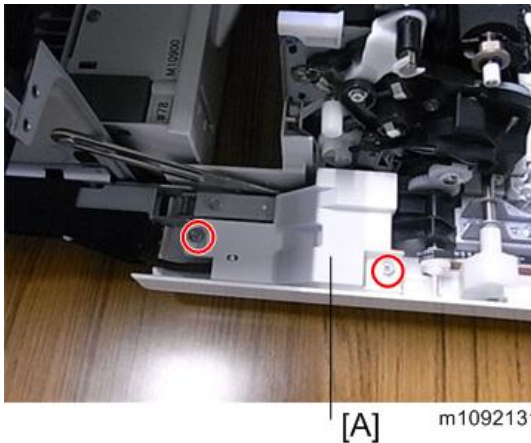


m1092038

4

Bypass Bottom Plate Home Position Sensor

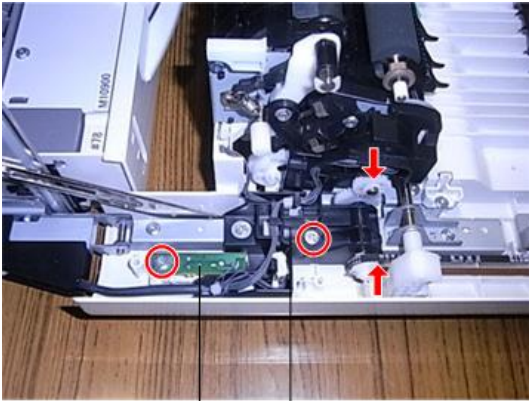
1. Open the Front cover.
2. Cover [A] (⚙️×2)



m1092131

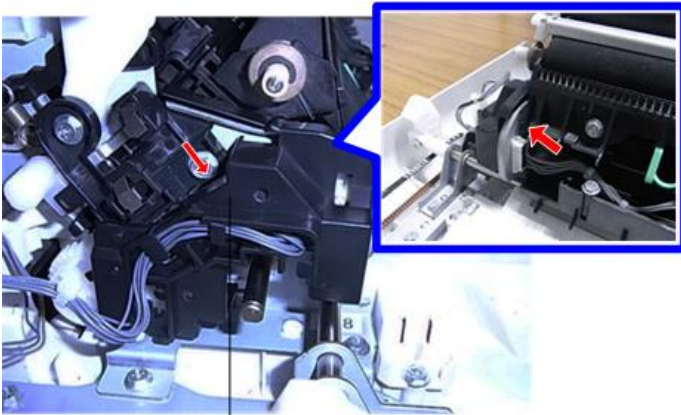
3. Power switch [A] (⚙️×1)

4. Harness guide [B] (🔧×1, 🛠️×1)



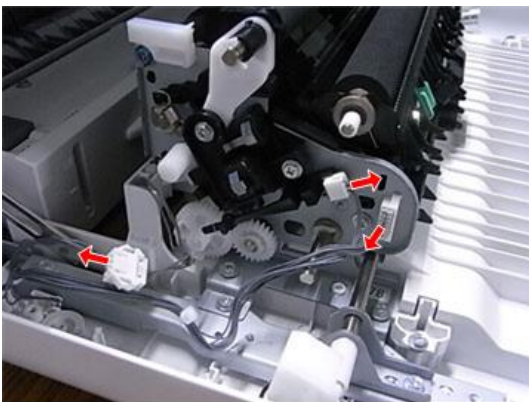
[A] [B] m1092116

5. Harness guide [A] (hook×2)



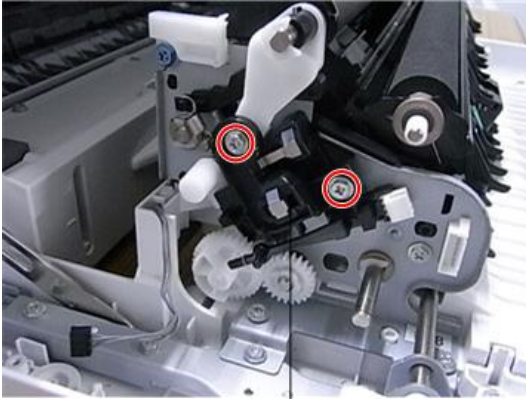
[A] m1092117

6. Connectors (🔌×3)



m1092118

7. Ground plate [A] (⌀×2)



[A] m1092119

8. Insert a flat-blade screwdriver into the outside of the Bypass bottom plate Home position sensor [A], and then pull out.



[A] m1092181

Paper Transport

Fusing Entrance Sensor

1. Open the Front cover.
2. Sensor cover [A] (hook×2)



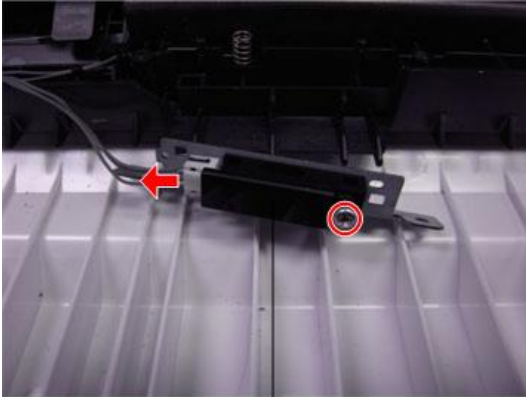
[A] m1092043

3. Sensor unit [A] (⌀×2)



[A] m1092044

4. Fusing entrance sensor [A] (⚙️×1, 📄×1)



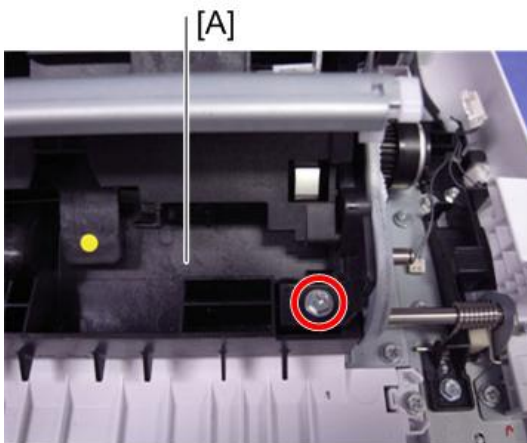
[A]

m1092045

4

Duplex Sensor

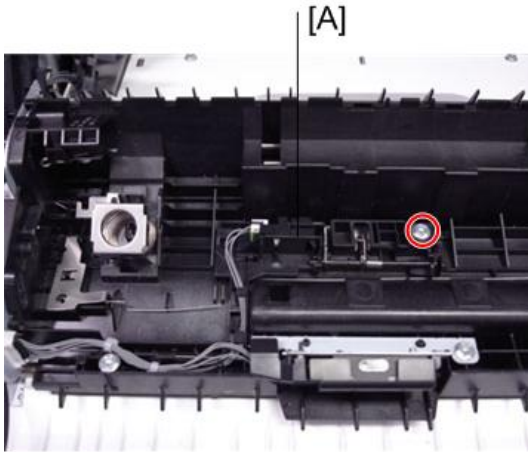
1. Open the Front cover.
2. Transfer roller (Relay) (📄 page 109)
3. Roller upper cover [A] (⚙️×1)



[A]

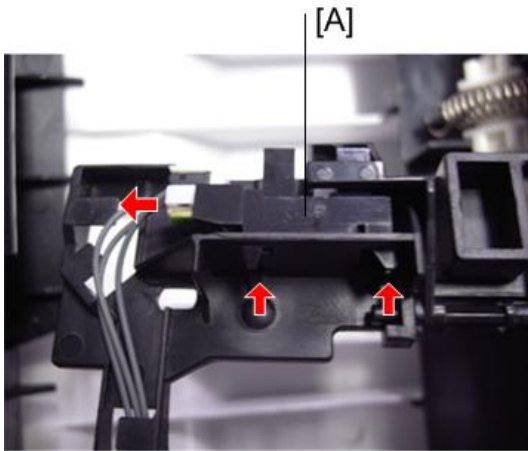
m1092063

4. Sensor unit [A] (🔧×1)



m1092064

5. Duplex sensor [A] (🔧×1, hook×2)

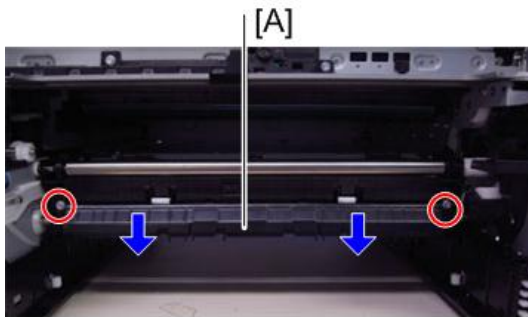


m1092065

Registration Sensor

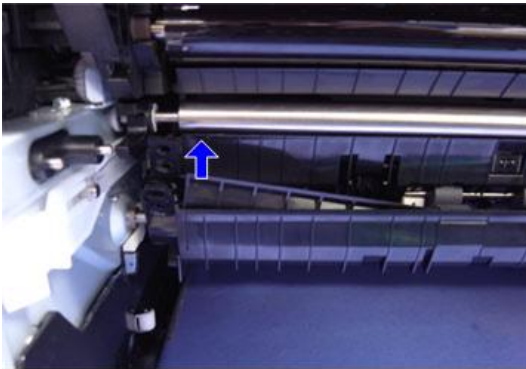
1. Paper feed tray (📄 page 87)
2. Open the Front cover.

3. Loosen the Transport guide [A] ($\phi \times 2$)



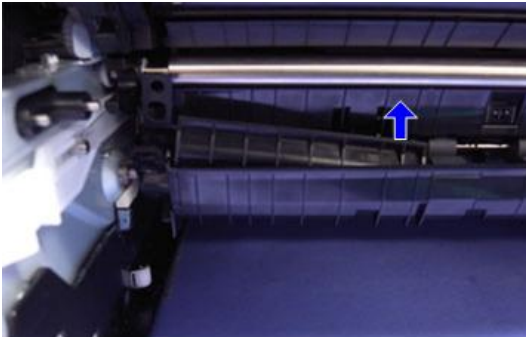
m1092086

4. Pull the outside of the Transport guide (left/right).



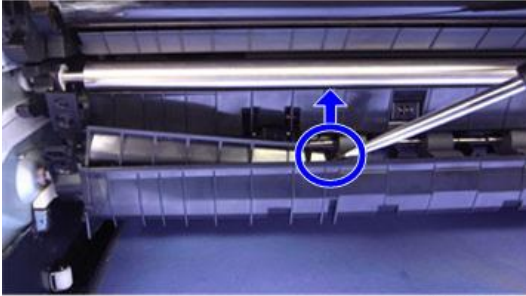
m1092142

5. Pull the inside of the Transport guide (left/right).



m1092143

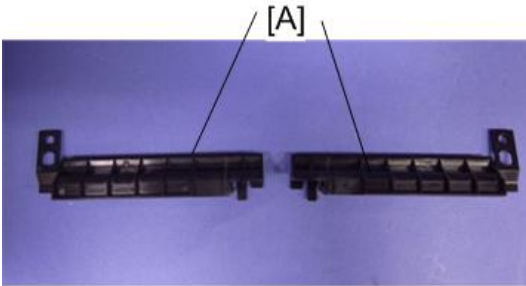
- 6. Insert a flat-blade screwdriver into the outside of the Transport guide (left/right), and then pull out.



m1092144

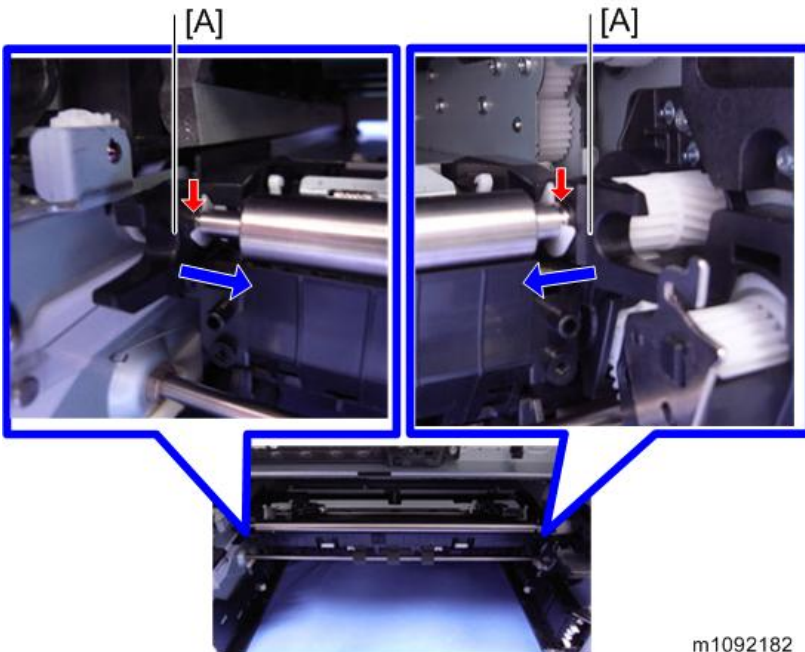
4

- 7. Transport guide (left/right) [A]



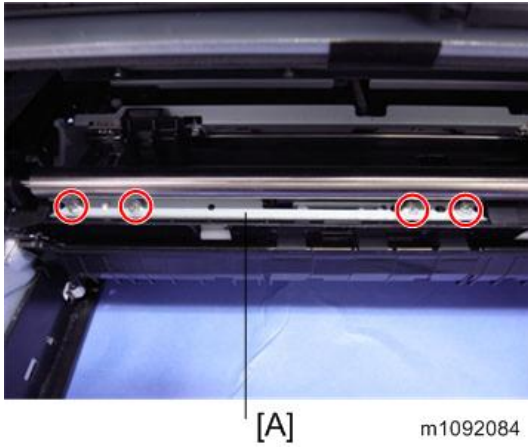
m1092145

- 8. Slide the Registration position stopper inside (left/right) [A].



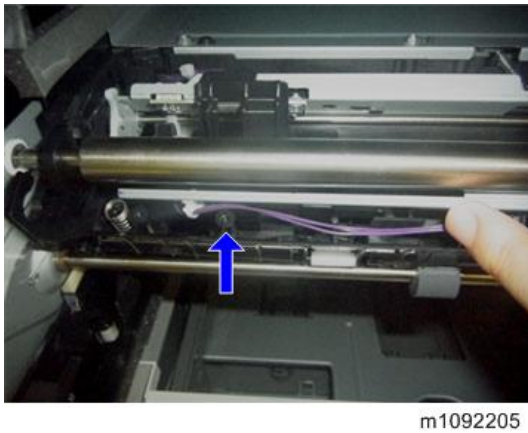
m1092182

9. Pull out the Transport guide (upper), and then remove the Sensor plate [A]. (⚙️×4)

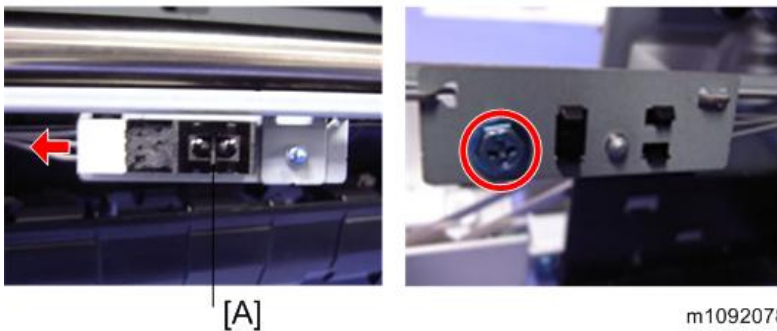


⚠️ Note

- Take care not to catch the harness between the plate and the screw hole.

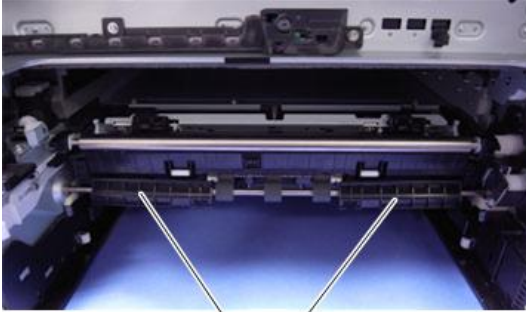


10. Registration sensor [A] (⚙️×1, ⚙️×1)



Reinstalling the Transport guide

1. Set the Transport guide (left/right) [A] on the Registration roller (Driven).



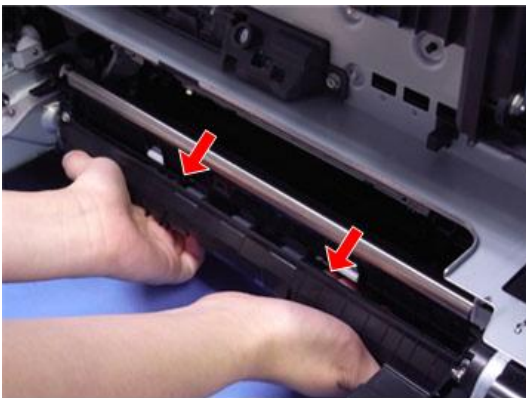
m1092183

2. Install the Transport guide (front), and then fit the screws loosely. (⌀×2)



m1092086a

3. Turn your hands to the back of the Transport guide (front), and then insert the pawls in the Transport guide (left/right).



m1092195

4. Fix the screws securely. (⚙️×2)

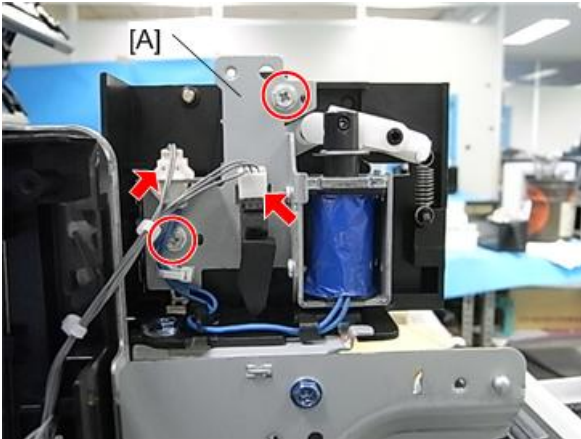


m1092086a

Paper Exit Sensor

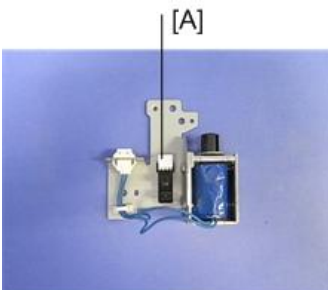
4

1. Fusing fan (🔌 page 134 "Fusing Fan Motor")
2. Solenoid bracket [A] (🔌×2, ⚙️×2)



m1099038.jpg

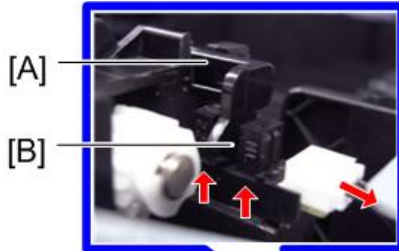
3. Paper exit sensor [A] (hook ×1)



m1092104.jpg

Paper Exit Full Sensor

1. Gear box bracket (☛ page 64 "Duplex Inverter Solenoid")
2. Actuator [A]
3. Paper exit full sensor [B] (☛ ×1, hook×2)

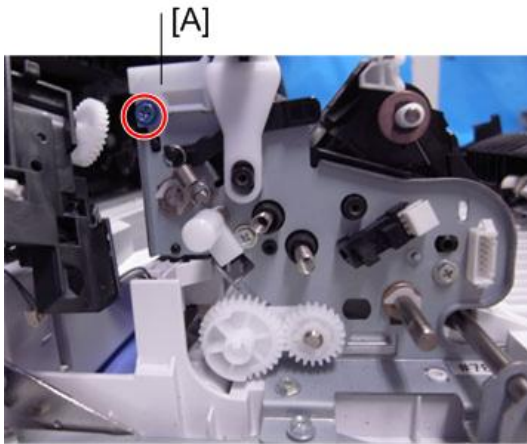


m1092078

Registration Roller (Drive)

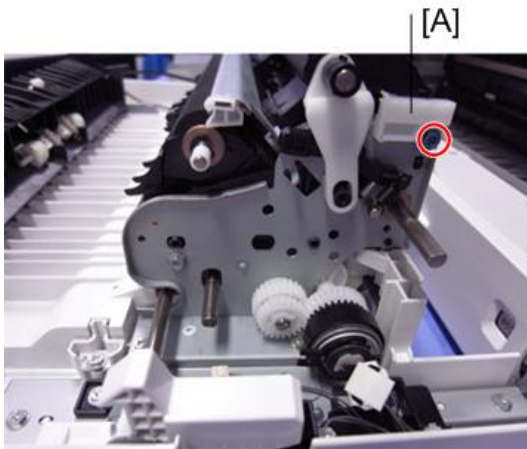
1. Right and Left gear covers (☛ page 35 "Front Cover Unit")

2. Roller left slide rail [A] (Ø×1)



m1092052

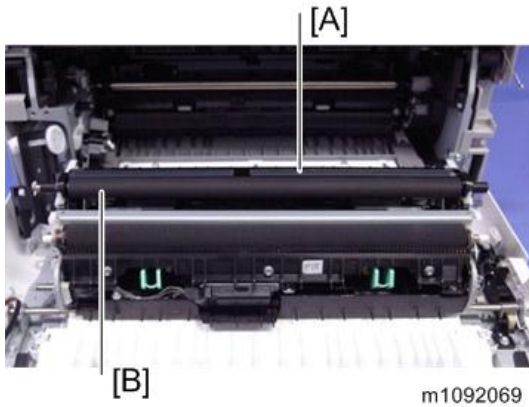
3. Roller right slide rail [A] (Ø×1)



m1092061

4. Roller rear cover [A]

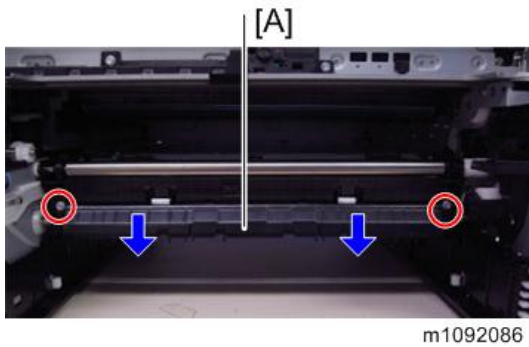
5. Registration roller (Drive) [B]



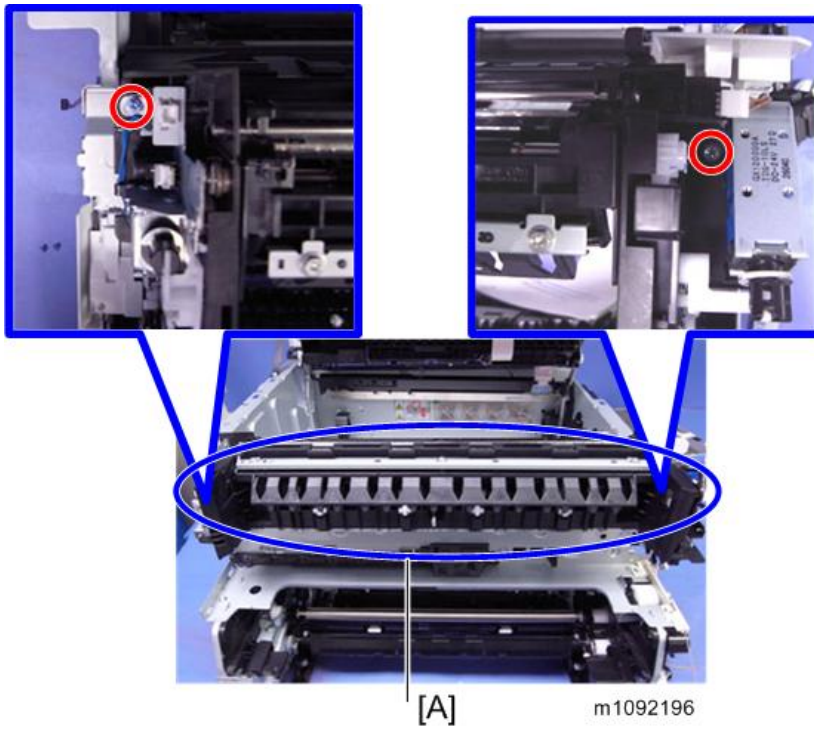
4

Registration Roller (Driven)

1. Image transfer belt unit (☛ page 54)
2. Standard paper tray (☛ page 87)
3. Fusing fan (☛ page 134 "Fusing Fan Motor")
4. Drive gears and Clutches (☛ page 67)
5. Gear box bracket (☛ page 64)
6. Pull out the Transport guide (front) [A] a little. (⚙️x2)

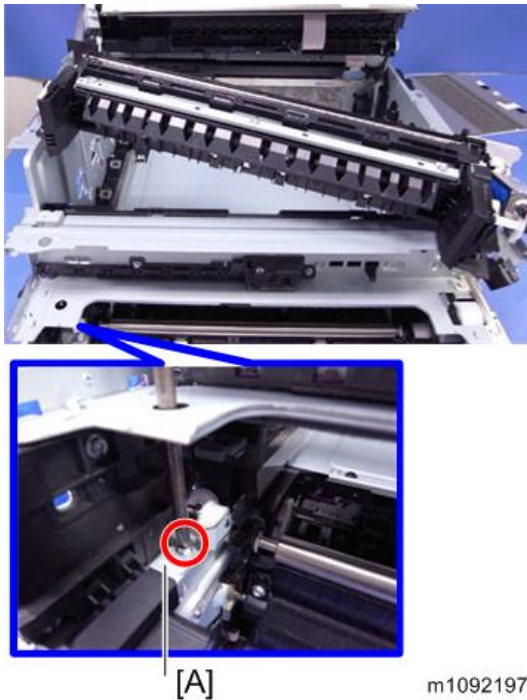


7. Release the Paper exit/reverse roller[A] (⌀×2)

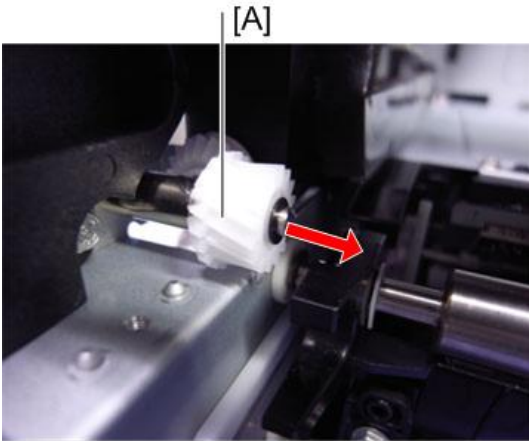


4

8. Insert a screwdriver through the hole, and then remove the gear plate [A]. (⌀×1)

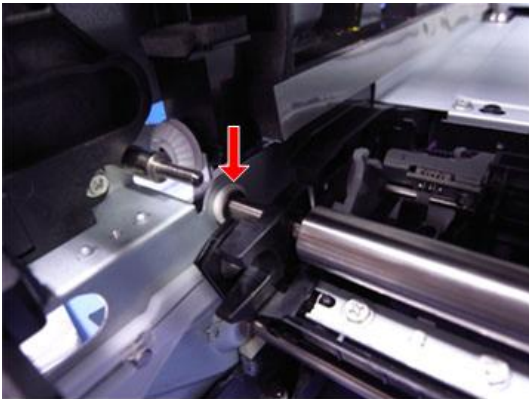


9. Gear [A]



m1092198

10. E-Ring



m1092199

11. Image transfer belt unit lock (right) [A] (⚙️×3)

12. Registration roller (Driven) [A].

Driven Roller (Relay)

1. Paper exit/reverse roller (🔍 page 109)

2. Driven roller (relay) [A]



m1092079

Transport Roller (Relay)

1. Left cover (☛ page 35)
2. Fusing unit (☛ page 76)
3. Drive gears and Clutches (☛ page 67)
4. Transport roller (Relay) [A]

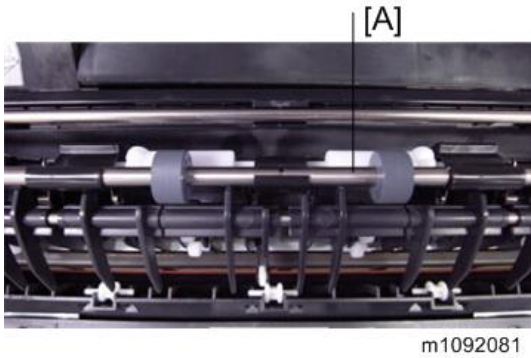


m1092076

Paper Exit/Reverse Roller

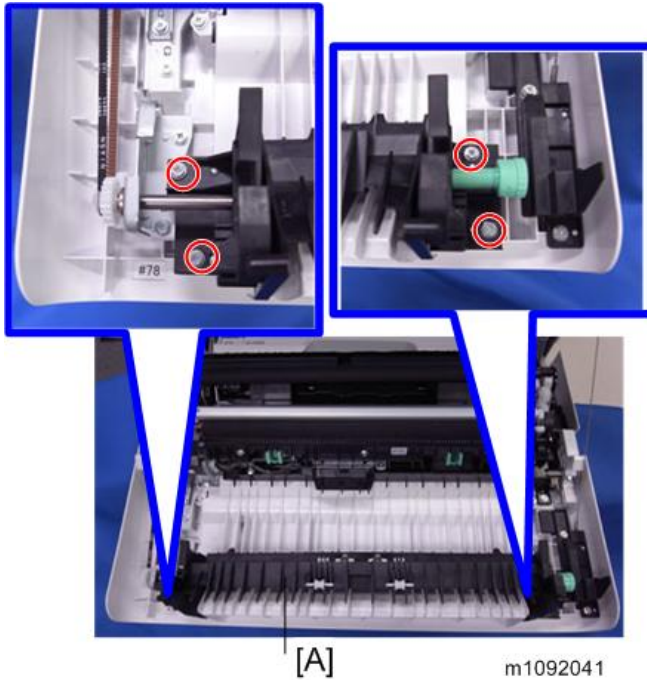
1. Solenoid bracket (☛ page 62 "Duplex Junction Gate Solenoid")
2. Gear box bracket (☛ page 64 "Duplex Inverter Solenoid")

3. Paper exit/reverse roller [A] (C×2)

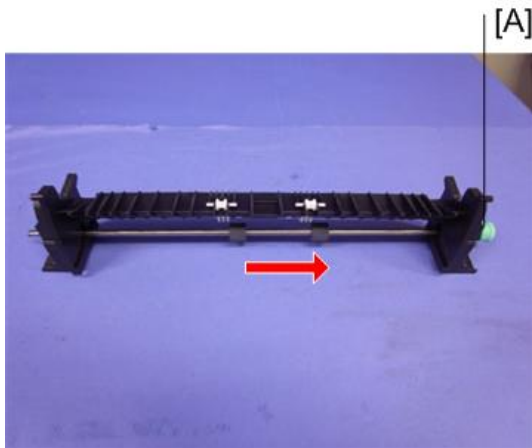


Duplex Entrance Roller

- 1. Open the Front cover.
- 2. Entrance roller unit [A] (⚙×4)



3. Duplex entrance roller [A] (🔧×2)

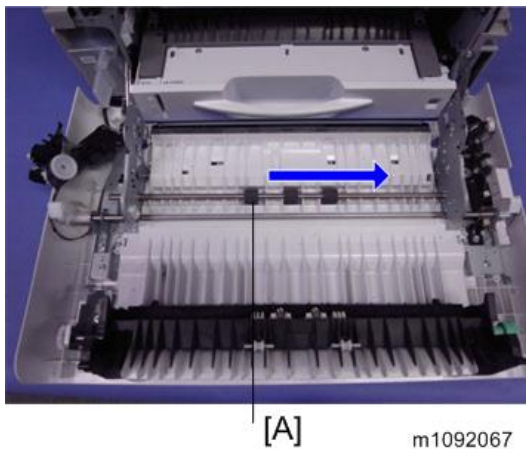


m1092042

4

Duplex Intermediate Roller

1. Transfer unit (🔧 page 93 "Bypass Bottom Plate Home Position Sensor")
2. Duplex intermediate roller [A] (🔧×2)

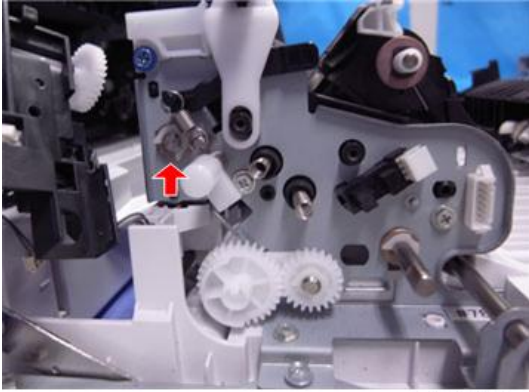


m1092067

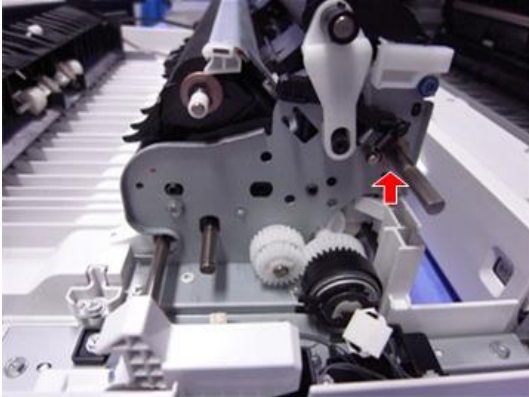
Duplex Exit Roller

1. Sensor cover (🔧 page 97 "Duplex Sensor")
2. Gear cover (🔧 page 97 "Duplex Sensor")

3. Snaps (🔌×2)

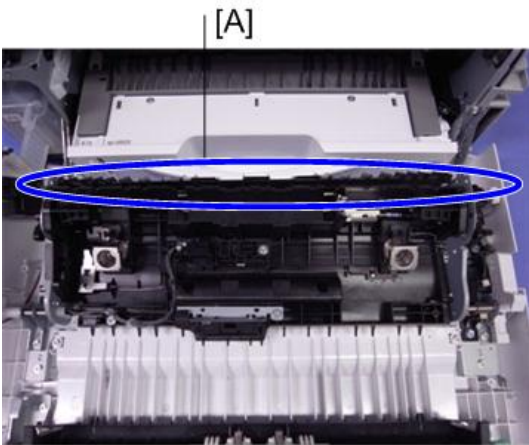


m1092053



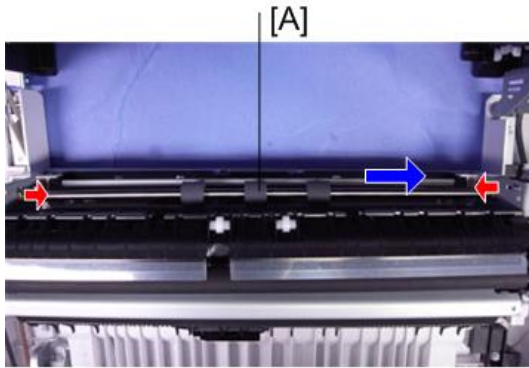
m1092062

4. Roller rear cover [A]



m1092070

5. Duplex exit roller [A] (C×2)



m1092082

Waste Toner

Waste Toner Bottle

1. Open the Front cover.
2. Pull out the Waste toner bottle [A].



[A]

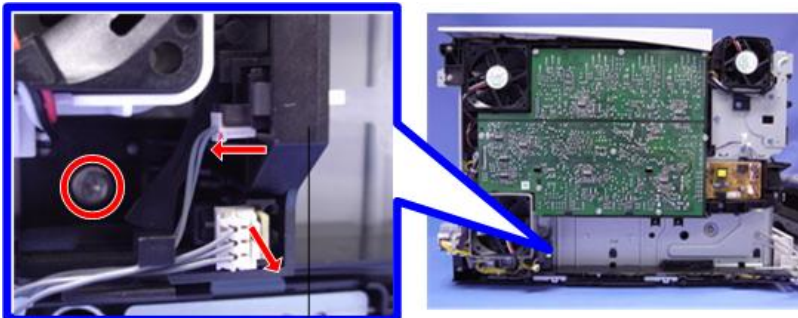
m1092019

Note

- Put a seal on the lid of the removed Waste toner bottle.

Waste Toner Bottle Sensor

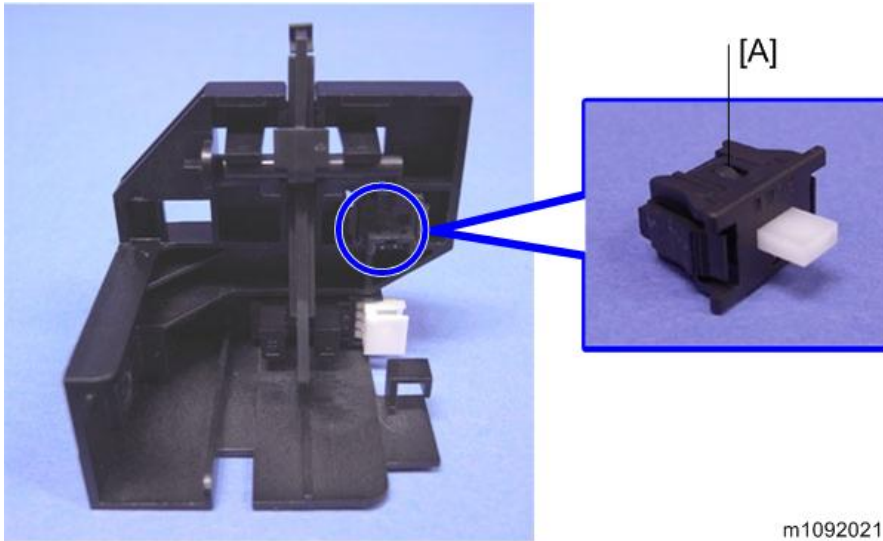
1. Left cover (☛ page 35)
2. Waste toner sensor unit [A] (🔧×1, 📦×2)



[A]

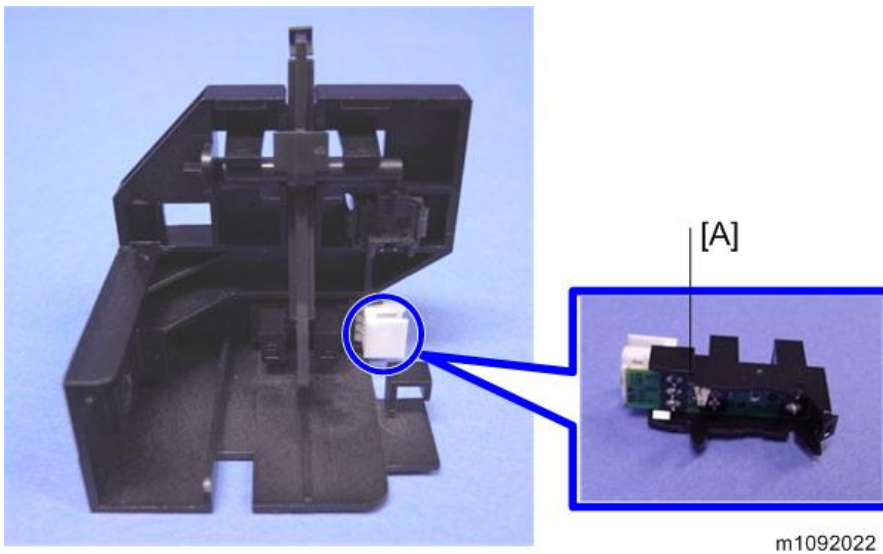
m1092020

3. Waste toner bottle set sensor [A]



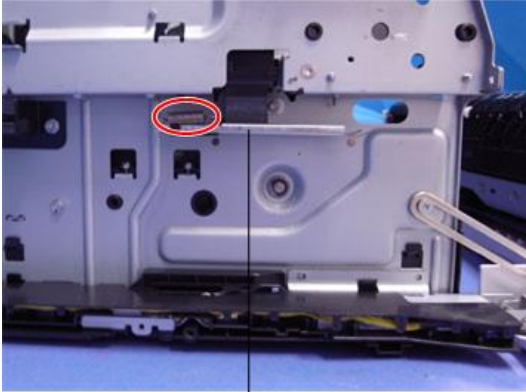
Waste Toner Full Sensor

1. Waste toner sensor unit (page 114)
2. Waste toner full sensor [A]



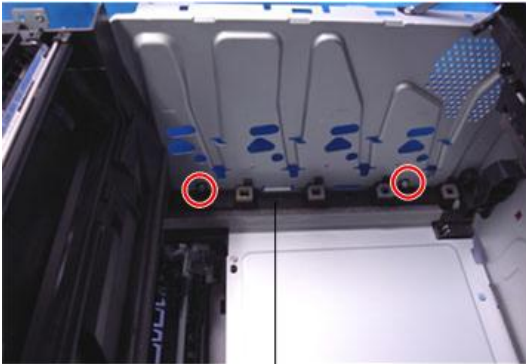
Waste Toner Duct

1. Image transfer belt unit (☛ page 54)
2. PCDUs (☛ page 52)
3. Left inner cover (☛ page 125 "PCDU Sensor Board")
4. Waste toner cover [A] (Spring×1)



m1092147

5. Waste toner duct [A] (Spring×2)

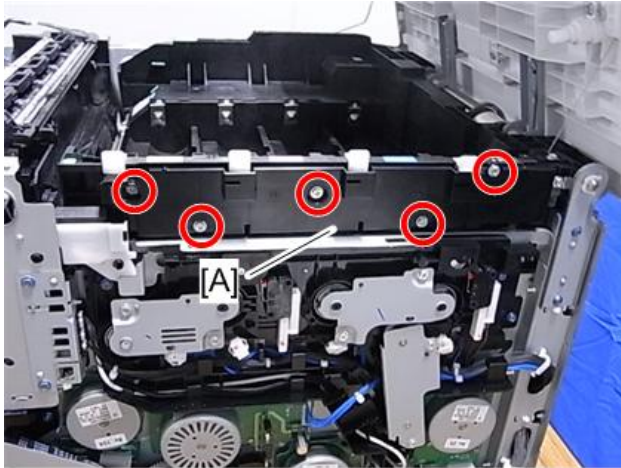


m1092146

Electrical Components

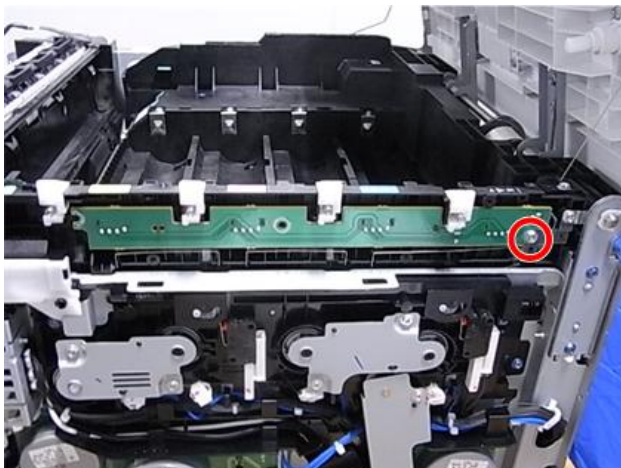
ID Chip Relay Board

1. Right cover (👉 page 34)
2. ID chip relay board cover [A] (🔩×5)



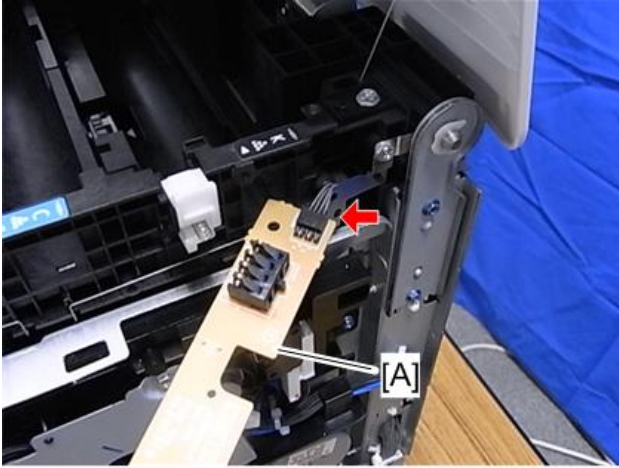
m1099110.jpg

3. Screw ×1



m1099111.jpg

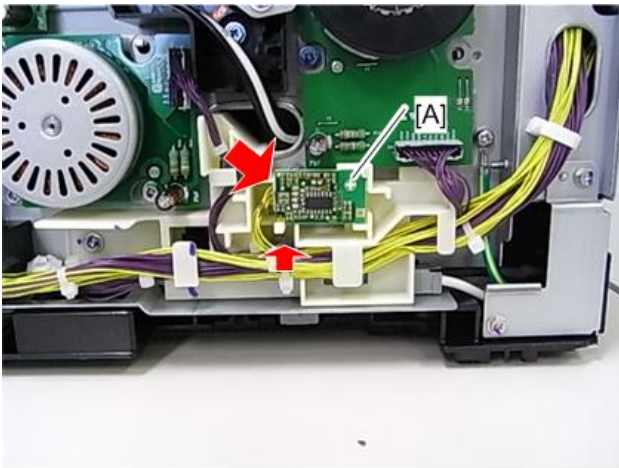
4. ID chip relay board [A] (🔧×1)



m1099112.jpg

Temperature & Humidity Sensor

1. Right cover (🔧 page 34)
2. Temperature & humidity sensor [A] (🔧×1, hook ×1)

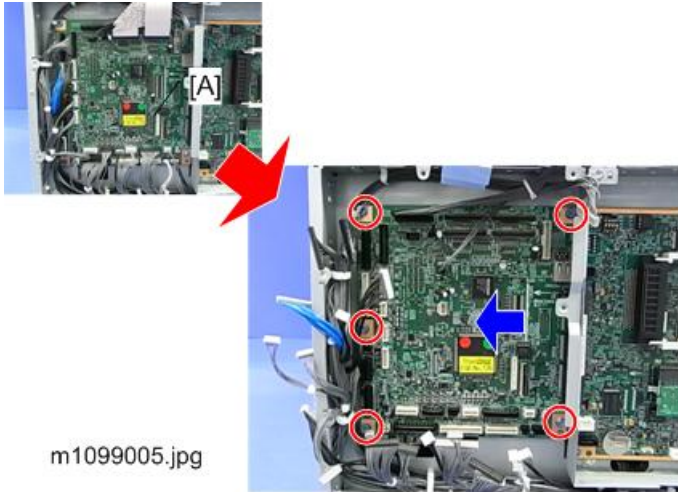


M1099037a.jpg

Engine Board

1. Rear cover (🔧 page 31)
2. Controller box cover (🔧 page 120 "Controller Board")

3. Engine board [A] (⚙️×4, 📡×All)



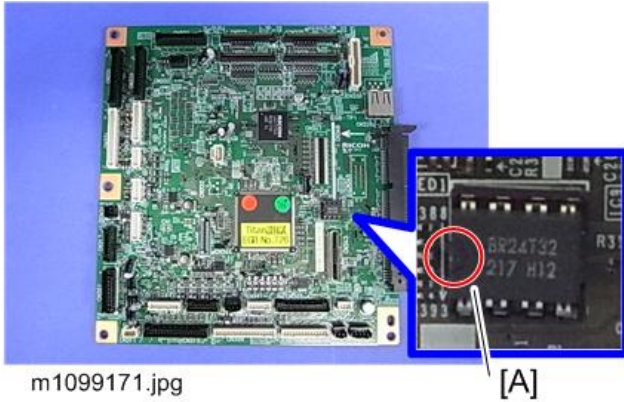
4. EEPROM [A]



When installing the new engine board

1. Remove the EEPROM from the old engine board.

2. Install the removed EEPROM on the new engine board, with the mark [A] pointing to the left side of the board.



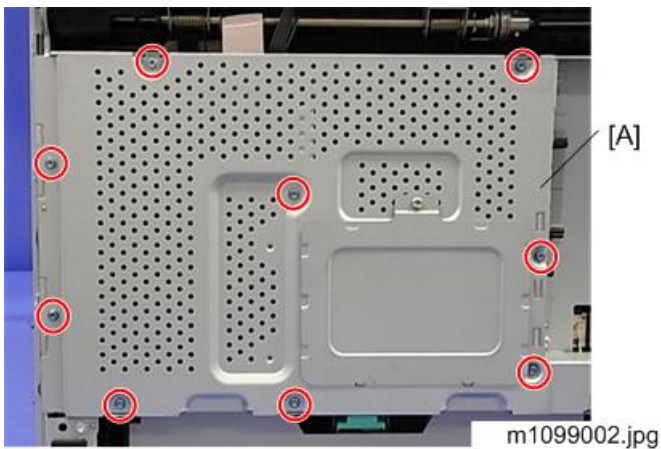
3. Replace the EEPROM if the EEPROM on the old engine board is defective.

⚠ CAUTION

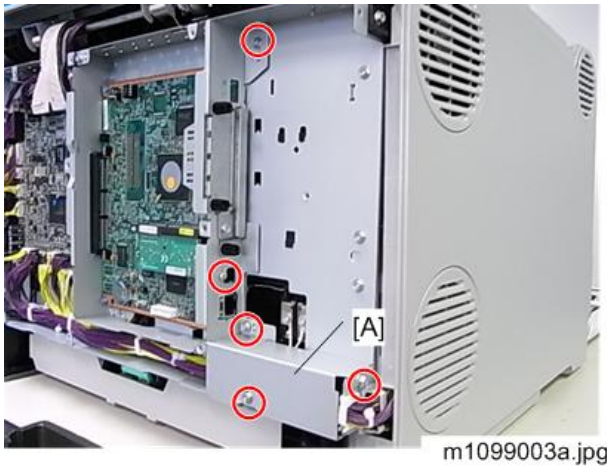
- Keep the EEPROM away from objects that can cause static electricity. Static electricity can damage EEPROM data.
- Make sure that the EEPROM is correctly installed on the engine board.

Controller Board

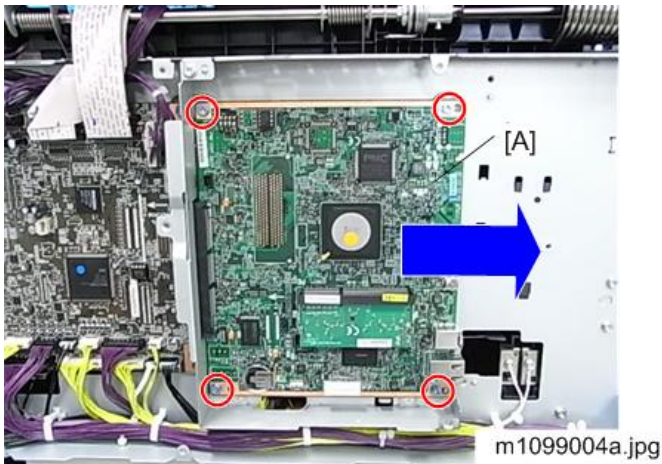
1. Rear cover (🔧 page 31)
2. Controller box cover [A] (🔧×9)



3. "L-shaped" bracket [A] (⚙️×5)



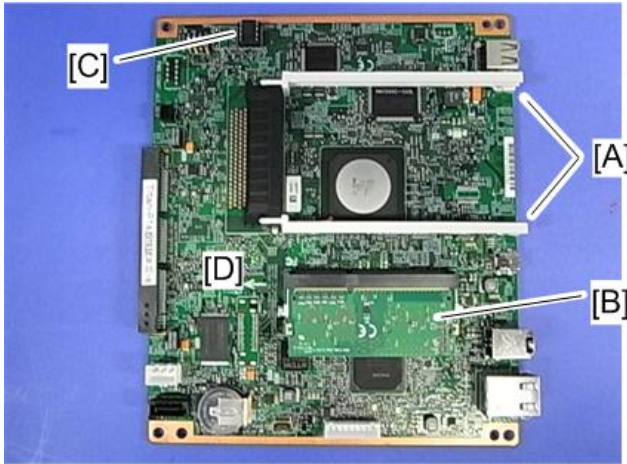
4. Slide off the controller board [A] (⚙️×4).



5. Rails [A] and RAMM DIMM [B]

6. NVRAM [C]

7. Controller board [D]



m1099155.jpg

4

When installing the new controller board

1. Remove the NVRAM from the old controller board.
2. Install the removed NVRAM on the new controller board with the mark [A] pointing downward.



m1099170.jpg

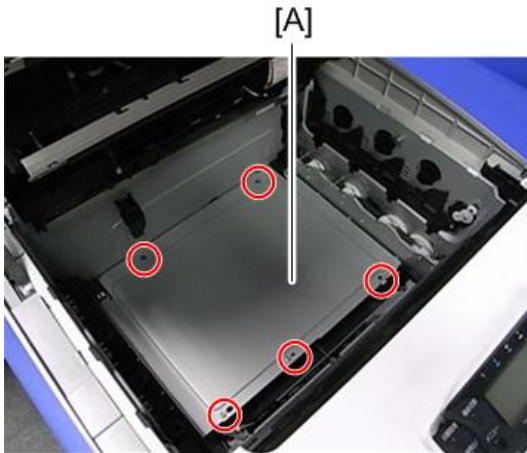
3. Replace the NVRAM if the NVRAM on the old controller board is defective.

⚠ CAUTION

- Keep the NVRAM away from objects that can cause static electricity. Static electricity can damage NVRAM data.
- Make sure that the NVRAM is correctly installed on the controller board.

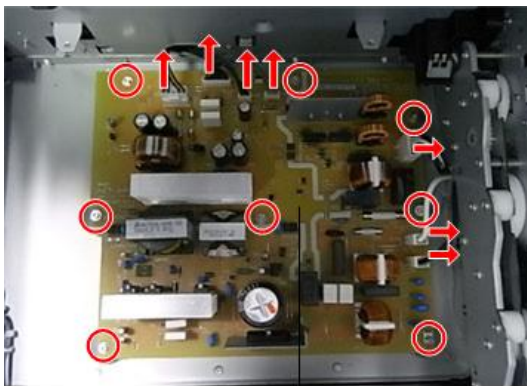
PSU

1. Image transfer belt unit (☛ page 54)
2. PCDUs (☛ page 52)
3. Bracket [A] (🔩×5)



m1092007

4. PSU [A] (🔩×8, 📁×All)

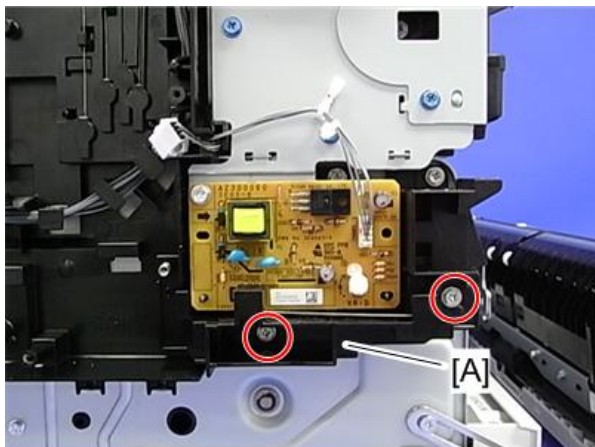


[A] m1092008

High Voltage Power Supply Board (Separation)

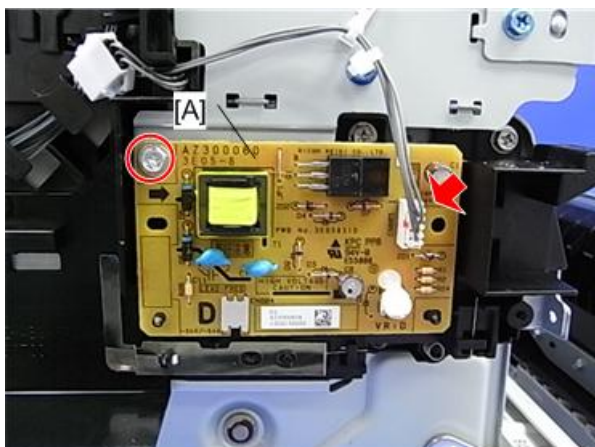
1. High voltage power supply board (☛ page 125)

2. Holder [A] (🔩×2)

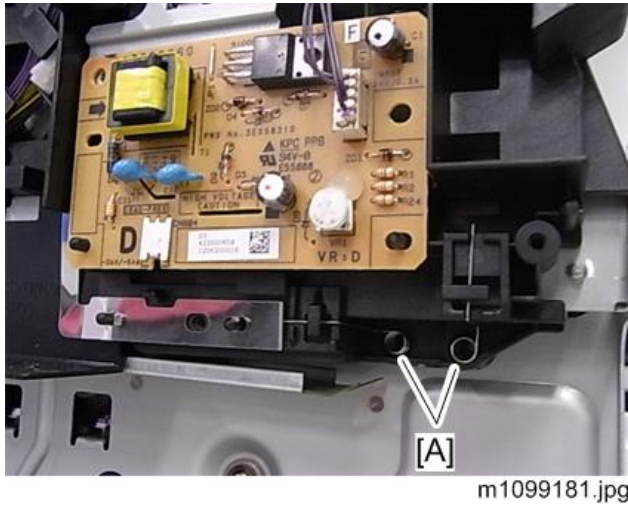


m1099013.jpg

3. High voltage power supply board (separation) [A] (🔩×1, 📡×1)



m1099014.jpg



m1099181.jpg

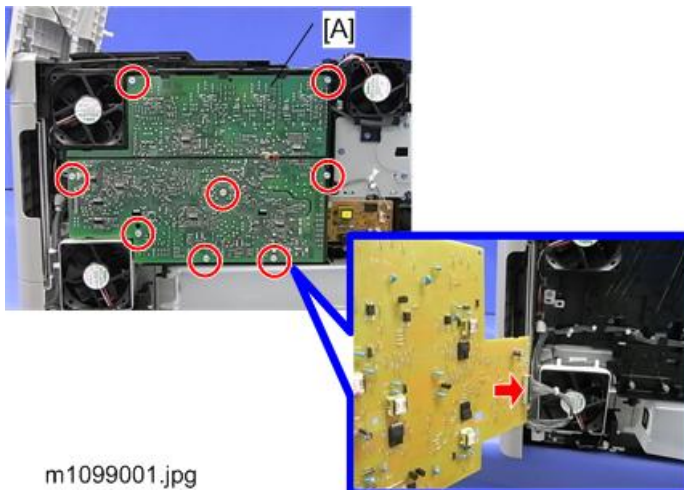
↓ Note

- Reinstall the two springs [A] as shown above if they are removed.

4

High Voltage Power Supply Board

1. Left cover (🔍 page 35)
2. High voltage power supply board [A] (🔍 x8, 📦 x1)

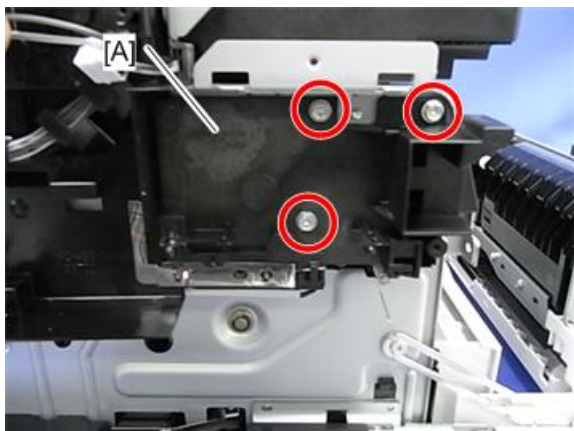


m1099001.jpg

PCDU Sensor Board

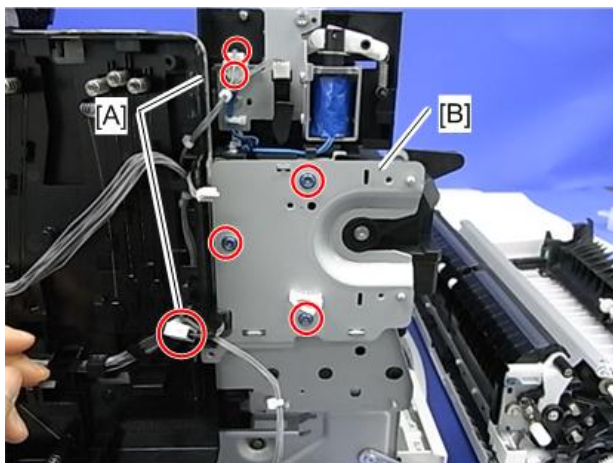
1. High voltage power supply board (🔍 page 125)

2. High voltage power supply board (separation) (☞ page 123)
3. Fusing fan (☞ page 134 "Fusing Fan Motor")
4. Holder [A] (🔩×3)



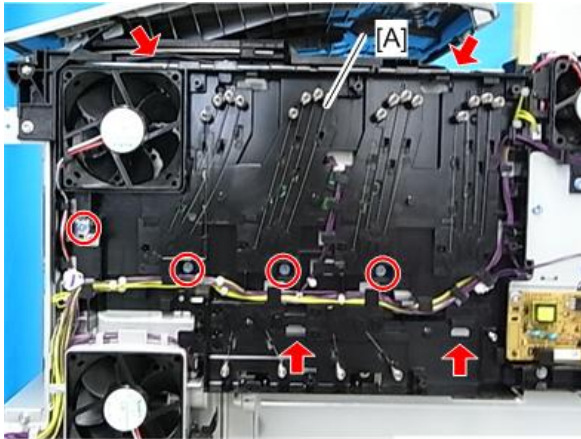
m1099023.jpg

5. Connector [A] × 3
6. Bracket [B] (🔩× 3)



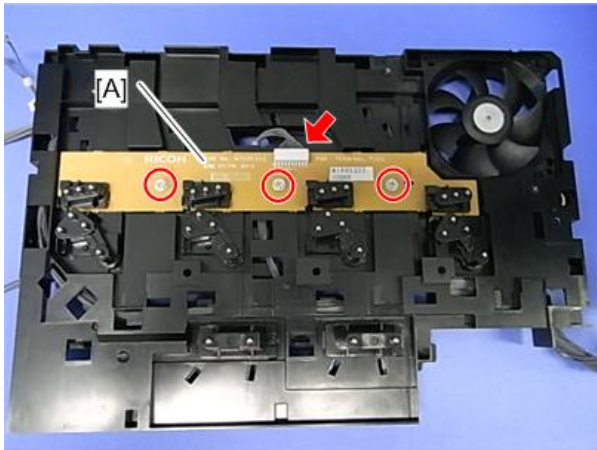
m1099024.jpg

7. Left inner cover [A] (⚙️ × 4, hook × 4)



m1099025a.jpg

8. PCDU sensor board [A] (⚙️ × 3, 📏 × 1)



m1099026.jpg

TM (ID) Sensor

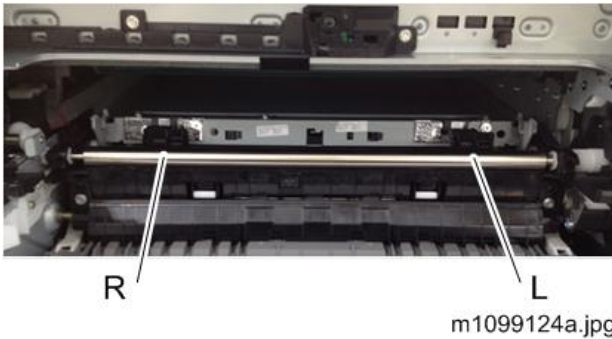
Before TM (ID) sensor replacement

On the TM (ID) sensor head part, there is a barcode label which shows the characteristics of the TM (ID) sensor. Before replacement, you must input these values into SP mode..

⚠️ Note

- Before replacement, it is recommended that you output SMC all print in case process control/ Music cannot complete correctly after replacement.

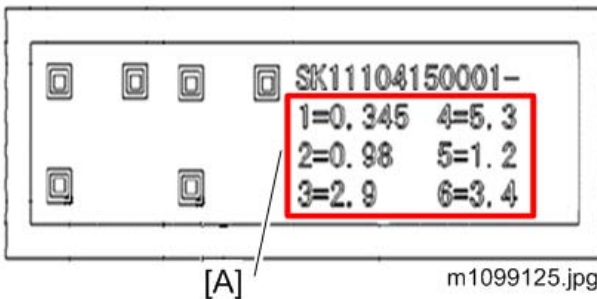
1. Write down the characteristic values which are written on the barcode label.



Note

- Viewed from the front of the machine, the sensor on the left is the TM (ID) sensor: R, and the sensor on the right is the TM (ID) sensor: L. Be careful about this during the following procedure.

Barcode label values



[A]: Characteristic Value

Turn the machine switch ON and enter the SP mode.

Then input the characteristic values in SP mode as follows.

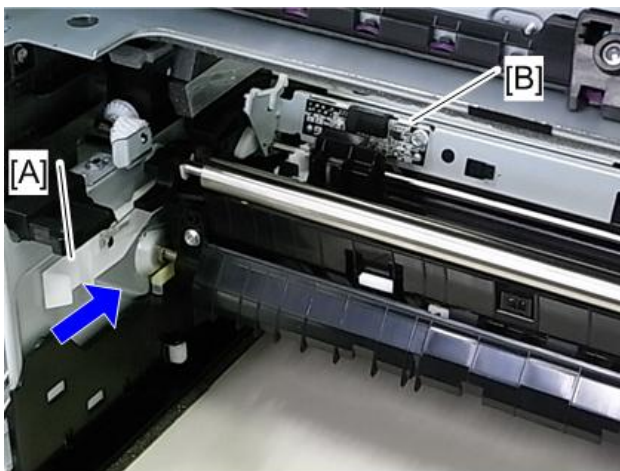
Input the values for TM sensor: R in SP3-333 and the the values for TM sensor: L in SP3-334 as follows:

SP No.	Value
3-333-001	Value "1" written on the R sensor label (the sensor on the observer's left)
3-333-002	Value "2" written on the R sensor label (the sensor on the observer's left)
3-333-003	Value "3" written on the R sensor label (the sensor on the observer's left)
3-333-004	Value "4" written on the R sensor label (the sensor on the observer's left)
3-333-005	Value "5" written on the R sensor label (the sensor on the observer's left)

SP No.	Value
3-333-006	Value "6" written on the R sensor label (the sensor on the observer's left)
3-334-001	Value "1" written on the L sensor label (the sensor on the observer's right)
3-334-002	Value "2" written on the L sensor label (the sensor on the observer's right)
3-334-003	Value "3" written on the L sensor label (the sensor on the observer's right)
3-334-004	Value "4" written on the L sensor label (the sensor on the observer's right)
3-334-005	Value "5" written on the L sensor label (the sensor on the observer's right)
3-334-006	Value "6" written on the L sensor label (the sensor on the observer's right)

Replacement

1. Image Transfer Belt unit (☛ page 54)
2. Push the lever [A] to bring up the TM sensor [B].



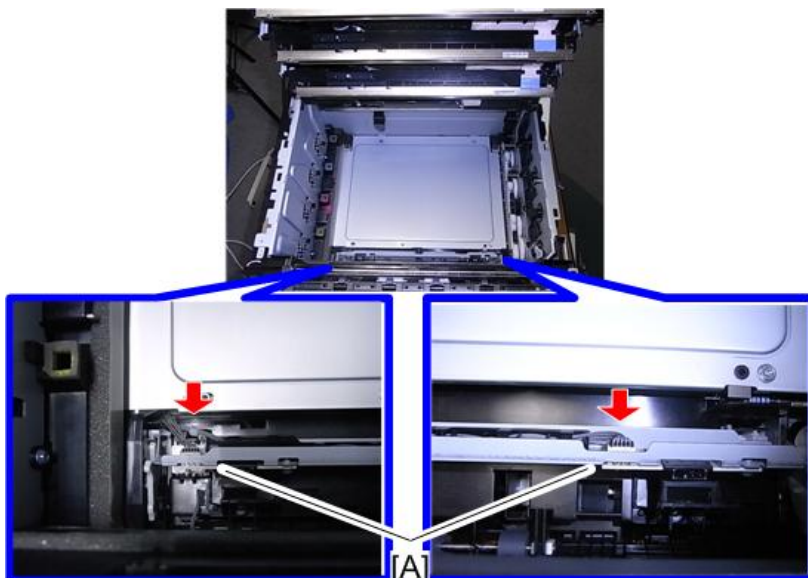
m1099160.jpg

3. Screw x4



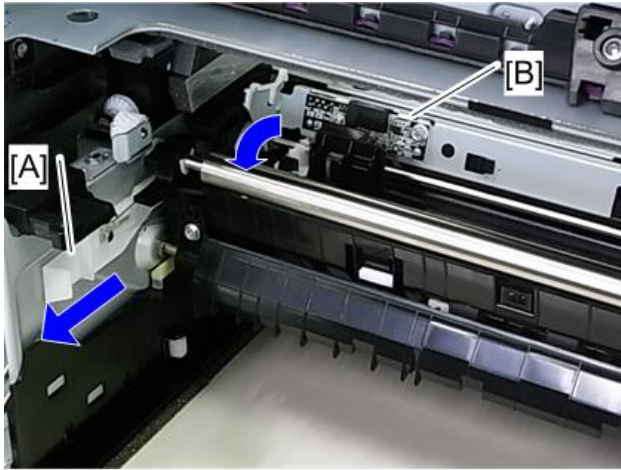
m1099113.jpg

4. TM (ID) sensor [A] (🔧x2)



m1099114.jpg

5. Pull the lever [A] to bring down the TM (ID) sensor [B].



m1099161.jpg

4

Adjustment after the TM (ID) sensor replacement

Turn the main switch ON and then enter the SP mode.

Execute SP3-011-004 (Adjustment manual exe. Full Music / process controll)

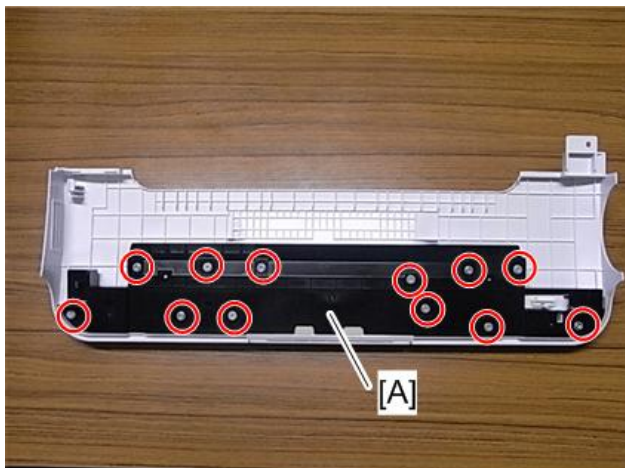
↓ Note

- If there is something wrong with the image after SP execution, make sure that input values are registered in the correct SPs. If values were input in the wrong SPs, refer to the SMC list and enter the correct values in the correct SPs.

Operation Panel

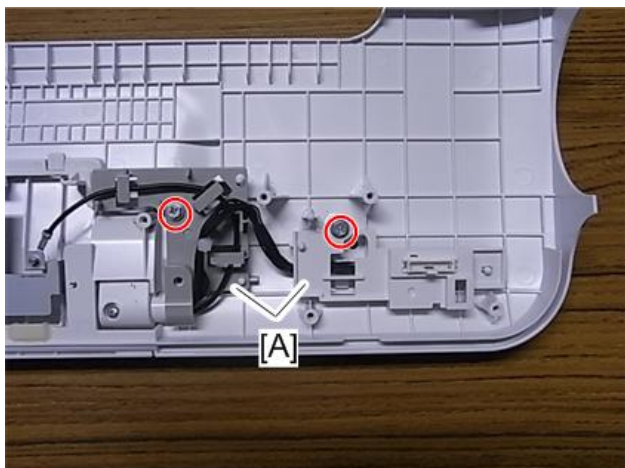
1. Paper exit cover (🖨️ page 32)

2. Brack cover [A] (⌀×12)



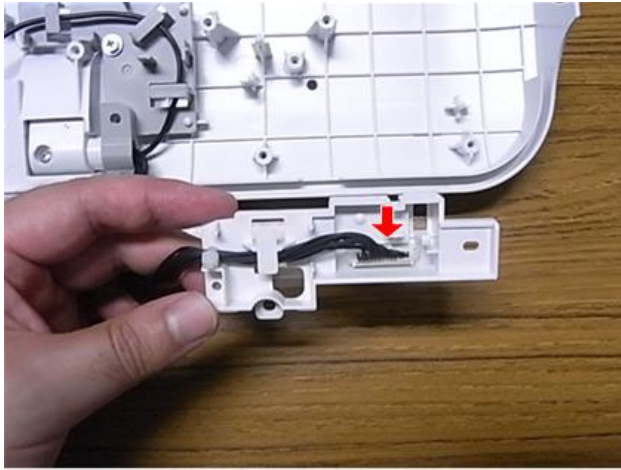
m1099115.jpg

3. Harness guide [A] (⌀×2)



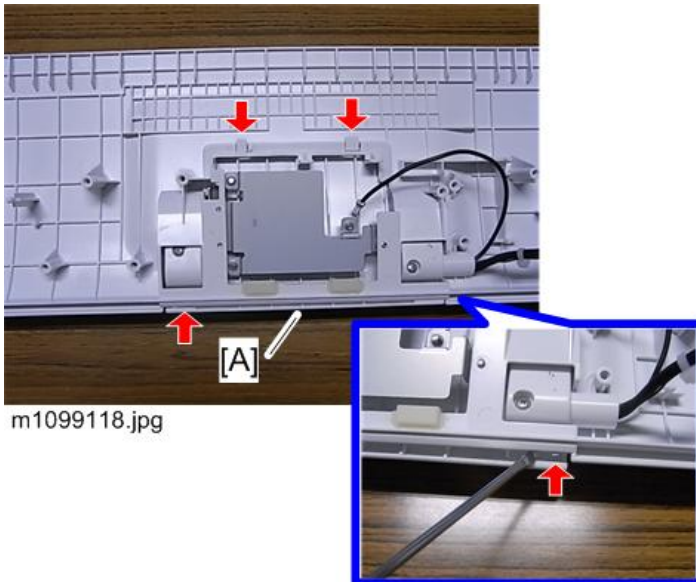
m1099116.jpg

4. Connector ×1



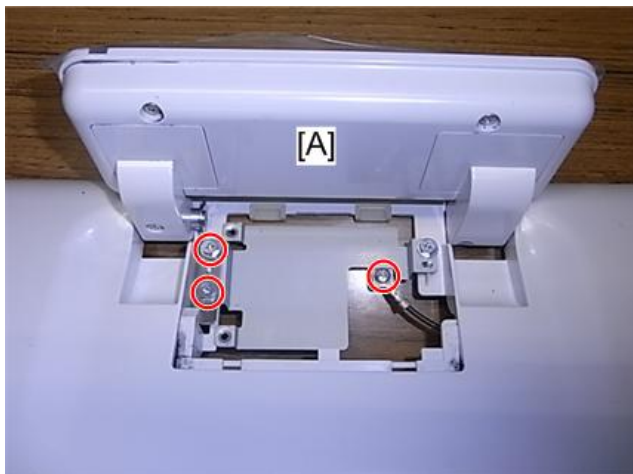
m1099117.jpg

5. Upper cover (small) [A] (hook ×4)



m1099118.jpg

6. Operation panel [A] (⚙️×3)



m1099119.jpg

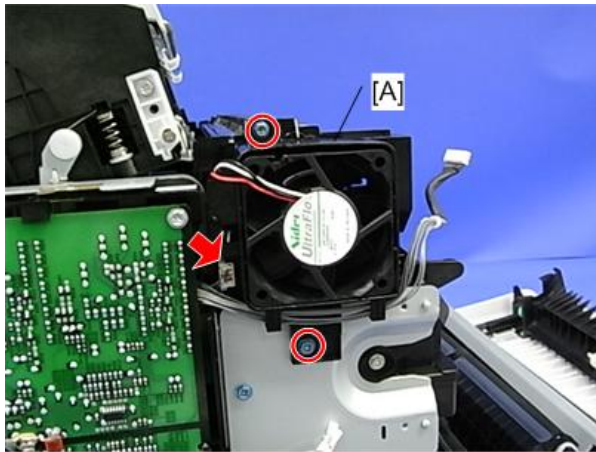
4

Fusing Fan Motor

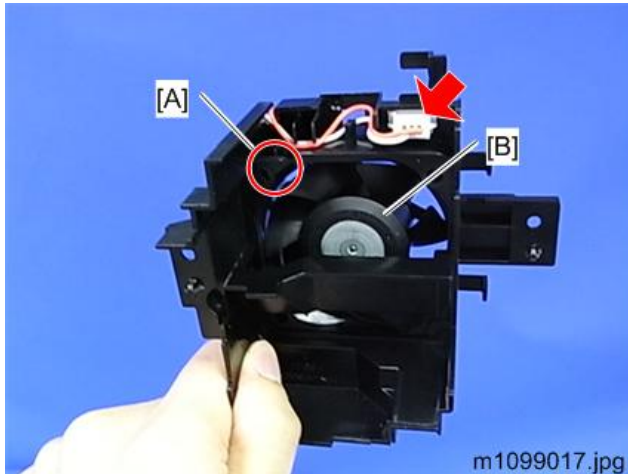
1. Left cover (🔧 page 35)
2. Bracket [A] (⚙️×2)



m1099015.jpg

3. Fan holder [A] (⚙️×2, 📌×1)

m1099016.jpg

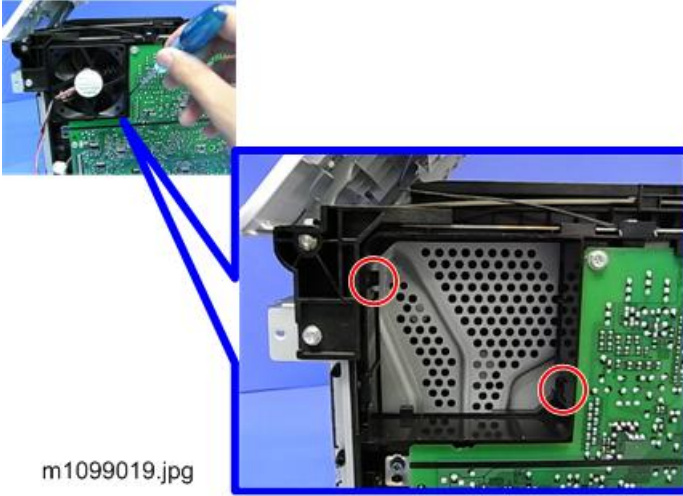
4. Connector ×1**5. Hook [A] ×1****6. Fusing fan motor [B]**

m1099017.jpg

Cooling Fan Motor

1. Pull out the cooling fan motor [A] (hook ×2).**↓ Note**

- Release the two hooks holding the fan before pulling. (The hooks are circled in red in the picture shown below.)



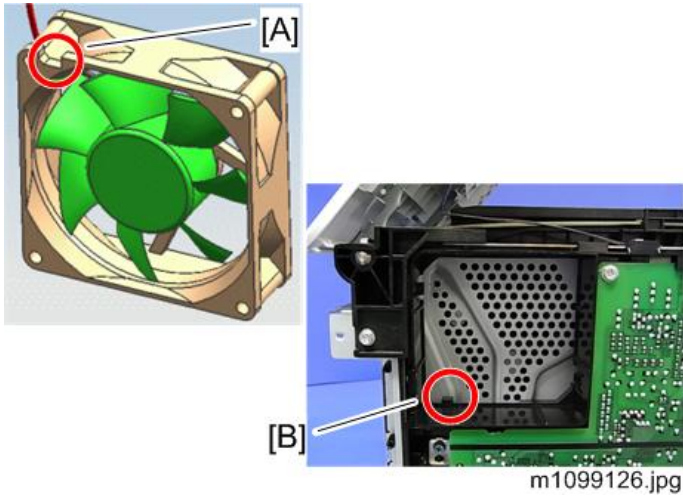
4

- 2. Connector ×1
- 3. Cooling fan motor [A]



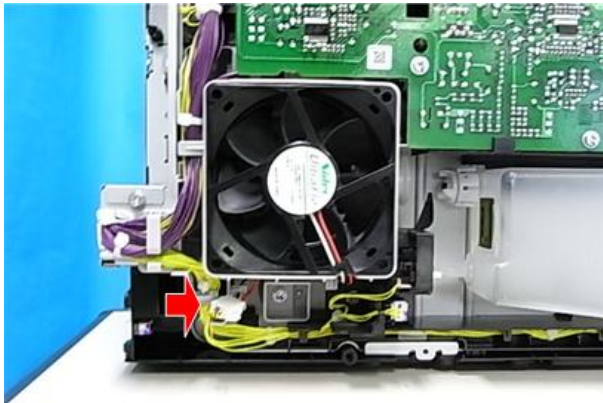
Reinstalling the cooling fan motor

Reinstall the cooling fan motor so that [A] and [B] are put together as shown below.



PSU Fan Motor

1. Left cover (☛ page 35)
2. Connector ×1



m1099020a.jpg

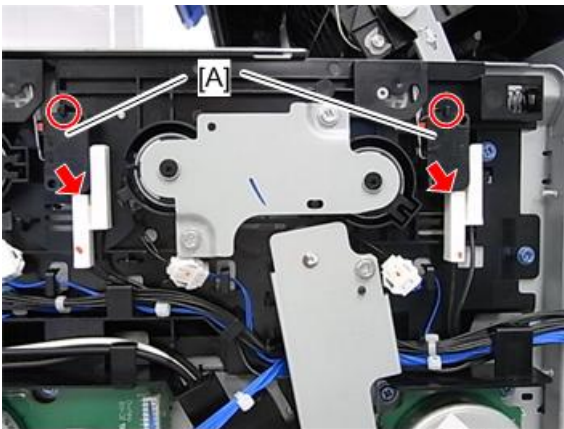
3. PSU fan motor [A] (hook ×1)



m1099021a.jpg

Interlock Switch

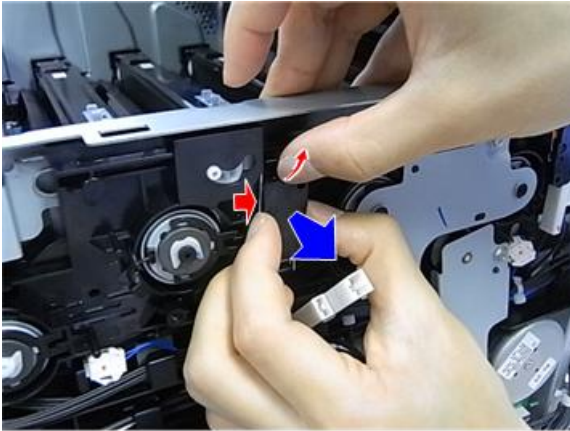
1. Right cover (👉 page 34)
2. Interlock switches [A] (👉 ×1, hook ×1 each)



m1099035.jpg

↓ **Note**

- Pull the switch out while pushing the switch and releasing the hook as shown below.



m1099036.jpg

NVRAM

Note

- Replacement and reinstallation procedures for the EEPROM and the NVRAM are included in the "Engine Board" and "Controller Board" replacement procedures. Refer to "Engine Board" or "Controller Board" for details.

When replacing an old EEPROM or NVRAM with a new one, EEPROM or NVRAM setting is required. Follow the EEPROM or the NVRAM setting procedure described below.

NVRAM on the controller

1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
2. Insert an SD card in the lower SD slot.
3. Plug in, and then turn on the main power switch.
4. Start the SP mode.
5. Use SP5-990 to print out the SMC reports ("SP Mode Data" and "Logging Data") if possible.
6. Use SP5-824-001 to upload the NVRAM data if possible.
7. Turn off the main power switch and unplug the power cord.
8. Replace the NVRAM on the controller and reassemble the machine.
9. Plug in the power cord.

10. 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.

11. Start the SP mode.

12. Use SP5-825-001 to download the NVRAM data if possible.

13. Make these contract-related settings:

- Counter Method (SP5-045)
- Meter-click Charge Mode (SP5-930, 1-007, 5-083)
- Telephone Number Setting > Fax Telephone Number (SP5-812-002) if the meter charge mode (SP5-930-001) is "ON" (enabled)
- Counter Size Setting (SP5-104)

14. Turn off the main power switch, and then remove the SD card from the lower slot.

15. Turn on the main power switch.

16. Output the SMC data ("ALL") using SP5-990-001, and make sure that it matches the SMC data you printed out in step 5 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.

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

★ Important

- Do all of the following if SP5-824-001 (NVRAM Data Upload) and SP5-825-001 (NVRAM Data Download) cannot be performed for some reason.

1. Manually enter all data on the SMC report (factory settings).

EEPROM on the engine board

When replacing the EEPROM on the Engine Board, please check the following points:

- If a near end alert for the fusing unit, paper transfer roller unit, or PCDU is displayed, replace them with new units before carrying out EEPROM replacement. Not doing so may cause image quality problems or SC490.
- If the Waste Toner Bottle is near full, replace it with a new one. Not doing so may cause toner overflow.
- After replacing the EEPROM, check that there is no image quality problem. If an image quality problem occurs, do not try to fix it by putting the old EEPROM back, but make adjustments so that they are stored in the new EEPROM.

If the EEPROM download/upload feature cannot be used, do the following steps;

1. Login to the machine using the factory SP mode (Cover open).

- Set these SPs in the factory SP mode.
 1. 5-807-001 "Machine Type Area Selection" <- NA:"2", EU:"3", CN: "5"
 2. 5-807-002 "Machine Type Model Selection" <-Set "1"
 3. 5-930-001 "Meter Click Charge" <-Set the value on the latest SMC sheet
 4. 5-988-001 "Maintenance ID" <-Set the value on the latest SMC sheet
 5. 5-988-002 "Brand ID" <-Set the value on the latest SMC sheet
 6. 5-811-001 "Machine Info Set: Serial No." <-Input the 5-811-002 value from the SMC sheet
 7. 5-801-002 Execute "Engine Memory Clear"

2. Power OFF, then power ON. Login to the normal SP mode.

- Input values from the latest SMC sheet
 1. 3-333-001 to 3-333-006 "TM (ID) sensor (right) adjustment value"
 2. 3-334-001 to 3-334-006 "TM (ID) sensor (left) adjustment vale"
 3. 1-001-013 to 1-001-020 "Sub scan direction registration"
 4. 1-002-001 to 1-002-003 "Main scan direction registration"
 5. 1-003-001 to 1-003-012 "Paper buckle adjustment"

3. Close Cover, then do the following steps in this order.

1. 2-111-002 Execute "Line position adjustment factory mode"
2. 3-011-001 Execute "Normal Process Control"
3. 2-185-002 Input "1" in "Margin Position: Base Calculation Flag"
4. 2-111-001 Execute "Line position adjustment normal mode"
5. 2-185-002 Input "1" in "Margin Position: Base Calculation Flag"
6. 2-111-003 Execute "Line position adjustment Black mode"

Ready to use the machine

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 printer to process the data.

SP Tables

See "Appendices" for the following information:
"SP Mode Tables"

5

Enabling and Disabling Service Program Mode

Note

- The Service Program Mode is for use by service representatives only so that they can properly maintain product quality. 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.

Accessing the Required Program

Use the "Up/Down arrow" keys to scroll through the menu listing.

1. Service: Controller service modes
2. Engine: Engine service modes
3. End: Exit service mode

To select an item, press the "OK" key. Then the sub-menu shows.

Scroll through the sub menu items using the "◀/▶" keys.

To go back to a higher level, press the "Escape" key.

Inputting a Value or Setting for a Service Program

Enter the required program mode as explained above. The setting appearing on the display is the current setting.

Select the required setting using the " $\triangleleft/\triangleright$ " keys, then press the "OK" key. The previous value remains if the "OK" key is not pressed.

Exiting Service Mode

Select "End" from the service mode main menu, then press the "OK" key.

⬇ Note

- To make the settings effective, turn the main switch off and on after exiting service mode.

Bit Switch Programming

Do not change the bit switches unless you are told to do this by the manufacturer.

1. Start the SP mode.

```
[SP mode(Service)]
Service
Engine
End
```

2. Select the "Service" menu with " $\triangleleft/\triangleright$ " keys, and then push the "OK" key.

```
Service(Class1) 0~9/⬅/➡/OK
1.Service Mode
```

3. Push the "OK" key.

```
Service(Class2) 0~9/⬅/➡/OK
1.001 Bit Switch
```

4. Push the "OK" key

```
Service(Class3) 0~9/⬅/➡/OK
1.001.001 Bit Switch 1
(7)00000000(0) [00]
(00000000) [00]
```

5. To select a bit switch, push the " \triangle/∇ " keys.

6. Push the "OK" key.

7. Set the value with these keys:

[Left] [Right]: Moves the cursor to one of the adjacent bits.

[Up] [Down]: Changes a bit between "0" and "1".

[Escape]: Goes out of the program without saving changes.

[OK]: Goes out of the program and saves changes.

8. Push the "Escape" key one or more times until the menu "SP mode (Service) " is shown.
9. Select "End" and push the OK key.

Service Table Key


Notation	What it means
[range / default / step]	Example: [-9 to +9 / 0 / 0.1 mm step]. The setting can be adjusted in the range ± 9 , value reset to +3.0 after an NVRAM reset, and the value can be changed in 0.1 mm steps with each key press.
*	Value stored in NVRAM. After a RAM reset, this default value (factory setting) is restored.
DFU	Denotes "Design or Factory Use". Do not change this value.
Japan only	The feature or item is for Japan only. Do not change this value.
SSP	This denotes a "Special Service Program" mode.
FSP	This denotes a "Factory Service Program" mode.

SP Mode Tables

CAUTION

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


SP1-XXX (Feed)

1001	<p>[Leading Edge Reg] Leading Edge Registration (Tray or By-pass, Paper Type, Process Speed) Process Speed: LowSpd: Low Speed, HlfSpd: Half speed, NorSpd: Normal speed</p>		
	<p> Note</p> <ul style="list-style-type: none"> • Adjusts the leading edge registration by changing the registration motor operation timing for each mode. • Increasing a value: The image is moved towards the trailing edge of paper. • Decreasing a value: The image is moved towards the leading edge of paper. It is recommended that these service programs are set up by the user program. 		
001	Tray1	*ENG	[-9.0 to 9.0 / 0.0 / 0.1 mm/step]
002	By-pass	*ENG	
003	Duplex	*ENG	
004	Tray2	*ENG	
005	Tray3	*ENG	
006	Tray4	*ENG	

1002	<p>[Side-to-Side Reg] Side-to-Side Registration Adjustment</p>		
	<p>Adjusts the side-to-side registration for each mode. This SP changes the LED main scan start position and it is recommended that these service programs are set up by the user program.</p>		
001	Tray1	*ENG	[-20.0 to 20.0 / 0.0 / 0.1 mm/step]
002	By-pass	*ENG	[-20.0 to 20.0 / 0.0 / 0.1 mm/step]
003	Duplex	*ENG	[-20.0 to 20.0 / 0.0 / 0.1 mm/step]

004	Tray2	*ENG	[-20.0 to 20.0 / -0.9 / 0.1 mm/step]
005	Tray3	*ENG	[-20.0 to 20.0 / -0.8 / 0.1 mm/step]
006	Tray4	*ENG	[-20.0 to 20.0 / -0.2 / 0.1 mm/step]

1113	[Curl Correction]		
001	Execute Pattern	*ENG	[0 or 1 / 0 / 1 /step] 0: Off, 1: On (No Decurl), 2: On
	If it is set to On, printing speed goes down by 20% and warming up time for the first print will take another 1 min.		

1118	[Water Drop Reduce]		
001	Execute Pattern	*ENG	[0 or 1 / 0 / 1 /step] 0: OFF, 1: ON
	Reduces the image area that are missing due to the moisture after fusing.		
	 Note <ul style="list-style-type: none"> If "1" is selected, the 1st duplex print starts from ready mode or process control/ MUSIC will be delayed about 20 sec. 		

1141	[FusingSCErrorInfo]		
	Displays the information when an SC code was issued.		
001	SC Number	*ENG	Displays the issued SC number. [0 to 999 / - / 1 /step]
002	SC Number Detail	*ENG	Displays the details of the issued SC number. [0 to 255 / - / 1 /step]
101	SC Temp:Sens1	*ENG	[0 to 255 / - / 1 deg/step]
102	SC Temp:Sens2	*ENG	[0 to 255 / - / 1 deg/step]
103	SC Temp:Sens3	*ENG	[0 to 255 / - / 1 deg/step]
104	SC Temp:Sens4	*ENG	[0 to 255 / - / 1 deg/step]
151	SC Pre1Temp:Sens1	*ENG	[0 to 255 / - / 1 deg/step]

152	SC Pre1Temp:Sens2	*ENG	[0 to 255 / - / 1 deg/step]
153	SC Pre1Temp:Sens3	*ENG	[0 to 255 / - / 1 deg/step]
154	SC Pre1Temp:Sens4	*ENG	[0 to 255 / 0 / 1 deg/step]
201	SC Pre2Temp:Sens1	*ENG	[0 to 255 / 0 / 1 deg/step]
202	SC Pre2Temp:Sens2	*ENG	[0 to 255 / 0 / 1 deg/step]
203	SC Pre2Temp:Sens3	*ENG	[0 to 255 / 0 / 1 deg/step]
204	SC Pre2Temp:Sens4	*ENG	[0 to 255 / 0 / 1 deg/step]

1159	[Fusing Jam]		
001	SC Detection	*ENG	[0 or 1 / 0 / 1 /step]
	If a fusing jam occurred 3 times continuously, this SP can select if an SC occurs or not. <ul style="list-style-type: none"> • 0: No SC • 1: SC occurs 		

SP2-XXX (Drum)

2106	[LED Array Setting]		
	Sets the LED Array light-emission time.		
021	Stbwd normal Bk	ENG	[0 to 65535 / 0 / 1 ns/step]
022	Stbwd normal C	ENG	
023	Stbwd normal M	ENG	
024	Stbwd normal Y	ENG	
025	Stbwd half/low Bk	ENG	[0 to 65535 / 0 / 1 ns/step]
026	Stbwd half/low C	ENG	
027	Stbwd half/low M	ENG	
028	Stbwd half/low Y	ENG	
029	Stbwd Elmt normal	ENG	[0 to 65535 / 0 / 1 ns/step]

030	Stbwd Elmt half	ENG	
031	Stbwd Elmt low	ENG	

2111	[Line Position Adj]		
	Executes the fine line position adjustment.		
001	Normal Mode	ENG	[- / - / -] [Execute]
002	Factory Mode	ENG	[- / - / -] [Execute]
003	Black mode	ENG	[- / - / -] [Execute]

2181	[Skew Correction]		
	The following SPs display the result of MUSIC for the skew correction.		
003	C	*ENG	[-64 to 63 / 0 / 1 line/step]
021	M	*ENG	
039	Y	*ENG	
061	Bk	*ENG	

2183	[MUSIC Condition]		
	Displays the result of the position detection pattern.		
001	Posipattern FC R	*ENG	[0 to 65535 / 0 / 1 /step]
002	Posipattern FC L	*ENG	
003	Posipattern Bk R	*ENG	
004	Posipattern BK L	*ENG	

2193	[MUSIC Condition]		
023	Normal Pagecount	*ENG	[0 to 65535 / 0 / 1 pages/step]

	Displays the page counter since alignment adjustment was executed in normal mode.		
024	Black Pagecount	*ENG	[0 to 65535 / 0 / 1 pages/step]
	Displays the page counter since alignment adjustment was executed in BW mode.		
025	Judge Factor	*ENG	[0 to 255 / 0 / 1 /step]
	Displays the judge factor for MUSIC.		
026	Normal Temp	*ENG	[-128 to 127 / 0 / 1 deg/step]
	Environment temperature when alignment adjustment is executed in normal mode.		
027	Black Temp	*ENG	[-128 to 127 / 0 / 1 deg/step]
	Environment temperature when alignment adjustment is executed in BW mode.		

2194	[MUSIC Result]		
	-		
007	Run Result	*ENG	[0 to 0xFFFFFFFF / 0 / 1 /step]
	Displays the run result of alignment adjustment.		
013	Normal Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the execution number of alignment adjustments in normal mode.		
014	Normal Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the failed number of alignment adjustments in normal mode.		
015	Factory Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the execution number of alignment adjustments in factory mode.		
016	Factory Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the failed number of alignment adjustments in factory mode.		
017	Margin Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the execution number of alignment adjustments in BW mode.		
018	Margin Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the failed number of alignment adjustments in BW mode.		

2221	[LEDA Disp]		
001	Average volume Bk	ENG	Displays the average light intensity data of LEDA. [0 to 65535 / 0 / 1 /step]
002	Average volume C	ENG	
003	Average volume M	ENG	
004	Average volume Y	ENG	
005	Serial num Bk	ENG	Displays LEDA serial numbers. [0 to 255 / 0 / 1 /step]
006	Serial num C	ENG	
007	Serial num M	ENG	
008	Serial num Y	ENG	
009	LEDA Pow Err Bk	ENG	Displays the flag indicator of LEDA power error. [0 or 1 / 0 / 1 /step]
010	LEDA Pow Err C	ENG	
011	LEDA Pow Err C	ENG	
012	LEDA Pow Err Y	ENG	

2302	[Env Correct]		
001	Crrnt Env Display	ENG	[0 to 7 / 0 / 1 /step]
	Displays the environmental divisions for high voltage power supply. 0: SSL 1: LL 2: ML 3: MM 4: MH 5: HH1 6: HH2 7: HH3		

2412	[Trans2:Correct] DFU		
	-		

011	High Humid paper	*ENG	[0 or 1 / 0 / 1 /step] 0:Normal, 1:High Humid
	Sets the application timing for paper transfer roller bias.		

2904	[Auto revolutions]		
	Turn auto revolutions on to rotate the image transfer belt for paper dust removal.		

001	On	ENG	[- / - / -] [Execute]
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2907	[ACS SW: FC Mode]		
	Adjusts the threshold number of continuous BW pages to switch FC mode to BW mode when printing color and BW mixed data.		
001	Cont.Mono Sheet	ENG	[0 to 10 / 1 / 1 sheet/step]

SP3-XXX (Process)

3011	[AdjustManualExe]		
	-		
001	Normal ProCon	ENG	[- / - / -] [Execute]
	Executes the normal process control manually (potential control). Check the result with SP3-325-001 and 3-012-001 after executing this SP.		
004	FullMusic/ProCon	ENG	[- / - / -] [Execute]
	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) twice.		
005	Nor.Music/ProCon	ENG	[- / - / -] [Execute]
	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) once.		

3012	[ProCon OK?] Process Control Self-check Result		
	<p>Displays the result of the latest process control self-check.</p> <p>All colors are displayed. The results are displayed in the order "Y M C K"</p> <p>The result displays as below:</p> <p>00: Not executed</p> <p>11: Succeeded</p> <p>Others: Error Codes</p> <p>e.g., 11 (Y) 99 (C) 11 (M) 11 (K): The self-check for Cyan failed but the others were successful.</p>		
001	History:Last	*ENG	[0 to 255 / 0 / 1 /step]

3017	[ManualRmn:Exe]		
	<p>Executes the manual remaining toner detection.</p> <p>Detection result can be checked by SP3411-002 to 004.</p>		
001	TnrRmnSnsFc	ENG	[- / - / -]
002	TnrRmnSnsBk	ENG	[Execute]

3018	[ManualMix:Exe]		
	<p>Executes the manual toner mixing.</p> <p>Execution time can be set by SP3019-001.</p> <p>Detection result can be checked by SP3411-001.</p>		
001	TnrMixFc	ENG	[- / - / -]
002	TnrMixBk	ENG	[Execute]

3098	[TonerNearEnd]		
001	DaysBeforeTE	*ENG	[0 to 2 / 1 / 1 g/step]
	<p>Sets the toner near end detection timing.</p> <p>0: Earlier (7 days before)</p> <p>1: Normal (5 days before)</p> <p>2: Later (3 days before)</p>		

3101	[TE-NE]		
	Amount of total toner consumption (accumulated for the toner cartridge).		
005	Total Usage: Bk	*ENG	[0 to 999999999 / 0 / 1 µg/step]
006	Total Usage: C	*ENG	
007	Total Usage: M	*ENG	
008	Total Usage: Y	*ENG	
3101	[TE-NE]		
	Remaining amount in the toner cartridge that is set in the machine.		
009	TonerRemainBk	*ENG	[0.0 to 300.0 / 181.0 / 0.1 g/step]
010	TonerRemainC	*ENG	[0.0 to 300.0 / 158.0 / 0.1 g/step]
011	TonerRemainM	*ENG	

3103	[RcvrySply]		
	Displays the number of replenishment executions for recovering.		
001	RcvrySplyCntK	*ENG	[0 to 10000 / - / 1 times/step]
002	RcvrySplyCntY	*ENG	
003	RcvrySplyCntM	*ENG	
004	RcvrySplyCntC	*ENG	

3131	[TnrSplyErr:Disp]		
	Displays the counter of toner supply errors for recovering. Counts up if recovery is failed continuously more than the number set in SP3131-015. If recovery execution succeeded, this counter is reset.		
011	RcvryFailCntK	*ENG	[0 to 20 / 0 / 1 times/step]
012	RcvryFailCntY	*ENG	[0 to 20 / 0 / 1 times/step]
013	RcvryFailCntM	*ENG	[0 to 20 / 0 / 1 times/step]
014	RcvryFailCntC	*ENG	[0 to 20 / 0 / 1 times/step]

015	RcvryFailThresh	*ENG	[0 to 20 / 3 / 1 times/step]
-----	-----------------	------	------------------------------

3236	[TonerSply]		
011	CnsmFromSplyK	*ENG	Consumption since the last time toner was supplied. [0.0 to 100000.0 / 0.0/ 0.1 mg/step]
012	CnsmFromSplyY	*ENG	
013	CnsmFromSplyM	*ENG	
014	CnsmFromSplyC	*ENG	

3310	[ID.Sens :Voffset]		
001	Voffset_reg (R)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays the regular reflection output when the right TM (ID) Sensor is turned off.		
002	Voffset reg (L)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays the regular reflection output when the left TM (ID) Sensor is turned off.		
011	Voffset dif (R)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays the diffuse reflection output when the right TM (ID) Sensor is turned off.		
012	Voffset dif (L)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays the diffuse reflection output when the left TM (ID) Sensor is turned off.		

3349	[IBACC Setting]		
This is a flag to recognize if IBACC is executing.			
001	Exec Mode	ENG	[0 or 1 / 0 / 1 /step] • 0: Not executing • 1: Executing

3411	[TonerFixSply:Disp]		
001	TonerRmnK	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of remaining toner for Bk. 0: Upper limit 1: Mid		

	2: Lower limit		
002	TonerRmnY	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of remaining toner for Ye. 0: Upper limit 1: Mid 2: Lower limit		
003	TonerRmnM	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of remaining toner for Ma. 0: Upper limit 1: Mid 2: Lower limit		
004	TonerRmnC	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of remaining toner for Cy. 0: Upper limit 1: Mid 2: Lower limit		
005	SnsOutCntAvK	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmissions for the toner near-end sensor for Bk.		
006	SnsOutCntAvY	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmissions for the toner near-end sensor for Ye		
007	SnsOutCntAvM	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmissions for the toner near-end sensor for Ma		
008	SnsOutCntAvC	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmissions for the toner near-end sensor for Cy		
011	CnsmRate:SplyK	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		
012	CnsmRate:SplyY	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		

013	CnsmRate:SplyM	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		
014	CnsmRate:SplyC	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		
015	T/HThresh:LL	*ENG	[0.00 to 70.00 / 4.00 / 0.01 g/m ² /step]
	Temperature and humidity threshold to determine LL environment.		
016	T/HThresh:HH	*ENG	[0.00 to 70.00 / 16.00 / 0.01 g/m ² /step]
	Temperature and humidity threshold to determine HH environment.		

3516	[Refresh Mode]		
001	Print Area K	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judgement to execution of last toner refreshment for Bk.		
002	Print Area C	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judgement to execution of last toner refreshment for Cy.		
003	Print Area M	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judgement to execution of last toner refreshment for Ma.		
004	Print Area Y	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judgement to execution of last toner refreshment for Ye.		
005	Run Distance K	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	Run distance of OPC drum from judgement to execution of last toner refreshment for Bk.		
006	Run Distance C	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	Run distance of OPC drum from judgement to execution of last toner refreshment for Cy.		
007	Run Distance M	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	Run distance of OPC drum from judgement to execution of last toner refreshment for Ma.		
008	Run Distance Y	*ENG	[0 to 999999999 / 0 / 1 mm/step]

	Run distance of OPC drum from judgement to execution of last toner refreshment for Ye.		
017	Pint RateThresh K	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Bk.		
018	Pint RateThresh C	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Cy.		
019	Pint RateThresh M	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Ma.		
020	Pint RateThresh Y	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Ye.		
021	Enable Flag BW	*ENG	[0 or 1 / 1 / 1 /step] DFU
	Enables or disables toner refreshment for black and white. <ul style="list-style-type: none"> • 0: Disables • 1: Enables 		
022	Enable Flag FC	*ENG	[0 or 1 / 1 / 1 /step] DFU
	Enables or disables toner refreshment for full color. <ul style="list-style-type: none"> • 0: Disables • 1: Enables 		
023	Wait Page Max	*ENG	[0 to 500 / 50 / 1 page/step] DFU
	Maximum output pages from when the execution condition is satisfied.		
024	Wait Page Bk	*ENG	[0 to 500 / 0 / 1 page/step]
	Black output pages from when the execution condition is satisfied.		

025	Exec Count K	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Bk.		
026	Exec Count C	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Cy.		
027	Exec Count M	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Ma.		
028	Exec Count Y	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Ye.		
037	Wait Page Fc	*ENG	[0 to 500 / 0 / 1 page/step]
	Full color output pages from when the execution condition is satisfied.		

3517	[Toner Input]		
	-		
001	Enable Flag K	*ENG	[0 or 1 / 1 / 1 /step] DFU
	Enables or disables toner input for Bk. <ul style="list-style-type: none"> • 0: Disables • 1: Enables 		
002	Enable Flag C	*ENG	[0 or 1 / 0 / 1 /step] DFU
	Enables or disables toner input for Cy. <ul style="list-style-type: none"> • 0: Disables • 1: Enables 		
003	Enable Flag M	*ENG	[0 or 1 / 0 / 1 /step] DFU
	Enables or disables toner input for Ma. <ul style="list-style-type: none"> • 0: Disables • 1: Enables 		

	Enable Flag Y	*ENG	[0 or 1 / 0 / 1 /step] DFU
004	Enables or disables toner input for Ye. <ul style="list-style-type: none"> • 0: Disables • 1: Enables 		
	Run Distance K	*ENG	[0 to 999999999 / 0 / 1 mm/step]
005	OPC drum running distance after previous execution for toner input to the cleaning blade.		
	Run Distance C	*ENG	[0 to 999999999 / 0 / 1 mm/step]
006	OPC drum running distance after previous execution for toner input to the cleaning blade.		
	Run Distance M	*ENG	[0 to 999999999 / 0 / 1 mm/step]
007	OPC drum running distance after previous execution for toner input to the cleaning blade.		
	Run Distance Y	*ENG	[0 to 999999999 / 0 / 1 mm/step]
008	OPC drum running distance after previous execution for toner input to the cleaning blade.		

3521	[Drum Stop Time]		
	Displays the time when the drum stopped.		
001	Year	*ENG	[0 to 99 / - / 1 year/step]
002	Month	*ENG	[1 to 12 / - / 1 month/step]
003	Day	*ENG	[1 to 31 / - / 1 day/step]
004	Hour	*ENG	[0 to 23 / - / 1 hour/step]
005	Minute	*ENG	[0 to 59 / - / 1 minute/step]

3522	[Procon Environ]		
	Displays the latest temperature when process control was executed.		
001	Temperature	*ENG	[-1280 to 1270 / 0 / 0.1 deg/step]
	Displays the latest relative humidity when process control was executed.		
002	Rel Humidity	*ENG	[0 to 1000 / 0 / 0.1 %RH/step]
	Displays the latest relative humidity when process control was executed.		

003	Abs Humidity	*ENG	[0 to 1000 / 0 / 0.1 g/m ³ /step]
	Displays the latest absolute humidity when process control was executed.		

3523	[Procon Time]		
	Displays the latest date and time when process control was executed.		
001	Year	*ENG	[0 to 99 / 0 / 1 year/step]
002	Month	*ENG	[0 to 12 / 1 / 1 month/step]
003	Day	*ENG	[0 to 31 / 1 / 1 day/step]
004	Hour	*ENG	[0 to 23 / 0 / 1 day/step]
005	Minute	*ENG	[0 to 59 / 0 / 1 minute/step]

3524	[Unit Change]		
	Displays a request to execute process control when the unit is changed. 0: OFF, 1: ON		
001	Trans Belt	*ENG	[0 or 1 / 0 / 1 /step]
002	PCDU:K	*ENG	[0 or 1 / 0 / 1 /step]
003	PCDU:YMC	*ENG	[0 or 1 / 0 / 1 /step]

3529	[Procon Interval]		
	Displays the page counter since the last process control was executed.		
006	Page Cnt:BW	*ENG	[0 to 5000 / - / 1 sheets/step]
	Displays the page counter since the last process control was executed.		
007	Page Cnt:FC	*ENG	[0 to 5000 / - / 1 sheets/step]
	Displays the page counter since the last process control was executed.		
011	CnsmRate_Upper	*ENG	[0 to 100 / 100 / 1 %/step]
	Controls process control execution when the consumption rate is higher than the upper limit.		
012	CnsmRate_Lower	*ENG	[100 to 0 / 0 / 1 %/step]
	Controls process control execution when the consumption rate is lower than the lower limit.		

3611		[Chrg DC Control]	
		Displays the charge DC bias when printing.	
001	Std Speed: K	*ENG	[300 to 1350 / 1100 / 1 -V/step]
002	Std Speed: C	*ENG	[300 to 1350 / 1100 / 1 -V/step]
003	Std Speed: M	*ENG	[300 to 1350 / 1100 / 1 -V/step]
004	Std Speed: Y	*ENG	[300 to 1350 / 1100 / 1 -V/step]
021	Low Speed: K	*ENG	[300 to 1350 / 1100 / 1 -V/step]
022	Low Speed: C	*ENG	[300 to 1350 / 1100 / 1 -V/step]
023	Low Speed: M	*ENG	[300 to 1350 / 1100 / 1 -V/step]
024	Low Speed: Y	*ENG	[300 to 1350 / 1100 / 1 -V/step]
031	UpperLimit	*ENG	[900 to 1300 / 1300 / 1 -V/step]
	Displays the upper limit of the charge DC bias to set.		
032	LowerLimit	*ENG	[900 to 1300 / 900 / 1 -V/step]
	Displays the lower limit of the charge DC bias to set.		

3612		[Dev DC Control] DFU	
001	Std Speed: K	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Bk when printing.		
002	Std Speed: C	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Cy when printing.		
003	Std Speed: M	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Ma when printing.		
004	Std Speed: Y	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Ye when printing.		
021	Low Speed: K	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Bk when printing at mid / low speed.		

022	Low Speed: C	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Cy when printing at mid / low speed.		
023	Low Speed M	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Ma when printing at mid / low speed.		
024	Low Speed Y	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Ye when printing at mid / low speed.		
031	MUSIC Std: K	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Bk when MUSIC is executed.		
032	MUSIC Std: C	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Cy when MUSIC is executed.		
033	MUSIC Std: M	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Ma when MUSIC is executed.		
034	MUSIC Std: Y	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays the development bias for Ye when MUSIC is executed.		

3613	[LED Strob Time Op]		
001	Std Speed: K	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Bk when printing.		
002	Std Speed: C	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Cy when printing.		
003	Std Speed: M	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Ma when printing.		
004	Std Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Ye when printing.		
021	Low Speed: K	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Bk when printing at low speed.		

022	Low Speed: C	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Cy when printing at low speed.		
023	Low Speed: M	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Ma when printing at low speed.		
024	Low Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Ye when printing at low speed.		
031	Ppattern: K	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Bk when a pattern is drawn on the OPC drum.		
032	Ppattern: C	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Cy when a pattern is drawn on the OPC drum.		
033	Ppattern: M	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Ma when a pattern is drawn on the OPC drum.		
034	Ppattern: Y	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays the exposure amount for Ye when a pattern is drawn on the OPC drum.		
051	MUSIC	*ENG	[0 to 200 / 100 / 1 %/step]
	Strobe time coefficient when a MUSIC pattern is created. Indicates the correction percentage for the time set by SP3613-001 to 004. Do not change this SP because there is a possibility that MUSIC will fail if the value is changed.		

3622	[Dev Pot :Set]		
	Displays the development potential. Development potential is the potential difference between the electrostatic latent image potential and the development bias.		
001	K	*ENG	[0 to 800 / - / 1 V/step]
002	C	*ENG	[0 to 800 / - / 1 V/step]
003	M	*ENG	[0 to 800 / - / 1 V/step]
004	Y	*ENG	[0 to 800 / - / 1 V/step]

3628	[Ppattern:Set]		
	Displays the difference between pattern scanning time when MUSIC is executed and standard time.		
001	OffsetTime:K	*ENG	[-100 to 100 / - / 1 ms/step]
002	OffsetTime:C	*ENG	[-100 to 100 / - / 1 ms/step]
003	OffsetTime:M	*ENG	[-100 to 100 / - / 1 ms/step]
004	OffsetTime:Y	*ENG	[-100 to 100 / - / 1 ms/step]
005	OffsetTime:BW	*ENG	[-100 to 100 / - / 1 ms/step]

3630	[Dev gamma :Disp]		
	Displays the latest development gamma.		
001	Current:K	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]
002	Current:C	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]
003	Current:M	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]
004	Current:Y	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]

3631	[Dev Start Vol Vk]		
	Displays the latest development starting voltage.		
001	K	*ENG	[-300 to 300 / - / 1 -V/step]
002	C	*ENG	[-300 to 300 / - / 1 -V/step]
003	M	*ENG	[-300 to 300 / - / 1 -V/step]
004	Y	*ENG	[-300 to 300 / - / 1 -V/step]

3632	[Hlftn:Slope alpha]		
	Displays the current half tone slope.		

001	Current:K	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/m ² /-100V/step]
002	Current:C	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/m ² /-100V/step]
003	Current:M	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/m ² /-100V/step]
004	Current:Y	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/m ² /-100V/step]

3633	[Hlftn:Intcpt beta]		
	Displays the halfone intercept slope.		
001	Current:K	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² /step]
002	Current:C	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² /step]
003	Current:M	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² /step]
004	Current:Y	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² /step]

3800	[TN Collec. Bottle]		
	-		
017	Days bfr End	*ENG	[0 to 2 / 1 / 1 days/step]
	Sets toner collection bottle near end timing. 0: Early 1: Normal 2: Late		

SP5-XXX (Mode)

5110	[PowerON LowPower]		
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001	Non-use Time	*ENG	[1 to 60 / 12 / 1 minute/step]
	Threshold whether or not to set BW text mode when the printer is turned on. Bk text mode is to print Bk only and when printing a predetermined ratio. It suppresses the TEC when BW text mode is on.		
5803	[INPUT CHECK]		
001	PSIZE&TRYSET	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: A4 SEF 2: A4 LEF 3: A5 SEF 4: A5 LEF 5: A6 SEF 6: DLT SEF 7: LG SEF 8: LT SEF 9: LT LEF 10: Custom 11: Folio 12: Executive 13: 16K 14: 8K 15: Tray not set		
004	PAPEND_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the by-pass paper end sensor. 0: paper remaining 1: paper end		
005	HANDBP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Base plate goes down 1: Base plate goes up		
006	HAND_SNS	ENG	[0 or 1 / 0 / 1/step]

	0: Paper detected 1: No paper detected		
008	PAPOUT_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
009	PEFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper not full 1: Paper full		
010	PAPERON_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
013	DUP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
015	REG_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
018	TE_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
019	TE_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
020	TE_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
021	TE_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining		

	1: Toner end		
024	INTERLOCK_+24VS1	ENG	[0 or 1 / 0 / 1/step]
	0: +24VS1 On 1: +24VS1 Off		
025	INTERLOCK_+24VS2	ENG	[0 or 1 / 0 / 1/step]
	0: +24VS2 On 1: +24VS2 Off		
026	INTERLOCK_+5VS	ENG	[0 or 1 / 0 / 1/step]
	0: +5VS On 1: +5VS Off		
032	TONERBTLSET_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the waste toner bottle set sensor. 0: Set 1: Not set		
033	TONERFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the waste toner overflow sensor. 0: Not full 1: Full		
034	ITBNEW_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
035	MINFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
036	FUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
037	PSUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]

	0: Normal 1: Error		
048	ITB_TCSP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Abutting 1: Spaced		
049	FEEDMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
050	BWMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
051	FUMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
052	COLMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
053	TRANSMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
054	HVP_ERR_D	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output for separation. If the error is detected, the machine returns SC460-00. 0: Error 1: Normal		
055	HVP_ERR_1	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output for charge and development. If the error is detected, the machine returns SC490-00. 0: Error		

	1: Normal		
056	HVP_ERR_2	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output for image transfer and paper transfer. If the error is detected, the machine returns SC490-01. 0: Abutting 1: Spaced		
058	FUNEW_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
060	FUSET_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
062	FUCOMP	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: High temp. detected		
072	EGB_VER	ENG	[0 to 15 / 0 / 1/step]
	Increases 1 if version is increased.		
077	BANK_PE_SNS1	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
078	BANK_PE_SNS2	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
079	BANK_PE_SNS3	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
080	BANK_FEED_SNS1	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected		

	1: Paper detected		
081	BANK_FEED_SNS2	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected 1: Paper detected		
082	BANK_FEED_SNS3	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected 1: Paper detected		
083	BANK_500/250_1	ENG	[0 or 1 / 0 / 1/step]
	Indicates that the first stage (tray 2) is a 500-sheet tray. 0: 500 1: Not used		
084	BANK_500/250_2	ENG	[0 or 1 / 0 / 1/step]
	Indicates that the second stage (tray 3) is a 500-sheet tray. 0: 500 1: Not used		
085	BANK_500/250_3	ENG	[0 or 1 / 0 / 1/step]
	Indicates that the third stage (tray 4) is a 500-sheet tray. 0: 500 1: Not used		
086	BANK_PSIZE_1	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF		

	12: LT LEF 14: Custom 15: Tray not set		
087	BANK_PSIZE_2	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set		
088	BANK_PSIZE_3	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set		
089	BANK_SET	ENG	[0 to 3 / 0 / 1/step]

Number of optional paper tray units set			
090	BANK_MT_LOCK_1	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
091	BANK_MT_LOCK_2	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
092	BANK_MT_LOCK_3	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
100	PCDUNEW_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
101	PCDUNEW_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
102	PCDUNEW_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
103	PCDUNEW_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
104	PCDUSET_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
105	PCDUSET_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		

106	PCDUSET_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
107	PCDUSET_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
115	Door Open Detect	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the interlock switches. 0: Door closed 1: Door opened		
116	Temperature	ENG	[0 to 999 / 0 / 1 deg/step]
	Displays the current temperature.		
117	Relative Humidity	ENG	[0 to 999 / 0 / 1 %RH/step]
	Displays the current relative humidity.		
118	Absolute Humidity	ENG	[0.00 to 99.99 / 0.00 / 0.01 %RH/step]
	Displays the current absolute humidity.		

5804	[OUTPUT CHECK]		
003	BWMT_144mm/s	ENG	[0 or 1 / 0 / 1/step] 0: OFF, 1: ON
	When using this SP, remove the Bk toner cartridge / Bk PCDU. Toner may contaminate the inside of the machine.		
004	BWMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove the Bk toner cartridge / Bk PCDU. Toner may contaminate the inside of the machine.		
005	BWMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove the Bk toner cartridge / Bk PCDU. Toner may contaminate the inside of the machine.		

010	FUMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
011	FUMT_mt_90mm/s	ENG	[0 or 1 / 0 / 1/step]
012	FUMT_t_90m/s	ENG	[0 or 1 / 0 / 1/step]
013	FUMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
017	COLMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove the FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate the inside of the machine.		
018	COLMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove the FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate the inside of the machine.		
019	COLMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove the FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate the inside of the machine.		
024	TRANSMT_144m/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDUs. This may damage the PCDUs and transfer belt, and would affect print image quality.		
025	TRANSMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDUs. This may damage the PCDUs and transfer belt, and would affect print image quality.		
026	TRANSMT_60m/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDUs. This may damage the PCDUs and transfer belt, and would affect print image quality.		
031	FEEDMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
032	FEEDMT_mt_90mm/s	ENG	[0 or 1 / 0 / 1/step]
033	FEEDMT_t_90mm/s	ENG	[0 or 1 / 0 / 1/step]
034	FEEDMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
035	FEEDMT_1TCSP	ENG	[0 or 1 / 0 / 1/step]
	Revolve using transected motor speed of the 1st transfer		

036	FEEDMT_HANDBP	ENG	[0 or 1 / 0 / 1/step]
	To lift the manual feed base plate, reverse drive the paper feed motor, and rotate at a speed for lifting.		
039	REG_CL	ENG	[0 or 1 / 0 / 1/step]
040	MID_CL	ENG	[0 or 1 / 0 / 1/step]
041	PAP_CL	ENG	[0 or 1 / 0 / 1/step]
042	HAND_CL	ENG	[0 or 1 / 0 / 1/step]
043	DUP_MID_CL	ENG	[0 or 1 / 0 / 1/step]
044	DUP_OUT_CL	ENG	[0 or 1 / 0 / 1/step]
045	DUP_SOL	ENG	[0 or 1 / 0 / 1/step]
	<p>Drives the switching solenoid to transfer the paper to the duplex unit.</p> <p>0: Off – moves the solenoid to the output tray direction.</p> <p>1: On – moves the solenoid to the duplex unit direction.</p> <p>Do not turn on more than a minute; this might damage the machine because of high heat.</p>		
046	PAPOUT_SOL	ENG	[0 or 1 / 0 / 1/step]
	<p>Drives the solenoid for the idler gear to reverse drive the paper exit roller.</p> <p>0: Off</p> <p>1: On – the idler gear works to transfer the paper to the duplex unit.</p> <p>Do not turn on more than a minute; this might damage the machine because of high heat.</p>		
083	1TCSP_CL	ENG	[0 or 1 / 0 / 1/step]
091	TN_CL_K	ENG	[0 or 1 / 0 / 1/step]
092	TN_CL_C	ENG	[0 or 1 / 0 / 1/step]
093	TN_CL_M	ENG	[0 or 1 / 0 / 1/step]
094	TN_CL_Y	ENG	[0 or 1 / 0 / 1/step]
100	MIN_FAN_H	ENG	[0 or 1 / 0 / 1/step]
101	MIN_FAN_L	ENG	[0 or 1 / 0 / 1/step]
102	FU_FAN_H	ENG	[0 or 1 / 0 / 1/step]

103	FU_FAN_L	ENG	[0 or 1 / 0 / 1/step]
107	PSU_FAN_H	ENG	[0 or 1 / 0 / 1/step]
108	PSU_FAN_L	ENG	[0 or 1 / 0 / 1/step]
130	HVP_C_K	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off</p> <p>1: On – Output -1100V</p> <p>There is no SP to change the output voltage.</p> <p>When turning this ON, make sure to remove the Bk toner cartridge and the Bk PCDU. The OPC Drum might be scratched by the discharge.</p> <p>SP5804-147 must be ON to output the voltage.</p>		
131	HVP_C_C	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off</p> <p>1: On – Output -1100V</p> <p>There is no SP to change the output voltage.</p> <p>When turning this ON, make sure to remove the Cy toner cartridge and the Cy PCDU. The OPC Drum might be scratched by the discharge.</p> <p>SP5804-148 must be ON to output the voltage.</p>		
132	HVP_C_M	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off</p> <p>1: On – Output -1100V</p> <p>There is no SP to change the output voltage.</p> <p>When turning this ON, make sure to remove the Ma toner cartridge and the Ma PCDU. The OPC Drum might be scratched by the discharge.</p> <p>SP5804-148 must be ON to output the voltage.</p>		
133	HVP_C_Y	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off</p> <p>1: On – Output -1100V</p> <p>There is no SP to change the output voltage.</p> <p>When turning this ON, make sure to remove the Ye toner cartridge and the Ye PCDU. The OPC Drum might be scratched by the discharge.</p> <p>SP5804-148 must be ON to output the voltage.</p>		

134	HVP_DV_K	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change the output voltage. SP5804-147 must be ON to output the voltage.		
135	HVP_DV_C	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change the output voltage. SP5804-147 must be ON to output the voltage.		
136	HVP_DV_M	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change the output voltage. SP5804-147 must be ON to output the voltage.		
137	HVP_DV_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change the output voltage. SP5804-147 must be ON to output the voltage.		
139	HVP_T1_K	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change the output voltage.		
140	HVP_T1_C	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change the output voltage.		
141	HVP_T1_M	ENG	[0 or 1 / 0 / 1/step]

	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
142	HVP_T1_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change the output voltage.		
143	HVP_T2_+	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +30uA There is no SP to change the output value.		
144	HVP_T2_-	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -800V There is no SP to change the output voltage.		
145	HVP_D	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +2000V There is no SP to change the output voltage.		
147	HVP_BION_BK	ENG	[0 or 1 / 0 / 1/step]
	SP to output charging and development for Bk. This SP must be “ON” to enable SP5804-130 / SP5804-134 to output voltage.		
148	HVP_BION_COL	ENG	[0 or 1 / 0 / 1/step]
	SP to output charge and development for Bk. This SP must be “ON” to enable SP5804-135 to SP5804-137 to output the voltage.		
185	TM_0	ENG	[0 or 1 / 0 / 1/step]
186	TM_1	ENG	[0 or 1 / 0 / 1/step]
224	BANK_MT1:144mm/s	ENG	[0 or 1 / 0 / 1/step]

225	BANK_MT1:90mm/s	ENG	[0 or 1 / 0 / 1/step]
226	BANK_MT1:60mm/s	ENG	[0 or 1 / 0 / 1/step]
227	BANK_MT2:144mm/s	ENG	[0 or 1 / 0 / 1/step]
228	BANK_MT2:90mm/s	ENG	[0 or 1 / 0 / 1/step]
229	BANK_MT2:60mm/s	ENG	[0 or 1 / 0 / 1/step]
230	BANK_MT3:144mm/s	ENG	[0 or 1 / 0 / 1/step]
231	BANK_MT3:90mm/s	ENG	[0 or 1 / 0 / 1/step]
232	BANK_MT3:60mm/s	ENG	[0 or 1 / 0 / 1/step]
239	BANK_PAP_CL1	ENG	[0 or 1 / 0 / 1/step]
240	BANK_PAP_CL2	ENG	[0 or 1 / 0 / 1/step]
241	BANK_PAP_CL3	ENG	[0 or 1 / 0 / 1/step]
242	BANK_FEED_CL1	ENG	[0 or 1 / 0 / 1/step]
243	BANK_FEED_CL2	ENG	[0 or 1 / 0 / 1/step]
244	BANK_FEED_CL3	ENG	[0 or 1 / 0 / 1/step]
248	ON_DEMAND_2	ENG	[0 or 1 / 0 / 1/step]
	Do not execute. Design analysis use only. Adjusting this SP might damage the motors.		
249	ITBFU_NEWON	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – flows current to cut the new detection fuse of the Fusing unit. This SP only flows current; no new detection control is working.		
250	PCDU_NEWON	ENG	[0 or 1 / 0 / 1/step]
251	TEON_BK	ENG	[0 or 1 / 0 / 1/step]
252	TEON_COL	ENG	[0 or 1 / 0 / 1/step]
253	UPCOVER_SOL	ENG	[0 or 1 / 0 / 1/step]
	This SP controls the shutter to supply toner to the PCDU from the toner cartridge. If the top cover is opened, it is a spec to not open the shutter. Must to hear the sound to check if this solenoid is working.		

	When using this SP, remove all toner cartridges / PCDUs. Toner may contaminate the inside of the machine.		
254	5V_TMP_ON	ENG	[0 or 1 / 0 / 1/step]
	This SP supplies power to the thermopile to check the surface temperature of the fusing belt. Design analysis use only. Adjusting this SP might damage the thermopile.		
255	BankSerialComm	ENG	[0 or 1 / 0 / 1/step]
	Uses this to check the connection to the paper bank.		

5810	[Fusing SC Clear]		
001	Clear	ENG	[- / - / -] [Excute]
	Clears the error when the fusing SC occurred.		

5811	[Machine Info]		
002	Display:Serial	*ENG	[0 to 255 / 0 / 1/step]

5902	[AdjustControl]		
001	B/W Priority Mode	*ENG	[0 or 1 / 0 / 1 /step]
	Turn the monochrome printing priority mode on or off. This SP can reduce color toner in the BW printing mode if this SP is set to "1: ON". 0: OFF (default), 1: ON		

5903	[Test Print]			
001	Feed Tray	ENG	[0 to 4 / 0 / 1/step]	
	Sets the feed tray to print test printing executed by SP5-930-009.			
	0	Bypass	3	Tray3
	1	Tray1	4	Tray4
	2	Tray2	-	-
002	Duplex Setting	ENG	[0 or 1 / 0 / 1/step] 0: Single	

			1: Duplex
	Sets the duplex / single-sided setting to print test printing executed by SP5-930-009.		
003	Paper Size	ENG	[0 to 5 / 0 / 1/step] 0: A3 1: DLT 2: A4 SEF 3: A4 LEF 4: B5 SEF
	Sets the paper size to print test printing executed by SP5-930-009.		
	Color Mode	ENG	[0 to 6 / 0 / 1/step]
	Sets the color mode to print test printing executed by SP5-930-009. Red (Magenta + Yellow) Blue (Cyan + Magenta) Green (Yellow + Cyan)		
004	0	Bk	4 Red
	1	Cyan	5 Blue
	2	Magenta	6 Green
	3	Yellow	- -
	Test Pattern	ENG	[0 to 16 / 0 / 1/step]
	Sets the test pattern to print test printing executed by SP5-930-009.		
005	0	None	9 20mm SGrid
	1	V 1Line	10 1by1
	2	H 1Line	11 2by2
	3	V 2Line	12 4by4
	4	H 2Line	13 Full Dot
	5	V Grid	14 Belt
	6	H Grid	15 10mm Gray
	7	20mm Grid	16 20mm Gray

	8	SGrid	-	-
006	Paper Kind		ENG	[0 to 2 / 0 / 1/step]
	Sets the paper weight and paper type to print test printing executed by SP5-930-009.			
	0	Plain Paper	Normal Speed (144mm/s)	
	1	Thick1-2	Mid Speed (90mm/s)	
	2	Thick3	Low Speed (60mm/s)	
007	Print Page		ENG	[0 to 255 / 1 / 1/step]
	Sets the print page to print test printing executed by SP5-930-009. If this SP is set to "0", it prints an unlimited number of copies. To exit the test printing, pull out the paper tray of the machine.			
008	Freerun Setting		ENG	[0 or 1 / 0 / 1/step] 0: Normal 1: FreeRun
	Sets the free-run on / off to print test printing executed by SP5-930-009. If this SP is set to "on", it creates a test pattern image on the image transfer belt but doesn't print on the paper. It doesn't control the paper feed clutch but it still detects any paper remaining, so paper must be set in the tray.			
009	Print Start		ENG	[- / - / -] [Execute]
	Executes the test print with parameters set by SP5930-001 to 008			

5930	[Meter Click Ch.]		
001	Meter Click Ch.	*ENG	Enables or disables the Meter Charge mode. When enabling the Meter Charge mode, the "Counter" menu is added to the user menu. [0 or 1 / 0 / 1/step] 0: OFF, 1: ON
010	PCDU	*ENG	[0 or 1 / 1 / 1/step]
	• 0: OFF (End notification on)		

	<ul style="list-style-type: none"> • 1: ON (End notification off) • Displays or does not display the Supply End Option. This SP is activated only when the SP5930-001 is "1 (ON)". 		
014	Trans Unit	*ENG	[0 or 1 / 1 / 1/step]
	<ul style="list-style-type: none"> • 0: OFF (End notification on) • 1: ON (End notification off) • Displays or does not display the Supply End Option. This SP is activated only when the SP5930-001 is "1 (ON)". 		
016	Fusing Unit	*ENG	[0 or 1 / 1 / 1/step]
	<ul style="list-style-type: none"> • 0: OFF (End notification on) • 1: ON (End notification off) • Displays or does not display the Supply End Option. This SP is activated only when the SP5930-001 is "1 (ON)". 		

5988	[ID Setting]		
001	Maintenance ID	*ENG	[0 to 255 / 0 / 1/step]
002	Brand ID	*ENG	[0 to 255 / 0 / 1/step] DFU

SP7-XXX (Data Log)

7801	[ROM Info]		
	Displays ROM numbers in the machine.		
002	ROM No.	ENG	[- / - / -]
102	Firmware Version	ENG	[- / - / -]

7803	[PM Counter]		
	Displays the PM counter for each unit.		
002	Page: PDCU: Bk	*ENG	Displays the number of pages printed. [0 to 999999 / 0 / 1 page/step]
003	Page: PDCU: C	*ENG	

004	Page: PDCU: M	*ENG	
005	Page: PDCU: Y	*ENG	
014	Page: ITB Unit	*ENG	
016	Page: Fusing Unit	*ENG	
019	Page: PTR Unit	*ENG	
031	Dist: PDCU: Bk	*ENG	Displays the rotation distance. [0 to 999999999 / 0 / 1 mm/step]
032	Dist: PDCU: C	*ENG	
033	Dist: PDCU: M	*ENG	
034	Dist: PDCU: Y	*ENG	
043	Dist: ITB Unit	*ENG	
044	Dist: ITBUnit: FC	*ENG	Displays the rotation distance. Counts the rotation distance when doing full color printing and the PCDU of YMC is touching the image transfer belt unit. It is used to count only, not to control. [0 to 999999999 / 0 / 1 mm/step]
045	Dist: Fusing Unit	*ENG	Displays the rotation distance. [0 to 999999999 / 0 / 1 mm/step]
048	Dist: PTR	*ENG	
110	Pass Dist: PTR	*ENG	Distance is used to determine lifecycle, and pass distance is used to control image stabilization. PTR distance is used to determine lifecycle, and PTR pass distance is used to control image stabilization. Fusing distance is used to determine lifecycle, and fusing pass distance is NOT used to control image stabilization, only used to count. [0 to 999999999 / 0 / 1 mm/step]
112	Pass Dist: Fusing	*ENG	

7804	[PM Counter.Reset]
	Clears the PM counter.

	Press the Enter key after the machine asks "Execute?", which will store the PM counter value in SP7-906 (PM Counter - Previous) and reset the value of the current PM counter (SP7-803) to "0".	
002	PCU: Bk	ENG
003	PCU: C	ENG
004	PCU: M	ENG
005	PCU: Y	ENG
017	ITB Unit	ENG
019	Fusing Unit	ENG
022	PTR Unit	ENG
030	Consump	ENG
050	Life:PCU: Bk	ENG
051	Life:PCU: C	ENG
052	Life:PCU: M	ENG
053	Life:PCU: Y	ENG
060	Life:ITB Unit	ENG
061	Life:PTR Unit	ENG
070	Life:Fusing Unit	ENG
100	All	ENG

Clears the unit counter for each unit.

[- / - / -]

[Execute]

DFU

Executing this SP does not work after mass production.

[- / - / -]

[Execute]

Clears the unit counter for each unit.

[- / - / -]

[Execute]

Clears the unit counter for all units.

DFU

This SP is used to clear the counter before shipment from the factory. It is recommended not to use this SP in the field.

[- / - / -]

[Execute]

7850	[MachineCounter]		
	Parameter to calculate ID log saving data.		
001	Total Counter	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Total sheets printed by this machine. A3 counts as 1 sheet.		
002	Total Counter FC	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Total number of sheets printed in full color by this machine. A3 counts as 1 sheet.		
003	Duplex	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Total number of sheets printed in duplex mode. A3 counts as 1 sheet.		
004	Size:DL/A3	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that DLT / A3 have been through the machine. (%)		
005	Size:LT/A4	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that LT / A4 have been through the machine. (%)		
006	Pkind:Normal	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that plain paper has been through the machine. (%)		
007	Pkind:Recycle	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that recycle paper has been through the machine. (%)		
008	Pkind:MidThick	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that mid-thick paper has been through the machine. (%)		
009	Pkind:Glossy	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that glossy paper has been through the machine. (%)		
010	Pkind:Post	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that postcards have been through the machine. (%)		
011	Feed:Tray1	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed by tray 1. (%)		
012	Feed:Tray2	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed by tray 2. (%)		

013	Feed:Tray3	*ENG	[0 to 0xFFFFFFFF / 0 / 1page/step]
	Displays ratio of total counter that are printed by tray 3. (%)		
014	Feed:Tray4	*ENG	[0 to 0xFFFFFFFF / 0 / 1page/step]
	Displays ratio of total counter that are printed by tray 4. (%)		
015	Env:HH	*ENG	[0 to 0xFFFFFFFF / 0 / 1page/step]
	Displays ratio of total counter that are printed in HH environment defined by SP2302-001. (%)		
016	Env:HL	*ENG	[0 to 0xFFFFFFFF / 0 / 1page/step]
	Displays ratio of total counter that are printed in HL environment defined by SP2302-001. (%)		
017	Env:LH	*ENG	[0 to 0xFFFFFFFF / 0 / 1page/step]
	Displays ratio of total counter that are printed in LH environment defined by SP2302-001. (%)		
018	Env:LL	*ENG	[0 to 0xFFFFFFFF / 0 / 1page/step]
	Displays ratio of total counter that are printed in LL environment defined by SP2302-001. (%)		
019	Coverage:Bk	*ENG	Calculation of dot coverage as A4 conversion for each color and counted as a cumulative value. [0 to 0xFFFFFFFF / 0 / 1page/step]
020	Coverage:C	*ENG	
021	Coverage:M	*ENG	
022	Coverage:Y	*ENG	

7853	[Replacement Cnt]		
001	PCDU: Bk	*ENG	Displays the replacement counter. [0 to 999 / - / 1time/step]
002	PCDU: C	*ENG	
003	PCDU: M	*ENG	
004	PCDU: Y	*ENG	
009	Cartridge: Bk	*ENG	Displays the replacement counter. [0 to 999 / - / 1time/step]
010	Cartridge: C	*ENG	

011	Cartridge: M	*ENG	Displays the replacement counter. [0 to 999 / - / 1time/step]
012	Cartridge: Y	*ENG	
013	ITB Unit	*ENG	
015	Fusing Unit	*ENG	
018	PTR Unit	*ENG	

7854	[CCW Rotate Cnt]		
001	ITB Unit	*ENG	Displays the number of reverse rotations of the image transfer belt to clean paper dust. [0 to 9999 / - / 1time/step]

7905	[Life Counter]		
001	Page: PCDU: Bk	*ENG	Displays the number of pages printed to make a life end decision. [0 to 999999 / - / 1 page/step]
002	Page: PCDU: C	*ENG	
003	Page: PCDU: M	*ENG	
004	Page: PCDU: Y	*ENG	
013	Page: ITB Unit	*ENG	
015	Page: Fusing Unit	*ENG	
018	Page: PTR Unit	*ENG	
031	Dist: PCDU: Bk	*ENG	Displays the rotation distance to make a life end decision. [0 to 999999999 / - / 1 mm/step]
032	Dist: PCDU: C	*ENG	
033	Dist: PCDU: M	*ENG	
034	Dist: PCDU: Y	*ENG	
043	Dist: ITB Unit	*ENG	
045	Dist: Fusing Unit	*ENG	
048	Dist: PTR	*ENG	
061	Dist(%): PCDU:Bk	ENG	Displays the threshold of rotation distance to make a life end decision.

062	Dist(%): PCDU:C	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step] 0: New 100: reached life end It counts up to 250% and stays until new unit is installed.
063	Dist(%): PCDU:M	ENG	
064	Dist(%): PCDU:Y	ENG	
073	Dist(%): ITB Unit	ENG	
075	Dist(%): Fusing	ENG	
078	Dist(%): PTR	ENG	
091	Page(%): PCDU: Bk	ENG	Displays the threshold of page count to make a life end decision. [0.0 to 250.0 / 0.0 / 0.1%/step] 0: New 100: reached life end It counts up to 250% and stays until a new unit is installed.
092	Page(%): PCDU: C	ENG	
093	Page(%): PCDU: M	ENG	
094	Page(%): PCDU: Y	ENG	
103	Page(%): ITB Unit	ENG	
105	Page(%): Fuser	ENG	
108	Page(%): PTR Unit	ENG	

7906	[Prev. Counter] Previous Unit Counter Display		
	Copies the life counter to this SP as the previous counter when the life counter is cleared.		
001	Page: PCDU: Bk	*ENG	Displays the number of pages printed with the previous unit counter. [0 to 999999 / - / 1 page/step]
002	Page: PCDU: C	*ENG	
003	Page: PCDU: M	*ENG	
004	Page: PCDU: Y	*ENG	
013	Page: ITB Unit	*ENG	
015	Page: Fusing Unit	*ENG	
018	Page: PTR Unit	*ENG	
031	Dist: PCDU: Bk	*ENG	Displays the rotation distance with the previous unit counter. [0 to 999999999 / - / 1 mm/step]
032	Dist: PCDU: C	*ENG	
033	Dist: PCDU: M	*ENG	

034	Dist: PCDU: Y	*ENG	
043	Dist: ITB Unit	*ENG	
045	Dist: Fusing Unit	*ENG	
048	Dist: PTR	*ENG	

7907	[Life(%) Counter]		
001	PCDU: Bk	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step]
002	PCDU: C	ENG	
003	PCDU: M	ENG	
004	PCDU: Y	ENG	
005	PDCU: FC	ENG	
013	ITB Unit	ENG	
014	ITB&PTR Unit	ENG	
015	Fusing Unit	ENG	
018	PTR Unit	ENG	

7931	[Toner Bottle Bk]		
001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product Type ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Info	*ENG	
009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]

010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.
012	Toner Remaining	*ENG	Displays the remaining toner amount. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1 /step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7932	[Toner Bottle C]		
001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product Type ID	*ENG	
006	Color ID	*ENG	

007	Maintenance ID	*ENG	
008	New Info	*ENG	
009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]
010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.
012	Toner Remaining	*ENG	Displays the remaining toner amount. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1 /step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7933	[Toner Bottle M]		
001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	

003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product Type ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Info	*ENG	
009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]
010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.
012	Toner Remaining	*ENG	Displays the remaining toner amount. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1 /step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7934	[Toner Bottle Y]		
001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Info	*ENG	
009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]
010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.
012	Toner Remaining	*ENG	Displays the remaining toner amount. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1 /step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end.

			[0 to 0xFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7935	[Toner Log: Bk]		
	Displays the toner bottle information log for Bk		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]
002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]
003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]
005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]
006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7936	[Toner Log: C]		
	Displays the toner bottle information log for Cy		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]
002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]
003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]
005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]
006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7937	[Toner Log: M]		
	Displays the toner bottle information log for Ma		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]

002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]
003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]
005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]
006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7938	[Toner Log: Y]		
	Displays the toner bottle information log for Ye		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]
002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]
003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]

005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]
006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7952	[PM Yield Setting]		
021	Days Thres:PCDU: K	*ENG	<p>Sets the near end timing for Bk. Recommend to set by user tools. [0 to 2 / 1 / 1/step] 0: Notify Sooner, 1: Normal, 2: Notify Later</p>
022	Days Thres:PCDU: FC	*ENG	<p>Sets the near end timing for color. Recommend to set by user tools. [0 to 2 / 1 / 1/step] 0: Notify Sooner, 1: Normal, 2: Notify Later</p>

033	Days Thres:Trans	*ENG	Sets the near end timing for the image transfer unit. Recommend to set by user tools. [0 to 2 / 1 / 1/step] 0: Notify Sooner, 1: Normal, 2: Notify Later
035	Days Thres:Fuser	*ENG	Sets the near end timing for the fusing unit. Recommend to set by user tools. [0 to 2 / 1 / 1/step] 0: Notify Sooner, 1: Normal, 2: Notify Later

Updating the Firmware

Updating Firmware

Preparation

- If the SD card is blank, copy the entire "romdata" folder onto the SD card.
- If the card already contains the "romdata" folder, copy the "M109" folder onto the card.

If the card already contains folders up to "M109", copy the necessary firmware files (e.g. M109xxxx.fwu) into this folder.

↓ Note

- Do not put multiple machine firmware programs on the same SD card. Copy the only model firmware you want.

5

Updating Procedure

1. Turn the main power switch off.
2. Remove the slot cover (🔧 × 1).
3. Insert the SD card into SD Card Slot 2. Make sure the label on the SD card faces the front side of the machine.
4. Slowly push the SD card into the slot so it locks in place. You will hear it click. Make sure the SD card locks in place.

↓ Note

- To remove the SD, push it in to unlock the spring lock. Then release it so it pops out of the slot.
5. Disconnect the network cable if the machine is connected to a network.
 6. Switch the main power switch on. After about 45 seconds, the initial version update screen appears on the LCD in English.
 7. On the screen, touch the button or press the corresponding number key on the operation panel to select the item in the menu that you want to update.

ROM/NEW	What it means
ROM:	Tells you the number of the module and name of the version currently installed. The first line is the module number, the second line the version name.

ROM/NEW	What it means
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. Select "UpDate (#)" to start the update.

↓ Note

- The progress bar appears on the operation panel.
9. The "Update is Done" message appears on the operation panel after completing the updating. The message differs depending on the firmware that has been updated.
 10. Switch the machine main power switch off when you see the "Update is Done" message or follow the procedure that is displayed on the operation panel.
 11. Press in the SD card to release it. Then remove it from the slot.
 12. Switch the machine on for normal operation.

Error Messages

An error message shows in the first line if an error occurs during the download.

The error code consists of the letter "E" and a number (for example, "E24"). For details, refer to the Error Message Table. (Handling Firmware Update Errors in this section)

Firmware Update Error

If firmware update fails, an error code appears.

For example, E36 reports that the program which you wish to update is not in the machine or the data in the machine you wish to update does not correspond to the data in the card.

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	Make sure the SD card is inserted correctly.
21	Cannot access memory	HDD connection incorrect or replace hard disks.
22	Cannot decompress compressed data	Incorrect ROM data on the SD card, or data is corrupted.
23	Error occurred when ROM update program started	Controller program abnormal. If the second attempt fails, replace controller board.
24	SD card access error	Make sure SD card inserted correctly, or use another SD card.
30	No HDD available for stamp data download	HDD connection incorrect or replace hard disks.
31	Data incorrect for continuous download	Insert the SD card with the remaining data required for the download, the re-start the procedure.
32	Data incorrect after download interrupted	Execute the recovery procedure for the intended module download, then repeat the installation procedure.
33	Incorrect SD card version	Incorrect ROM data on the SD card, or data is corrupted.
34	Module mismatch - Correct module is not on the SD card)	SD update data is incorrect. Acquire the correct data (Japan, Overseas, OEM, etc.) then install again.
35	Module mismatch – Module on SD card is not for this machine	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.

36	Cannot write module – Cause other than E34, E35	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.
40	Engine module download failed	Replace the update data for the module on the SD card and try again, or replace the BCU board.
42	Operation panel module download failed	Replace the update data for the module on the SD card and try again, or replace the LCDC.
43	Stamp data module download failed	Replace the update data for the module on the SD card and try again, or replace the hard disks.
44	Controller module download failed	Replace the update data for the module on the SD card and tray again, or replace controller board.
50	Electronic confirmation check failed	SD update data is incorrect. The data on the SD card is for another machine. Acquire correct update data then install again.

Uploading/Downloading NVRAM Data

Uploading Content of NVRAM to an SD card

Do the following procedure to upload SP code settings from NVRAM to an SD card.

↓ Note

- All data that is stored in NV-RAM of the engine and controller is subject to update.

↓ Note

- This data should always be uploaded to an SD card before the NVRAM is replaced.
- Make sure that the write protection of an SD card is unlocked

1. Do SP5990 (SMC Print) before you switch the machine off. You will need a record of the NVRAM settings if the upload fails.

2. Switch the machine main power switch off.

3. Remove the SD slot cover.

4. Insert the SD card into SD card slot . Then switch the machine on.

5. Execute SP5824 (NVRAM Data Upload) and then press the “Execute” key.

6. The following files are copied to an NVRAM folder on the SD card when the upload procedure is finished. The file is saved to the following path and 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 download may fail if the SD card with the NVRAM data is damaged, or if the connection between the controller and EGB is defective.
- Do the download procedure again if the download fails.
- Do the following procedure if the second attempt fails:

Enter the NVRAM data manually using the SMC print you created before uploading the NVRAM data.

1. Switch the machine main power switch off.
2. Remove the SD slot cover.
3. Insert the SD card with the NVRAM data into SD Card Slot.
4. Switch the machine main power switch on.
5. Do SP5825(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
- Total: Full Color
- B&W/Single Color

Using the Debug Log

Overview

This machine provides a Save Debug Log feature that allows the Customer Engineer to save and retrieve error information for analysis.

Every time an error occurs, debug information is recorded in volatile memory. But this information is lost when the machine is switched off and on.

To capture this debug information, the Save Debug Log feature provides two main features:

- Switching on the debug feature so error information is saved directly to the HDD for later retrieval.
- Copying the error information from the HDD to an SD card.

Do the following procedure below to set up the machine so the error information is saved automatically to the HDD when a user has problems with the machine. Then ask the user to reproduce the problem.

5

Switching ON and Setting UP Save Debug Log

The debug information cannot be saved until the "Save Debug Log" function has been switched on and a target has been selected.

1. Enter the SP mode and switch the Debug Log Save feature on.

- Enter the SP mode.
- Select "Engine".
- On the LCD panel, open SP5857.

2. Under "5857 Debug Log Save", select "1 On/Off".

3. Enter "1", then press "OK". This switches the Save Debug Log feature on.

↓ Note

- The default setting is "0" (OFF). This feature must be switched on in order for the debug information to be saved.

4. Select the target destination where the debug information will be saved.

5. Under "5857 Debug Log Save", select "2 Target".

6. Enter "1", then press "OK". This switches the Save Debug Log feature on.

↓ Note

- Select "3 SD Card" to save the debug information directly to the SD card if it is inserted in the service slot.

7. Now select "5858" and specify the events that you want to record in the debug log. SP5858 (Debug Save When) provides the following items for selection.

1	Engine SC Error	Saves data when an engine-related SC code is generated.
2	Controller SC Error	Saves debug data when a controller-related SC Code is generated.
3	Any SC Error	Saves data only for the SC code that you specify by entering code number.
4	Jam	Saves data for jams.

Note

- More than one event can be selected.

Example 1: To Select Items 1, 2, 4

Press "1" for each selection.

Example 2: To Specify an SC Code

Select "3 Any SC Error", enter the 3-digit SC code number. This example shows an entry for SC670.

8. Select one or more memory modules for reading and recording debug information. Select "5859".

Under "5859" press the necessary key item for the module that you want to record.

Enter the appropriate 4-digit number. Then press "OK".

Note

- Refer to the two tables below for the 4-digit numbers to enter for each key.

The following keys can be set with the corresponding numbers. (The initials in parentheses indicate the names of the modules.)

4-Digit Entries for Keys 1 to 10

Key No.	Printer	Web
1		2222 (SCS)
2		14000 (SRM)
3		256 (IMH)
4		1000 (ECS)
5		1025 (MCS)

Key No.	Printer	Web
6	4400 (GPS)	5682 (NFA)
7	4500 (PDL)	6600 (WebDB)
8	4600 (GPS-PM)	3300 (PTS)
9	2000 (NCS)	6666 (WebSys)
10	2224 (BB)	2000 (NCS)

Note

- The default settings for Keys 1 to 10 are all zero ("0").

Key to Acronyms

Acronym	Meaning	Acronym	Meaning
ECS	Engine Control Service	NFA	Net File Application
GPS	GW Print Service	PDL	Printer Design Language
GSP-PM	GW Print Service – Print Module	PTS	Print Server
IMH	Image Memory Handler	SCS	System Control Service
MCS	Memory Control Service	SRM	System Resource Management
NCS	Network Control Service	WebDB	Web Document Box (Document Server)

9. The machine is now set to record the debugging information automatically on the HDD (the target selected with SP5857-002) for the events that you selected with SP5858 and the memory modules selected with SP5859.

Please keep the following important points in mind when you do this setting:

- Note that the number entries for Keys 1 to 5 are the same for the Printer, and Web memory modules.
- The initial settings are all zero.
- These settings remain in effect until you change them. Be sure to check all the settings, especially the settings for Keys 6 to 10. To switch off a key setting, enter a zero for that key.
- You can select any number of keys from 1 to 10 (or all) by entering the corresponding 4-digit numbers from the table.

- You cannot mix settings for the groups for 006 to 010. For example, if you want to create a PRINTER debug log you must select the settings from the 9 available selections for the “PRINTER” column only.
- One area of the disk is reserved to store the debug log. The size of this area is limited to 4 MB.

Retrieving the Debug Log from the HDD

1. Retrieve the debug log by copying it from the hard disk to an SD card.
2. Insert the SD card into slot 2 (service slot) of the machine.
3. Enter the SP mode and execute SP5857-009 (Copy HDD to SD Card (Latest 4 MB)) to write the debugging data to the SD card.
4. Use a card reader to copy the file and send it for analysis to your local Ricoh representative by email. You can also send the SD card by regular mail if you want.

5

Debug Log Codes

SP5857-015 Copy SD Card-to-SD Card: Any Desired Key

This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number. The copy operation is executed in the log directory of the SD card inserted in the same slot. (This function does not copy from one slot to another.) Each SD card can hold up to 4 MB of file data. Unique file names are created for the data during the copy operation to prevent overwriting files of the same name. This means that log data from more than one machine can be copied onto the same SD card. This command does not execute if there is no log on the HDD for the name of the specified key.

SP5857-016 Create a File on HDD to Store a Log

This SP creates a 32 MB file to store a log on the HDD. However, this is not a completely empty file. The created file will hold the number “2225” as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the HDD when the first log is stored on the HDD (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the HDD. With the file already created on the HDD for the log file, the data only needs to be recorded. A new log file does not need to be created. To create a new log file, do SP5857-011 to delete the debug log data from the HDD. Then do SP5857-016.

SP5857-017 Create a File on SD Card to Store a Log

This SP creates a 4 MB file to store a log on an SD card. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information. Even if this SP is not executed, a file is created on the SD card when the first log is stored on the SD card (it takes some time to complete this operation). This creates the possibility that the machine may be switched off and on before the log can be created completely. If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time required to acquire the log information and save onto the SD card. With the file already created on the SD card for the log file, the data only needs to be recorded; a new log file does not require creation. To create a new log file, do SP5857-012 to delete the debug log data from the SD card. Then do SP5857-017.

SMC List Card Save Function

Overview

SMC List Card Save

- The SMC List Card Save (SP Text Mode) function is used to save the SMC list as CSV files to the SD-card inserted into the lower SD-card slot.

Procedure

- Turn the main power switch OFF.
- Insert the SD card into the lower SD-card slot. Then turn the power ON.
- Enter SP mode.
- Select "Engine".
- Select SP-5992 "SP Text Mode".
- Select a detail SP number shown below to save data on the SD card.
SP-5992-xxx (SP Text Mode)

Detail No.	SMC Categories to Save
001	All (Data List)
002	SP (Mode Data List)
004	Logging Data
005	Diagnostic Report
006	Non-Default
007	NIB Summary
026	Printer SP

- Press [EXECUTE].
- Press [EXECUTE] again to start. Press [CANCEL] to cancel the saving.
- "It is executing it" is shown on the screen while executing.
- Wait for 2 to 3 minutes until "Completed" is shown.

Note

- The SMC list saving may take from 2 to 3 minutes to complete.
- Press [CANCEL] to abort executing.

11. Press [Exit] to exit from SP mode.

File Names of the Saved SMC Lists

The SMC list data saved on the SD-card will be named automatically. A folder named by the machine serial number will be created on the SD card when this function is executed. The file naming rules are as follows.

Example:

W490M000006_5992002_20111011_53954.csv

[A]	[B]	[C]	[D]	[E]	

m1093036

A:

Machine serial number (fixed for each machine)

B:

SP number saved in this file.

First four digits (5992) in this part are fixed. The other three digits are the detail SP number(s). Therefore, this file is of SP5-992-002 (SP (Mode Data List)). See the upper SP table for the correspondence between SP detail numbers and the contents.

C:

File creation date

Year/Month/Day ("Zero" will be omitted if each is one digit.)

D:

File creation time

Hour/Minute/Second ("Zero" will be omitted if each is one digit.)

E:

File Extension CSV (Comma Separated Value)

This part is fixed.

Note

- This function can save the SMC list data only to an SD card inserted into the lower SD card slot.

Error Messages

SMC List Card Save error message:

- **Failed:**
FACTOR: Read-only file system, No space left on device.

If an error occurs, pressing "Exit" will cause the device to discard the job and return to the ready state.

6. Troubleshooting

Self-Diagnostic Mode

Self-Diagnostic Mode at Power On

As soon as the main machine is powered on, the controller waits for the initial settings of the copy engine to take effect and then starts an independent self-diagnostic test program.

The self-diagnostic test checks the CPU, memory, HDD, and so on. An SC code is displayed if the self-diagnostic program detects any malfunction or abnormal condition. In the case of the error that can start the machine, record it in System Error Log.

Service Call

Service Call Conditions

The "SC Table" section shows the SC codes for controller errors and other errors. The latter (not controller errors) are put into four types. The type is determined by their reset procedures. The table shows the classification of the SC codes.

Key	Definition	Reset Procedure
A	The error involves the fusing unit. The machine operation is disabled. The user cannot reset the error.	Turn the main switch off and on. Reset the SC (set SP5-810-1). Turn the main switch off and on.
B	The error involves one or some specific units. The machine operates as usual, excluding the related units.	Turn the main switch off and on.
C	The error is logged. The SC-code history is updated. The machine operates as usual.	The SC will not show. Only the SC history is updated.
D	The machine operation is disabled. You can reset the machine by turning the main switch off and on. If the error occurs again, the same SC code is displayed.	Turn the main power switch off and on.

Scanning

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
195-00	D	S/N input error
		Compare the product ID code of the product S/N (11 digits).
		The product ID code of the product S/N (11 digits) does not match.
		Re-enter the product S/N.

LED Optics

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
230-01	D	FGATE: Does not turn ON.(01: Bk, 02: C, 03: M, 04: Y)
230-02		GBIO has not been asserted, although the specified time (200 ms) elapsed after setting JOB to be started and reaching the FGAT assert time.
230-03		
230-04		Control Board
		Turn the power OFF and then ON

(*1)FGATE: Signals used between the controller and the engine in order to send the information about the sub scan length of the page to be printed.

(*2)GPIO: A type of input/output terminal

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
231-01	D	FGATE: Does not turn OFF.(01: Bk, 02: C, 03: M, 04: Y)
231-02		GPIO has not been negated, although the specified time (200 ms) elapsed after detecting GPIO* assert and then reaching the expected FGATE negate time.
231-03		
231-04		* This is an I/O pin. Such I/O pins can be used for a variety of applications, depending on the setting.
		<ul style="list-style-type: none"> • Control Board • Engine Board

(*1)FGATE: Signals used between the controller and the engine in order to send the information about the sub scan length of the page to be printed.

(*2)GPIO: A type of input/output terminal

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
270-00	D	Write ASIC communication error
		<ul style="list-style-type: none"> • When the Engine Board could not read the Unique ID of the Writing ASIC properly when starting this machine. • When an Error bit occurred in the communication between the Engine Board and the Writing ASIC.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		The unique ID of the write ASIC was not read normally.
		<ul style="list-style-type: none"> • Turn the power OFF and then ON. • Engine Board

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
277-01	D	LEDA communication error (01: Bk
277-02		The head type data was read three times in succession
277-03		<ul style="list-style-type: none"> • LED Head error • Harness Error
277-04		<ul style="list-style-type: none"> • Turn the power OFF and then ON. • Replace the LED Head

Image Processing – 1

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
332-01	D	Toner supply feed lock (01: Bk, 02: C, 03: M, 04: Y)
332-02		Under the condition that the Toner Cartridge has not reached the end, an error that no toner is supplied has been detected over n times in succession.
332-03		n: The value was set at SP3-131-015.
332-04		<ul style="list-style-type: none"> • Disconnected or broken Solenoid: Upper cover. (Failed to open the toner supply shutter) • Disconnection of Toner Supply Clutch • Failed PCDU. (Toner leak) • Toner clogging
		<ul style="list-style-type: none"> • Check the connector connection or check for broken wire. • Replace the Solenoid: Upper Cover • Replace the PCDU • Replace the Toner Cartridge.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
364-01 364-02 364-03 364-04	D	Toner End Sensor output count error (01: Bk, 02: C, 03: M, 04: Y)
		The output count from the Toner End Sensor indicates an average of 0.
		- Bad connector contact or connector disconnected/wire broken - Failed TE Sensor
		- Turn the main power of the printer OFF and then ON - Check the connector connection or check for broken wire. - Replace the LED Head. - Replace the TE sensor (using the same troubleshooting procedure as for LED).

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
365-01 365-02 365-03 365-04	D	Toner End Sensor upper limit sensor error (01: Bk, 02: C, 03: M, 04: Y)
		The Toner End Sensor still indicates that the remaining amount of toner is at the "upper limit", although 30 g or more toner has been consumed.
		- Stained TE Sensor surface - Failed TE Sensor
		<ul style="list-style-type: none"> • Turn the main power of the printer OFF and then ON. • Check the connector connection. • Clean/replace the sensor (using the same troubleshooting procedure as for LED).

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
370-01	D	TM(ID) Sensor calibration error (Right)*
		The specular light output voltage (Vsg_reg) of the Right TM (ID) Sensor cannot be calibrated to a value in the target range. Upper limit (initially 2.97 V) Lower limit (initially 2.31 V)

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> - Disconnected TM(ID) Sensor connector/bad contact - Stained TM(ID) Sensor window - Failed TM(ID) Sensor - Image Transfer Belt loosened or out of place
		<ul style="list-style-type: none"> • Check the TM(ID) Sensor • Clean the TM(ID) Sensor Detection window • Check the Image Transfer Belt • Replace the TM(ID) Sensor

* This is the sensor on the left as viewed from the front.

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SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
370-02	D	TM(ID) Sensor calibration error (Left) *
		The specular light output voltage (Vsg_reg) of the Left TM(ID) Sensor cannot be calibrated to a value in the target range. Upper limit (initially 2.97 V) Lower limit (initially 2.31 V)
		<ul style="list-style-type: none"> - Disconnected TM(ID) Sensor connector/bad contact - Stained TM(ID) Sensor window - Failed TM(ID) Sensor - Image Transfer Belt loosened or out of place
		<ul style="list-style-type: none"> • Check the TM(ID) Sensor • Clean the TM(ID) Sensor Detection window • Check the Image Transfer Belt • Replace the TM(ID) Sensor

* This is the sensor on the right as viewed from the front.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
396-01	D	Drum Motor: K Error
		Early Detection

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating. <p>Motor Operation Timing</p> <ul style="list-style-type: none"> • When the motor rotation request or speed change request is issued, the motor is in the stopped state. <p>Motor Stop Timing</p> <ul style="list-style-type: none"> • A command to stop the rotation of the motor has been issued, but the motor is still rotating.
		<ul style="list-style-type: none"> - Disconnected connector - Broken signal wire - Excessive motor torque
		<ul style="list-style-type: none"> • Check the connector connection. • Turn the power OFF and then ON. • Replace the Drum Motor: K.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Drum Motor: CMY error
		<p>Early Detection</p> <ul style="list-style-type: none"> • A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating. <p>Motor Operation Timing</p> <ul style="list-style-type: none"> • When the motor rotation request or speed change request is issued, the motor is in the stopped state. <p>Motor Stop Timing</p> <p>A command to stop the rotation of the motor has been issued, but the motor is still rotating.</p>
		<ul style="list-style-type: none"> - Disconnected connector - Broken signal wire - Excessive motor torque
		<ul style="list-style-type: none"> • Check the connector connection.
396-05	D	

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Turn the power OFF and then ON. • Replace the Drum Motor: CMY.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
460-00	D	Separation: Output error
		The "HVP_ERR_D output error Sensor signal" is monitored at 20 ms intervals. If 0 (error) is detected ten times in succession (200 ms), the following causes are suspected:
		<ul style="list-style-type: none"> • Transfer Roller error • High Voltage Power Supply (Separation) error • Damaged HVP connection harness
		<ul style="list-style-type: none"> • Replace the Image Transfer Roller. • Replace the High Voltage Power Supply (Separation) • Replace the harness.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
490-00	D	Charging/developing: Output error
		The "HVP_ERR1: Output error Sensor signal" is monitored at 20 ms intervals. If 0 (error) is detected ten times in succession (200 ms), the following causes are suspected:
		<ul style="list-style-type: none"> • Failed PCDU • Failed High Voltage Power Supply (Separation) • Damaged HVP connection harness
		<ul style="list-style-type: none"> • Replace the PCDU. • Replace the HVP. • Replace the harness.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
491-01	D	Primary/secondary transfer: Output error

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<p>The "HVP_ERR2: Output error Sensor signal" is monitored at 20 ms intervals. If 0 (error) is detected ten times in succession (200 ms) (during bias output), the following causes are suspected:</p> <ul style="list-style-type: none"> • Image Transfer Unit error • Transfer Roller error • Damaged HVP connection harness • Noise generated by poor contact of the power supply terminals of the Development Roller
		<ul style="list-style-type: none"> • Replace the Image Transfer Unit. • Replace the Transfer Roller • Replace the HVP. • Replace the harness. • Replace the PCDU.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
491-02	D	Disconnected connector: High voltage output error
		The "HVP_ERR2: Output error Sensor signal" is monitored at 20 ms intervals. If 0 (error) is detected ten times in succession (200 ms) (during non-bias output), the following causes are suspected:
		<ul style="list-style-type: none"> • HVP Connect harness disconnected • Damaged HVP connection harness
		<ul style="list-style-type: none"> • Check the HVP Connect harness • Replace the HVP connection harness.

Image Processing – 2

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
441-00	D	Transfer motor error
		Early Detection

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating. <p>Motor Operation Timing</p> <ul style="list-style-type: none"> • When the motor rotation request or speed change request is issued, the motor is in the stopped state. <p>Motor Stop Timing</p> <p>A command to stop the rotation of the motor has been issued, but the motor is still rotating.</p>
		<ul style="list-style-type: none"> • Disconnected connector • Broken signal wire • Excessive motor torque • Torque of the Image Transfer Unit is too large • Torque of the Waste Toner processing system is too large • Failed Paper Exit Full Sensor
		<ul style="list-style-type: none"> • Check the connector connection • Turn the power OFF and then ON • Replace the Image Transfer Unit Motor. • Replace the Image Transfer Unit • Replace the Waste Toner Duct • Replace the Paper Exit Full Sensor

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
442-01 442-02 442-03	D	<p>Intermediate transfer contact Sensor error (01: Home position error, 02: Contact error, 03: Non-contact error)</p> <p>- Home position error: SC442-01</p> <p>If the home position is not set within the T4 time after turning ON the feed motor and feed clutch, an error results.</p> <p>- Contact error: SC442-02</p> <p>If the contact state is not set within the T3 time after turning ON the feed motor and feed clutch, an error results.</p> <p>- Non-contact error: SC442-03</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<p>If the non-contact state is not set within the T3 time after turning ON the feed motor and feed clutch, an error results.</p> <p>[Error time T3] SP value: 100 to 25500 ms Initial value: 3000 ms Note: Contact/non-contact error judgment</p> <p>[Error time T4] SP value: 100 to 25500 ms Initial value: 3000 ms Note: Home position error judgment</p>
		<ul style="list-style-type: none"> • High motor load • Failed motor • Disconnected connector • Broken harness wire • PSU: +24 V fuse blown • Failed interlock mechanism • Failed Engine Board
		<ol style="list-style-type: none"> 1. Connect and disconnect the Image Transfer Unit 2. Replace the Image Transfer Unit 3. Replace the Engine Board 4. Replace the ITB (Image Transfer Belt) Contact Clutch 5. Replace the Paper Feed Motor

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
498-00	C	Temperature/humidity Sensor error
		<ul style="list-style-type: none"> • Temperature Sensor output error: Out of range between 0.76 V and 2.90 V • Humidity Sensor output error: 2.4 V or more
		<ul style="list-style-type: none"> - Unmounted Sensor (Unset connector or broken wire) - Failed Sensor
		<ul style="list-style-type: none"> • Turn the power OFF and then ON.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Check that the connector is set. • Replace the Sensor. • Replace the connector.

Paper Feed and Fusing

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
508-00	B	By-pass bottom plate operation error
		The signal from the by-pass bottom plate position Sensor has not changed (that is, the signal has not changed from ON to OFF or vice versa) for two seconds or more after the start of reverse Paper Feed Unit rotation, If the error is detected three times in succession, the appropriate SC number is displayed on the operation panel unit.
		- By-pass bottom plate Sensor connector disconnected or other error - By-pass bottom plate Sensor feeler stuck or other error
		<ul style="list-style-type: none"> • Turn the power OFF and then ON. • Check and replace the by-pass bottom plate Sensor connector connection. • Replace the by-pass bottom plate Sensor feeler. • Replace the Paper Feed Motor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
520-02	D	Fusing motor error
		Early Detection <ul style="list-style-type: none"> • A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating.
		Motor Operation Timing <ul style="list-style-type: none"> • When the motor rotation request or speed change request is issued, the motor is in the stopped state.
		Motor Stop Timing

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		A command to stop the rotation of the motor has been issued, but the motor is still rotating.
		<ul style="list-style-type: none"> - Disconnected connector - Broken signal wire - Excessive motor torque
		<ul style="list-style-type: none"> - Check the connector connection. - Turn the power OFF and then ON. - Replace the Fusing Motor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Bank 1 motor error (Bank: paper tray unit)
		Early Detection
		<ul style="list-style-type: none"> • A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating.
		Motor Stop Timing
		A command to stop the rotation of the motor has been issued, but the motor is still rotating.
		<ul style="list-style-type: none"> - Disconnected connector - Broken signal wire - Excessive motor torque
		<ul style="list-style-type: none"> - Check the connector connection. - Turn the power OFF and then ON. - Replace the bank 1 motor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Bank 2 motor error (Bank: paper tray unit)
		Early Detection
		A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating.
		Motor Stop Timing

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<p>A command to stop the rotation of the motor has been issued, but the motor is still rotating.</p> <ul style="list-style-type: none"> - Disconnected connector - Broken signal wire - Excessive motor torque <ul style="list-style-type: none"> - Check the connector connection. - Turn the power OFF and then ON. - Replace the bank 2 motor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
521-03	B	<p>Bank 3 motor error (Bank: paper tray unit)</p> <p>Early Detection</p> <p>A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating.</p> <p>Motor Stop Timing</p> <p>A command to stop the rotation of the motor has been issued, but the motor is still rotating.</p> <ul style="list-style-type: none"> - Disconnected connector - Broken signal wire - Excessive motor torque <ul style="list-style-type: none"> - Check the connector connection. - Turn the power OFF and then ON. - Replace the bank 3 motor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
530-00	D	<p>Cooling fan error</p> <p>The fan motor lock (rotating state) signal is sampled 30 times at 100 ms intervals and the fan goes into an unstable rotating state at least ten times. (No error detection occurs for two seconds after the start of the fan or after changing the speed.)</p> <ul style="list-style-type: none"> - Failed fan motor

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		- Disconnected connector
		- Replace the fan motor.
		- Check the connector.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
531-00	D	Fusing fan error
		The fan motor lock (rotating state) signal is sampled 30 times at 100 ms intervals and the fan goes into an unstable rotating state at least ten times. (No error detection occurs for two seconds after the start of the fan or after changing the speed.)
		- Failed fan motor
		- Disconnected connector
		- Replace the fan motor.
		- Check the connector.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
532-00	D	PSU cooling fan
		The fan motor lock (rotating state) signal is sampled 30 times at 100 ms intervals and the fan goes into an unstable rotating state at least ten times. (No error detection occurs for two seconds after the start of the fan or after changing the speed.)
		- Failed fan motor
		- Disconnected connector
		- Replace the fan motor.
		- Check the connector.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
540-00	D	Paper Feed Unit error
		Early Detection

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> A command to stop the rotation of the motor has been issued right after the power was turned on, but the motor is still rotating. <p>Motor Operation Timing</p> <ul style="list-style-type: none"> When the motor rotation request or speed change request is issued, the motor is in the stopped state. <p>Motor Stop Timing</p> <p>A command to stop the rotation of the motor has been issued, but the motor is still rotating.</p>
		<ul style="list-style-type: none"> - Disconnected connector - Broken signal wire - Excessive motor torque
		<ul style="list-style-type: none"> - Check the connector connection. - Turn the power OFF and then ON. - Replace the Paper Feed Unit.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Broken fusing (Center) thermopile wire
		At least ten times, the temperature is detected to stay at 0 deg C or less for three seconds.
541-00	A	<ul style="list-style-type: none"> - Broken thermopile wire - Bad connector contact
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Replace the connector. • Replace the thermopile.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Fusing lamp (Center) thermopile not reloaded 1
542-02	A	The heater (Center) thermopile does not reach 50 deg C 2.4 seconds after the start of heat control (during normal startup control).
		<ul style="list-style-type: none"> • Stained thermopile lens

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Deformed or floating thermistor • Input voltage out of range • The overtemperature prevention mechanism started working
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Clean the thermopile lens. • Replace the thermopile.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
542-03	A	Fusing lamp (Center) thermopile not reloaded 2
		The heater (Center) thermistor does not reach the reload temperature 44 seconds after the start of motor rotation.
		<ul style="list-style-type: none"> • Stained thermopile lens • Deformed or floating thermistor • Input voltage out of range • The overtemperature prevention mechanism started working
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Clean the thermopile lens. • Replace the thermopile.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
542-04	A	Fusing lamp (Center) thermopile not reloaded 3
		The heater (Center) thermistor does not reach 100 deg C 5.5 seconds after the start of heat control (during low-temperature start up control).
		<ul style="list-style-type: none"> • Stained thermopile lens • Deformed or floating thermistor • Input voltage out of range • The overtemperature prevention mechanism started working
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Clean the thermopile lens.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Replace the thermopile.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
543-00	A	Fusing (Center) thermopile high-temperature detected (software)
		The temperature is detected to stay at 230 deg C or higher for one second.
		<ul style="list-style-type: none"> • Shorted triac • Failed Engine Board
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Replace the PSU. • Replace the Engine Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
544-00	A	Fusing (Center) thermopile high-temperature detected (hardware)
		The hardware high-temperature error Sensor flag is detected at 10 ms intervals.
		<ul style="list-style-type: none"> • Damaged triac (shorted) • Failed engine control board • Failed fusing thermopile • Failed fusing thermistor • Abnormal fusing control software behavior • The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error).
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Replace the PSU. • Replace the Engine Board. • Replace the fusing thermopile. • Replace the Fusing Unit.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
545-00	A	Fusing (Center) heater stay ON
		The fusing (Center) heater stays ON for 5.7 seconds or more when in stand-by state (or the fusing roller is not rotating).
		<ul style="list-style-type: none"> • Deformed or floating thermistor • Broken fusing lamp wire • The overtemperature prevention mechanism started working
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Clean the thermopile lens. • Replace the fusing thermopile. • Replace the fusing (Center) lamp.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
547-01	D	Zero-crossing error (adhered relay contact)
		When the fusing relay is in an OFF state, a "zero-crossing interrupt request" occurs in 50 ms.
		Damaged fusing relay (adhered contact)
		<ul style="list-style-type: none"> • Turn the main power OFF and then ON. • Replace the harness. • Replace the PC board. • Replace the PSU.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
547-02	D	Zero-crossing error (bad relay contact)
		If a "zero-crossing interrupt request" does not occur when the fusing relay is in an ON state, an error results.
		<ul style="list-style-type: none"> - Damaged fusing relay (open contact) - Failed fusing relay drive circuit - PSU fuse (24VS) blown
		<ul style="list-style-type: none"> • Turn the main power OFF and then ON.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Replace the harness. • Replace the Engine Board. • Replace the PSU. • Replace the fuse.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
547-03	D	Zero-crossing error (low frequency error)
		The number of zero-crossing interrupts does not reach a certain value in 500 ms.
		The frequency of the commercial power supply line is unstable.
		<ul style="list-style-type: none"> • Turn the main power OFF and then ON. • Check the commercial power supply line. • Replace the harness. • Replace the Engine Board. • Replace the PSU.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
551-00	A	Broken fusing (End) thermistor wire
		At least ten times, the temperature is detected to stay at 0 deg C or less for three seconds.
		<ul style="list-style-type: none"> - Broken thermistor wire - Bad connector contact
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Check the connector connection. • Replace the fusing (End) thermistor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
552-02	A	Fusing (End) thermistor not reloaded (02: 1, 03: 2, 04: 3)
552-03		The heating (End) thermistor does not reach 80 deg C 7.7 seconds after the start of heat control (during normal startup control).
552-04		

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Stained thermopile lens • Deformed or floating thermistor • Input voltage out of range • The overtemperature prevention mechanism started working
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Replace the Fusing Unit.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
553-00	A	Fusing (End) thermistor high-temperature detected (software)
		The temperature is detected to stay at 230 deg C or higher for one second.
		<ul style="list-style-type: none"> • Shorted triac • Failed Engine Board
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Replace the PSU. • Replace the Engine Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
554-00	A	Fusing (End) thermistor high-temperature detected (software)
		The hardware high-temperature error Sensor flag is detected at 10 ms intervals.
		<ul style="list-style-type: none"> • Damaged triac (shorted) • Failed engine control board • Failed fusing thermopile • Failed fusing thermistor • Abnormal fusing control software behavior • The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error).
		<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Replace the PSU.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Replace the Engine Board. • Replace the fusing thermopile. • Replace the Fusing Unit.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
555-00	A	Fusing (End) heater stay ON
		The fusing (End) heater stays ON for 8.6 seconds or more when in stand-by state (or the fusing roller is not rotating).
		<ul style="list-style-type: none"> • Deformed or floating thermistor • Broken fusing lamp wire • The overtemperature prevention mechanism started working
		<ul style="list-style-type: none"> • CLEAR THE SP: FUSING SC. • Replace the thermistor. • Replace the fusing (End) lamp.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
557-00	C	Zero-crossing frequency exceeded
		The number of zero-crossing interrupts exceeds a certain value in 500 ms.
		The frequency of the commercial power supply line is unstable or noise occurs.
		None

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
559-00	A	Fusing jam detected 3 times in succession
		Fusing jam is detected three times in succession.
		Paper is wrapped around the fusing roller.
		CLEAR THE SP: FUSING SC.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
561-00	A	Broken pressure (Center) thermistor wire
		At least ten times, the temperature is detected to stay at 0 deg C or less for three seconds.
		- Broken thermistor wire - Bad connector contact
		<ul style="list-style-type: none"> • CLEAR THE SP: FUSING SC. • Check the connector connection. • Replace the fusing (End) thermistor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
562-00	A	Pressure (Center) thermistor not reloaded
		The pressure (Center) thermistor does not reach 40 deg C 17.8 seconds after the start of heat control (during normal startup control).
		<ul style="list-style-type: none"> • Stained thermopile lens • Deformed or floating thermistor • Input voltage out of range • The overtemperature prevention mechanism started working
		<ul style="list-style-type: none"> • CLEAR THE SP: FUSING SC. • Replace the Fusing Unit.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
563-00	D	Pressure (Center) thermistor high-temperature detected (software)
		The temperature is detected to stay at 230 deg C or higher for one second.
		<ul style="list-style-type: none"> • Shorted triac • Failed Engine Board
		<ul style="list-style-type: none"> • CLEAR THE SP: FUSING SC. • Replace the PSU. • Replace the Engine Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
564-00	A	Pressure (Center) thermistor high-temperature detected (hardware)
		The pressure (Center) thermopile temperature becomes 250 or higher. (The hardware high-temperature error Sensor flag is detected at 10 ms intervals.)
		<ul style="list-style-type: none"> • Damaged triac (shorted) • Failed Engine Board • Failed fusing thermopile • Failed fusing thermistor • Abnormal fusing control software behavior • The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error).
		<ul style="list-style-type: none"> • CLEAR THE SP: FUSING SC. • Replace the PSU. • Replace the Engine Board. • Replace the fusing thermopile. • Replace the Fusing Unit.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
571-00	A	Broken pressure (End) thermistor wire
		At least ten times, the temperature is detected to stay at 0 deg C or less for three seconds.
		<ul style="list-style-type: none"> - Broken thermistor wire - Bad connector contact
		<ul style="list-style-type: none"> • CLEAR THE SP: FUSING SC. • Check the connector connection. • Replace the fusing (End) thermistor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
573-00	D	Pressure (Center) thermistor high-temperature detected (software)

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<p>The temperature is detected to stay at 230 deg C or higher for one second.</p> <ul style="list-style-type: none"> • Shorted triac • Failed Engine Board
		<ul style="list-style-type: none"> • CLEAR THE SP: FUSING SC. • Replace the PSU. • Replace the Engine Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Pressure (End) thermistor high
		The pressure (Center) thermopile temperature becomes 250 deg C or higher. (The hardware high
		<ul style="list-style-type: none"> • Damaged triac (shorted) • Failed Engine Board • Failed fusing thermopile • Failed fusing thermistor • Abnormal fusing control software behavior • The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error).
574-00	A	<ul style="list-style-type: none"> • Clear the SP: fusing SC. • Replace the PSU. • Replace the Engine Board. • Replace the fusing thermopile. • Replace the Fusing Unit.

Device Communication

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
669-**	D	EEPROM communication error

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<p>An error is notified during EEPROM communication and the printer does not recover after three retries.</p> <p>669 - 1 ID error during EEPROM OPEN 669 - 2 Channel error during EEPROM OPEN 669 - 3 Device error during EEPROM OPEN 669 - 4 Communication interrupted error during EEPROM OPEN 669 - 6 Not operating error during EEPROM OPEN 669 - 7 Buffer full during EEPROM OPEN 669 - 11 ID error during EEPROM data write 669 - 12 Channel error during EEPROM data write 669 - 13 Device error during EEPROM data write 669 - 14 Communication interrupted error during EEPROM data write</p>
		<p>669 - 16 Not operating error during EEPROM data write 669 - 17 Buffer full during EEPROM data write 669 - 18 No error code during EEPROM data write 669 - 19 ID error during EEPROM data read 669 - 20 Channel error EEPROM data read 669 - 21 Device error during EEPROM data read 669 - 22 Communication interrupted error during EEPROM data read 669 - 24 Not operating error during EEPROM data read 669 - 25 Buffer full during EEPROM data read 669 - 26 No error code during EEPROM data read</p>
		<p>Turn the power OFF and then ON.</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
688-00	D	<p>PRREQ signal not asserted</p> <p>The print request signal (PRREQ) signal is not asserted within the prescribed time after paper reaches the registration stand-by position,</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> - Noise - Engine Board error
		<ul style="list-style-type: none"> • Turn the power OFF and then ON • Replace the Engine Board.

Peripherals

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
790-00	D	Maximum number of banks (paper tray units) exceeded error
		When the power is turned ON, the number of mounted paper tray units is detected and the number exceeds three.
		The number of mounted paper tray units exceeds the specifications.
		Reduce the number of mounted paper tray units according to the specifications.

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SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
995-**	D	CPM setting error
		The product ID code and product S/N (11 digits) are compared.
		The product ID code or product S/N (11 digits) does not match.
		SC995-01
		<ul style="list-style-type: none"> • Use SP5-811 to enter the product S/N, and turn the power OFF and then ON. • Replace the NVRAM with the one before the replacement.
		SC995-02
		<ul style="list-style-type: none"> • Replace the NVRAM with the one before the replacement. • Use SP5-825 to download information into the replacement NVRAM, and turn the power OFF and then ON.
		SC995-03
<ul style="list-style-type: none"> • Replace the controller with the specified one. 		
		SC995-04

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Replace the CTL Board • Replace the .Engine Board.

Controller

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
636-01	D	Expanded authentication module error
		<p>If the expanded authentication management is set to "Enabled", an error is detected when:</p> <ul style="list-style-type: none"> • There is no external expanded authentication module in the machine; • The SD card or the file of the expanded authentication module is broken;
		<ul style="list-style-type: none"> • There is no external expanded authentication module in the machine. • The SD card or the file of the expanded authentication module is broken
		<ul style="list-style-type: none"> • Install the correct SD card or the file of expanded authentication module. • Install the DESS module. • Make the following settings using the Super Service SP, and then turn off/on the main power switch: <ul style="list-style-type: none"> • Controlled access: Set the expanded authentication management setting (SP5-401-160) to 0. • Controlled access: Set the detailed setting of the expanded authentication management (SP5-401-161) to 0. • Give the Security All-Clear (SP5-876-1).

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
636-02	D	IC card error

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		When the version of the expanded authentication module is not correct.
		The version of the expanded authentication module is not correct.
		Install the correct expanded authentication module.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
637-**	D	Tracking information notification error
		When the tracking information is lost.
		637-01 Notification to the tracking SDK application has failed.
		637-02 Communication with the tracking management server has failed.
		Turn the power OFF and then ON.

SC NO.	Pattern	Details (Symptom, Possible Cause)
650-**	B	Communication error of the remote service modem
		When an error in the communication line of the Cumin-M Embedded RC gate as a modem due to the incorrect Embedded RC gate Cumin modem setting is detected when the power is turned on.
		650-01 Dial-up authentication has failed.
		650-04 Call has failed due to incorrect modem setting.
		650-05 The supply current is not sufficient.
		Defective communication line or defective connection.
		650-13 The modem board is not installed even though the Cumin-M Embedded RC gate as a modem is installed.
		650-14

SC NO.	Pattern	Details (Symptom, Possible Cause)
		The modem board is installed even though the Cumin-N Embedded RC gate as a network equipment modem is installed, or the wired/wireless LAN does not work properly.

SC NO.	Pattern	Details (Troubleshooting Procedures)
650-**	B	<p>650-01</p> <p>SP5-816-156: Check the dial-up user name.</p> <p>SP5-816-157: Check the dial-up password.</p> <p>650-04</p> <p>SP5-816-160: Check if the AT command is correct.</p> <p>If correct, it is a software bug.</p> <p>650-05</p> <p>None</p> <p>650-13</p> <ul style="list-style-type: none"> • If no modem board is installed, install the modem board. • Double check the modem driver settings (SP5-816-160, SP5-816-165 to 171, SP5-816-188 to SP5-816-189). • If none of the actions above solved the problem, replace the modem board. <p>650-14</p> <ul style="list-style-type: none"> • If the modem board is installed, remove the modem board. <p>Check if the wired/wireless LAN is available.</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
651-00	C	Incorrect dial-up connection by the remote service modem
		When the unexpected error occurs when the Embedded RC gate as a modem Cumin-M tries to call the center with a dial-up connection.
		<p>651-01</p> <p>chat program parameter error</p> <p>651-02</p> <p>chat program execution error</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Not required

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
652-00	D	Remote service ID2 mismatch error
		When the ID2 of the individual certificate for the device does not match the ID2 of the NVRAM.
		<ul style="list-style-type: none"> The controller board has been replaced with the one with which the Embedded RC gate Cumin was installed to the different machine in the past. The NVRAM has been replaced with the one that was once used in the different machine.
		<p>If an error occurs during the Embedded RC gate Cumin installation: CE checks the validity of the certificate, the NVRAM and the device identification number; create a common certificate; and then install the modem again.</p> <p>If an error occurs after the Embedded RC gate Cumin installation: CE clears the installation of the Embedded RC gate Cumin. The engineer checks the validity of the certificate, the NVRAM and the device identification number; create a common certificate; and then install the modem again.</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
653-00	D	Incorrect ID2 for the remote service
		<p>When the ID2 stored in the NVRAM has one of the following problems:</p> <ul style="list-style-type: none"> The string length is not 17. Includes the characters that cannot be printed. All space characters. NULL
		Replace the NVRAM.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		CE clears the installation of the Embedded RC gate Cumin, creates a common certificate, and then installs the Embedded RC gate modem again.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
670-00	D	Engine startup error
		<p>Case 1:</p> <ul style="list-style-type: none"> When the main power is turned on or when the machine is recovering from energy saver mode, the /ENGRDY signal assertion fails. After the main power is turned on, the engine does not make the EC response within the specified time. After the main power is turned on, the engine does not make the PC response within the specified time. Writing of the Rapi driver failed (not recognized by PCI). <p>Case 2: After the /ENGRDY signal assertion, an unintended shutdown is detected.</p>
		<p>Case 1:</p> <ul style="list-style-type: none"> The Engine Board does not start up. <p>Case 2: The Engine Board is reset at an unintended timing.</p>
		Check the connection and the contact between the Engine Board and the Controller Board again. If the error is 100% reproducible, replace the Engine Board. If the error is still not resolved after the replacement, replace the Controller Board and junction boards.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
672-**	C	Controller startup error
		<ul style="list-style-type: none"> When communication between the controller and the operation panel does not begin normally after the machine is powered on or if communication is interrupted after a normal startup.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> When the controller does not send an attention code (FDH) or attention acknowledge code (FEH) within 15 to 30 seconds after the operation panel is reset. After the operation panel issues a command to check the communication line with the controller at 30-second intervals, the controller fails to respond twice.
		<p>672-10 After the machine is powered on, communication (receiving) between the controller and operation panel is unable to begin normally.</p> <p>672-11 After the machine is powered on, communication (sending) between the controller and operation panel is unable to begin normally, or data transmission after startup fails.</p> <p>672-12 Communication with the controller is interrupted after a normal startup.</p> <p>672-13 The operation panel detects that the controller is down for reasons other than those described above.</p> <p>672-99 The software for the operation panel (OCS) is aborted.</p>
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Transfer error
674-**	D	<p>674-01 An M2P error has occurred.</p> <p>674-02 A PCI error interrupt is generated by the expanded engine ASIC (SELENE,SELENE2).</p>
		<p>674-01 Defective Controller Board/software</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		674-02 PCI error
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
816-**	D	Error detected by Energy efficient I/O subsystem
		When the energy efficient I/O subsystem detects some kind of error.
		<ul style="list-style-type: none"> Defective energy efficient I/O subsystem The energy efficient I/O subsystem has found an error in the Controller Board (no response). An error was detected during the preparation for the STR migration.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
820-00	D	Self-diagnostic error: CPU
		No interrupt is supposed to occur after the Interrupt 0 is used.
		<ul style="list-style-type: none"> Defective CPU device Defective ASIC device
		Replace the Controller Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
840-00	D	EEPROM access error
		While executing I/O to the EEPROM, an error is detected: <ul style="list-style-type: none"> When a read error still occurs even after three attempts; When a write error has occurred.
		EEPROM is defective or has reached its end of life.
		-

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
841-00	D	Error in data read from the EEPROM
		When mirrored data read from three different regions in the EEPROM differ each other.
		For some reason, the data stored in a particular region of the EEPROM has been overwritten.
		-

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
842-00	D	Verification error in the Nand-Flash update
		When updating the remote ROM and the ROM, SCS encountered an error in writing to the Nand-Flash memory that holds the module data.
		Defective Nand-Flash memory.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
853-00	B	Bluetooth device connection error
		When a Bluetooth hardware device (USB type) is connected after startup.
		A Bluetooth hardware device (USB type) has been connected after startup.
		Connect the Bluetooth hardware device (USB type) before turning on the main power switch.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
854-00	B	Bluetooth device removal error
		When a Bluetooth hardware device (USB type) is removed after startup.
		A Bluetooth hardware device (USB type) has been removed after startup.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Connect the Bluetooth hardware device (USB type) before turning on the power switch.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
855-**	B	Wireless LAN card error
		855-01 When an error is detected during attach processing for the wireless LAN card.
		855-02 When an error is detected while initializing the wireless LAN card.
		Defective wireless LAN card or poor contact
		<ul style="list-style-type: none"> • Turn the main switch off and on. • Replace the wireless LAN card.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
858-**	A	Serious encrypted data conversion error
		858-01 A serious error occurred while updating the data encryption key.
		858-02 NVRAM data conversion failed.
		858-30 After rebooting the machine before starting data conversion, an error that seems to be recoverable occurred.
		858-31 A fatal error occurred during data conversion.
		<ul style="list-style-type: none"> • Data corruption in a USB Flash memory device, etc. • Communication error caused by electromagnetic noise, etc. Out-of-order Controller Board
		Replace the Controller Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
859-**	B	HDD conversion error during encrypted data conversion
		When the HDD conversion that is performed while updating the data encryption key fails. While performing conversion, the error is only indicated on the screen and does not generate any SC. However, a Mode SC is issued after rebooting.
		859-01 You have selected HDD data conversion has been selected, but there is no HDD. 859-02 The NVRAM/HDD conversion was not completed. 859-10 The conversion performed while updating the key failed due to HDD errors, noise caused by cables, and so on.
		<ul style="list-style-type: none"> • Check the HDD connection. • Initialize the HDD. • Replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
860-00	B	Hard disk startup error at power-on
		A hard disk is connected, but the driver detected the following errors: SS_NOT_READY (-2) The HDD is not ready. SS_BAD_LABEL (-4) Incorrect partition type. SS_READ_ERROR (-5) An error occurred while reading or checking labels. SS_WRITE_ERROR (-6) An error occurred while writing or checking labels. SS_FS_ERROR (-7) Failed to restore filesystem.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		SS_MOUNT_ERROR (-8)Failed to mount filesystem.
		SS_COMMAND_ERROR (-9) The driver does not respond to the command. SS_KERNEL_ERROR (-10) Internal kernel error. SS_SIZE_ERROR: (-11)The drive is too small. SS_NO_PARTITION: (-12) The specified partition does not exist. SS_NO_FILE No device file exists. Tried to obtain the information about the status of the hard disk from the driver, but no response has been returned for more than 30 seconds.
		<ul style="list-style-type: none"> • The hard disk has not yet initialized. • Broken label data • Defective hard disk
		Initialize the hard disk from SP mode.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
863-**	D	HDD data read failure
		When the data stored in the HDD cannot be read properly.
		A bad sector occurred during operation.
		Replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
864-**	D	HDD data CRC error
		When the CRC error reply is returned from the hard disk during HDD operation.
		A bad sector occurred during operation.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> • Format the HDD. • Replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
865-**	D	HD access error
		When the error reply is returned during HDD operation.
		The error reply returned from the HDD was other than SC863 (bad sector) or SC864 (CRC error). (Branch numbers 01 to 23 refer to the generated partition codes, a to v, respectively.)
		Replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
866-00	B	SD card authentication error
		When a correct license for digital authentication is not found in a SD card application.
		The SD card contains the wrong program data.
		Store the correct program data on the SD card.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
867-**	D	SD card removal detection
		When an application SD card is removed from the slot while the application is activated.
		An application SD card has been removed from the slot. 867-00 Removed from the mount point /mnt/sd0.
		867-01 Removed from the mount point /mnt/sd1. 867-02

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Removed from the mount point /mnt/sd2.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
868-**	D	SD card access error
		When an error reply is returned while the SD controller board is in operation.
		<ul style="list-style-type: none"> • Defective SD card • Defective SD controller
		<p>868-01</p> <p>Download the Panasonic SD card formatter SD Formatter 3.1 (which is available at http://panasonic.jp/support/sd_w/download/index.html), and then format the SD card on a Windows PC.</p> <p>868-02</p> <p>After turning the main switch off, remove the SD card to see if there is any problem on the contact surface between the SD card slot and the SD card. If there is no problem, re-insert the SD card and turn the main switch on to check whether the error occurs again.</p> <p>If the error still occurs, replace the SD card with the equivalent application SD card, and then turn the main switch on again to check whether the error occurs.</p> <p>If the error persists even after replacing the SD card, replace the Controller Board.</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
870-**	B	Address book data error
		During startup or machine operation, an error is detected in the handling and the configuration of the address book data.
		<ul style="list-style-type: none"> • Software bug • Incorrect reference to the address book data source (inside the machine, delivery server settings, and LDAP settings)

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> Inconsistent encryption settings and encryption key (This occurs as a result of a failure to initialize the address book data whenever replacing NVRAM or HDD.) The media that stores the address book data—such as SD card or HDD—has been removed, or the machine configuration does not match the application setting. Data corruption was detected while accessing the address book data.
		<ul style="list-style-type: none"> Install the media containing the address book data correctly, then turn the main switch off and then on again. Reset all of the option settings for HDD, SD/USB, and FlashROM (07A) to their defaults, and then run the following SP: SP5-846-046: UCS: Initialize all settings, address book data, and authentication information configuration information. (After implementation, wait for at least three seconds.) SP5-832-006: Initialize the partition (for HDD-equipped machines only).

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
872-00	B	HDD mail received data error
		An error is detected in the HDD at machine power-on.
		<ul style="list-style-type: none"> Defective HDD Power failure while accessing the HDD
		<ul style="list-style-type: none"> Use SP5832-007 to initialize the HDD (HDD-related: Format: Mail received data). Replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
873-00	B	HDD mail transfer error
		An error is detected in the HDD at machine power-on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		<ul style="list-style-type: none"> Defective HDD Power failure while accessing the HDD
		<ul style="list-style-type: none"> Use SP5832-008 to initialize the HDD (HDD-related: Format: Mail transfer data). Replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
875-**	D	Delete All error (HDD)
		An error is detected before executing HDD Erase.
		875-01 <ul style="list-style-type: none"> Error occurred at "hddchack -l".
		875-01 <ul style="list-style-type: none"> Data erase failed.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause)
876-00	D	Log data error
		An error was detected in the handling and configuration of the log data at power up or during machine operation.
		876-01 <ul style="list-style-type: none"> Damaged log data file (This can be caused by the machine being switched off while it is operating.)
		876-02 <ul style="list-style-type: none"> The log encryption setting is enabled, but no encryption module is installed.
		876-03 Invalid log encryption key (due to defective NVRAM data)
		876-04 <ul style="list-style-type: none"> The log data file has been encrypted even though log encryption is disabled (due to a defective NVRAM).

SC NO.	Pattern	Details (Symptom, Possible Cause)
		<ul style="list-style-type: none"> The log data file has not been encrypted even though log encryption is enabled (due to a defective NVRAM) <p>876-05</p> <ul style="list-style-type: none"> Installed NVRAM has been used in another machine. Installed HDD has been used in another machine. <p>876-99</p> <ul style="list-style-type: none"> Causes other than those described above

SC NO.	Pattern	Details (Troubleshooting Procedures)
876-00	D	<p>876-01</p> <ul style="list-style-type: none"> Initialize the HDD. <p>876-02</p> <ul style="list-style-type: none"> Replace/reconfigure the encryption module. Disable the log encryption setting. <p>876-03</p> <ul style="list-style-type: none"> Use SP5832-004 to initialize the HDD. Disable the log encryption setting. <p>876-04</p> <ul style="list-style-type: none"> Use SP5832-004 to initialize the HDD. <p>876-05</p> <ul style="list-style-type: none"> Reinstall the previous NVRAM. Reinstall the previous HDD. Once the SC has been generated, use SP5832-004 to initialize the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
878-**	D	<p>TPM system authentication error</p> <p>878-01</p> <p>Defective file system in the USB Flash memory</p> <p>878-02</p> <p>An error occurred in the TPM or the TPM driver.</p> <p>878-03</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		An error occurred in the TPM software stack.
		878-01 The file system in the USB Flash memory was damaged.
		878-02 Defective TPM
		878-03 <ul style="list-style-type: none"> • Could not start the TPM software stack. • Could not find the file for the TPM software stack.
		Replace the Controller Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
881-**	D	Management area error
		Defective software has been detected.
		Abnormal accumulation of authentication information in the software
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
900-**	D	Electronic counter error
		The value provided by the electronic total counter is outside the normal range.
		<ul style="list-style-type: none"> • Unexpected NVRAM installed • Defective NVRAM • NVRAM data corruption • Data is stored in an unexpected area due to external causes. • The count requests made by SRM upon receiving the PRT have not yet been processed.
		Install an NVRAM device designed specifically for the model.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
920-**	B	Printer application error
		A serious application error that stops the machine from operating is detected.
		920-00 At PM startup, no response was returned within the specified period of time.
		920-01 A time-out occurred during PM operation.
		920-02 WORK memory acquisition failed.
		920-03 The filter process cannot be started.
		920-04 The filter process was aborted.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
921-**	B	Printer font error
		921-00 A font that is usually included as standard was not found when the printer application was started.
		921-01 A font that is used in optional font emulation was not found when the printer application was started.
		921-00 There is no file for a font that is included as standard.
		921-01 There is no file for a font used in optional font emulation.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
925-00	B	Net File function error
		The Net File storage area on the HDD is not available, or the management file used for handling the Net File data is broken. As a result, access to the Net File data cannot be continued.
		<ul style="list-style-type: none"> • Defective HDD • HDD inconsistency caused by switching the machine off while writing to HDD • Software bug
		<ul style="list-style-type: none"> • When HDD error-related service calls (SC860-SC865) are issued at the same time: <p>This error can be caused by a defective HDD. Therefore, take the necessary countermeasures specified for SC860, etc.</p>
		<ul style="list-style-type: none"> • When other HDD error-related service calls (SC860-SC865) are NOT issued at the same time: <ol style="list-style-type: none"> 1) Turn the main switch off and on. 2) If it cannot be restored by taking the above measure, initialize the Net File partition in the HDD. <p>Note, however, that this may delete stored data such as documents remaining in the Fax transmission queue and those waiting for capture. Therefore, you must obtain the consent of your customer before executing the initialization. Note that after executing commands including Plumeria/Palm2, the job history will also be cleared.</p> 3) If the error persists even after taking the above step, initialize all of the partitions in the HDD in accordance with SP5-832-001, then turn the main power off and then on again. <p>Note, however, that this step will clear all of the data stored on the HDD including various documents, address book data, and so on. Therefore, again you must obtain the prior consent of your customers. Note that saved received Fax documents will be protected, but the receiving order may not be maintained.</p> 4) If the error still cannot be restored, replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
990-00	D	Software performance error
		The software attempted to make an unexpected operation.
		<ul style="list-style-type: none"> • Incorrect argument • Incorrect internal parameter • Insufficient working memory • Abnormal performance caused by an error that cannot be detected in normal SC detection due to hardware specifications.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
991-00	C	Software continuity error
		The software has attempted to perform an unexpected operation. (However, the process can continue running if recovery processing is carried out.)
		<ul style="list-style-type: none"> • Incorrect argument • Incorrect internal parameter • Insufficient working memory • May have resulted from an error that cannot be detected by the hardware using normal SC detection.
		Not required

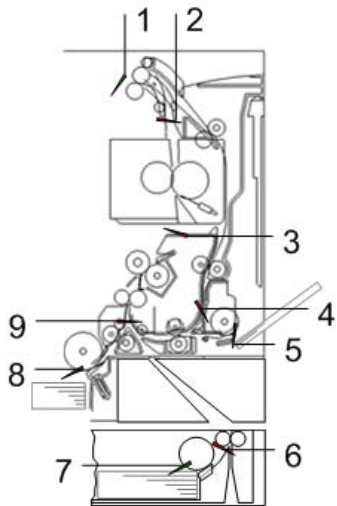
SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
992-00	D	Undefined SC error
		An error that is not controlled by the system occurred (the error does not come under any other SC code).
		A SC code used in the previous machine was applied erroneously.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
997-00	B	Application function selection error
		<ul style="list-style-type: none"> The application has not responded to the set command created by SCS within a certain period of time. The application selected ended abnormally.
		Software bug
		<ul style="list-style-type: none"> Check whether an option required by the application (RAM, DIMM, board) is installed properly. Check whether downloaded applications are correctly configured. <p>(Take necessary countermeasures specific to the application in which the error occurs. In some applications, the logs can be taken from the monitor. If this option is available, analyze the logs.)</p>

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
998-00	D	Application start error
		<ul style="list-style-type: none"> After power on, no application program is registered to the system within a predetermined period of time. (No application starts or ends normally.) Even if they are started, all applications have become unable to be rendered due to an unknown defect.
		<ul style="list-style-type: none"> Software bug An option required by the application (RAM, DIMM, board) is not installed properly
		<ul style="list-style-type: none"> Check whether an option required by the application (RAM, DIMM, board) is installed properly. Check whether downloaded applications are correctly configured. Replace the Controller Board.

Jam Detection

Sensor Position



m1093009

1. Paper Exit Full Sensor
2. Paper Exit Sensor
3. Fusing Entrance Sensor
4. Duplex Sensor
5. Bypass Paper Volume Sensor
6. Bank Sensor
7. Paper End Sensor (Bank)
8. Paper End Sensor
9. Registration Sensor

Sensor Position

Paper Feed

Jam Code	Jam Type	Place Code	Place
03	No Paper Feeding and Not reached the registration sensor.	A	Front Cover, Paper Feed Tray (Front Cover Half-open)
24	Not reached the Fusing Entrance Sensor.	B	Front Cover
32	Not reached the Paper Exit Sensor.	C	Front Cover
87	Didn't pass the Registration Sensor.	B	Front Cover
96	Didn't pass the Paper Exit Sensor.	C	Front Cover

6

Bypass Tray

Jam Code	Jam Type	Place Code	Place
08	No Paper Feeding and Not reached the registration sensor.	A	Front Cover, Bypass Tray
24	Not reached the Fusing Entrance Sensor.	B	Front Cover, Bypass Tray
32	Not reached the Paper Exit Sensor.	C	Front Cover, Bypass Tray
87	Didn't pass the Registration Sensor.	B	Front Cover, Bypass Tray
96	Didn't pass the Paper Exit Sensor.	C	Front Cover

Bank

Jam Code	Jam Type	Place Code	Place
18	Not reached the Bank Sensor 1.	Y1	Front Cover (Clear the Jam), Bank 1 (Remove the paper)

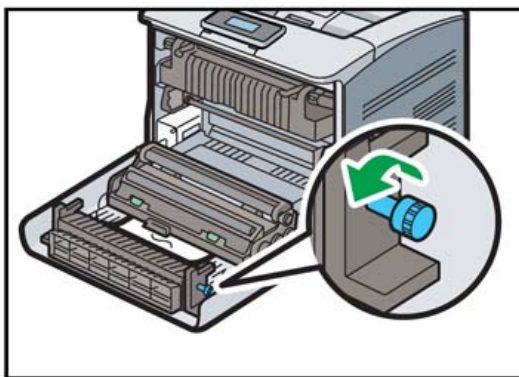
Jam Code	Jam Type	Place Code	Place
19	Not reached the Bank Sensor 2.	Y2	Front Cover (Clear the Jam), Bank 2 (Remove the paper)
20	Not reached the Bank Sensor 3.	Y3	Front Cover (Clear the Jam), Bank 3 (Remove the paper)
***	Not reached the Registration Sensor.	B	Front Cover (Clear the Jam), Paper Tray (Remove the paper)

Duplex

Jam Code	Jam Type	Place Code	Place
09	No Duplex Paper Feeding and Not reached the registration sensor.	Z	Front Cover
38	Not reached the Duplex Sensor.	Z	Front Cover
102	Didn't pass the Duplex Sensor.	Z	Front Cover

6

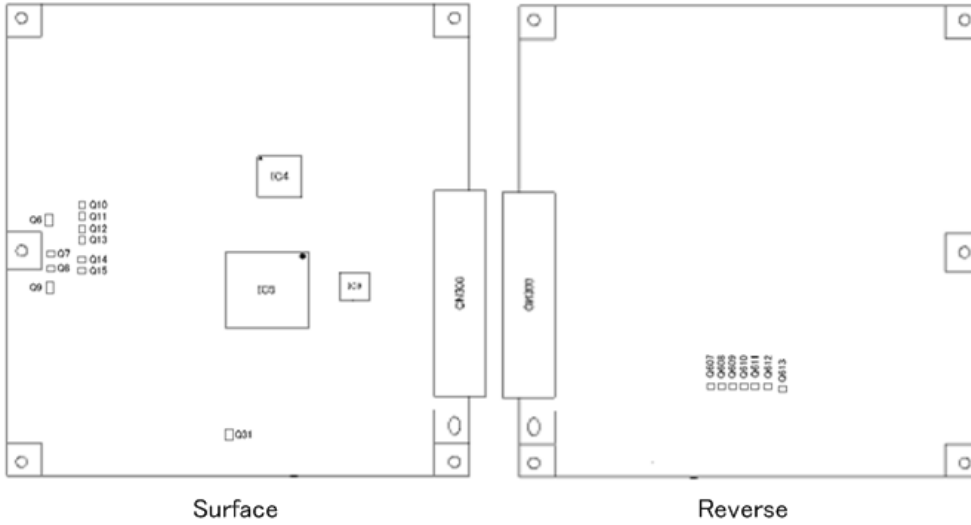
Jam, with Paper Lost



CSJ149

Open the Front Cover, then pull out the jammed paper. Turn the Knob (to help remove the paper).

Electrical Component Defects



6

m1093012

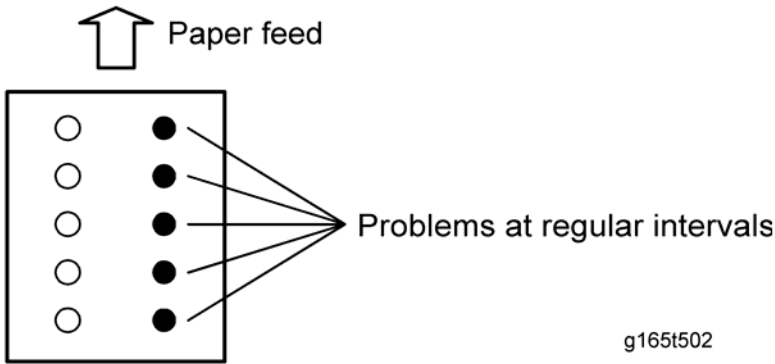
ICNo.	Controls this Electrical Component
IC5	Drum Motor: CMY
IC5	Fusing Motor
IC5	Image Transfer Unit Motor
IC5	Drum Motor: K
IC5	Paper Feed Motor
Q6,Q7	Duplex Junction Gate Solenoid
Q9,Q8	Solenoid: Upper Cover
Q31,Q613	Duplex Inverter Solenoid
Q608,Q607	Cooling Fan
Q610,Q609	Fusing Fan
Q612,Q611	PSU Cooling Fan
Q11	Toner Supply Clutch (K)
Q11	Toner Supply Clutch (C)

ICNo.	Controls this Electrical Component
Q10	Toner Supply Clutch (M)
Q10	Toner Supply Clutch (Y)
Q15	Bypass Clutch
Q15	Duplex Intermediate Clutch
Q14	Duplex Paper Exit Clutch
Q12	Registration Clutch
Q12	ITB (Image Transfer Belt) Contact Clutch
Q13	Paper Feed Clutch
Q13	Relay Clutch

Image Quality

Overview

Image problems may appear at regular intervals that depend on the circumference of certain components. The following diagram shows the possible symptoms (black or white dots at regular intervals).



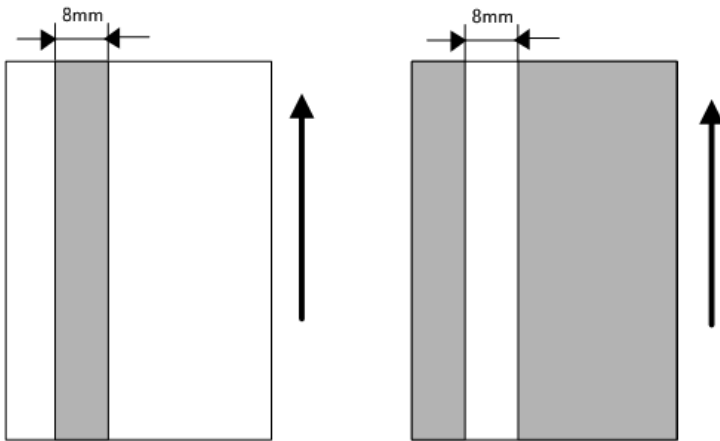
g165t502

6

Unit	Parts	Interval
PCDU	Drum	95mm
	Development Roller	36mm
	Cleaning Roller	30mm
	Charge Roller	30mm
ImageTransfer	Image Transfer Belt	2357mm
Transfer	Transfer Roller	69mm
Fusing	Fusing Belt	94mm

Each LED head has 36 LED chips on board, and each chip has a line of LEDs 8mm in length.

If a vertical line 8mm in width appears on the image parallel to the direction of paper feed, it may be caused by a broken LED chip. Exchange the LED head with one of the other colors to troubleshoot the symptom

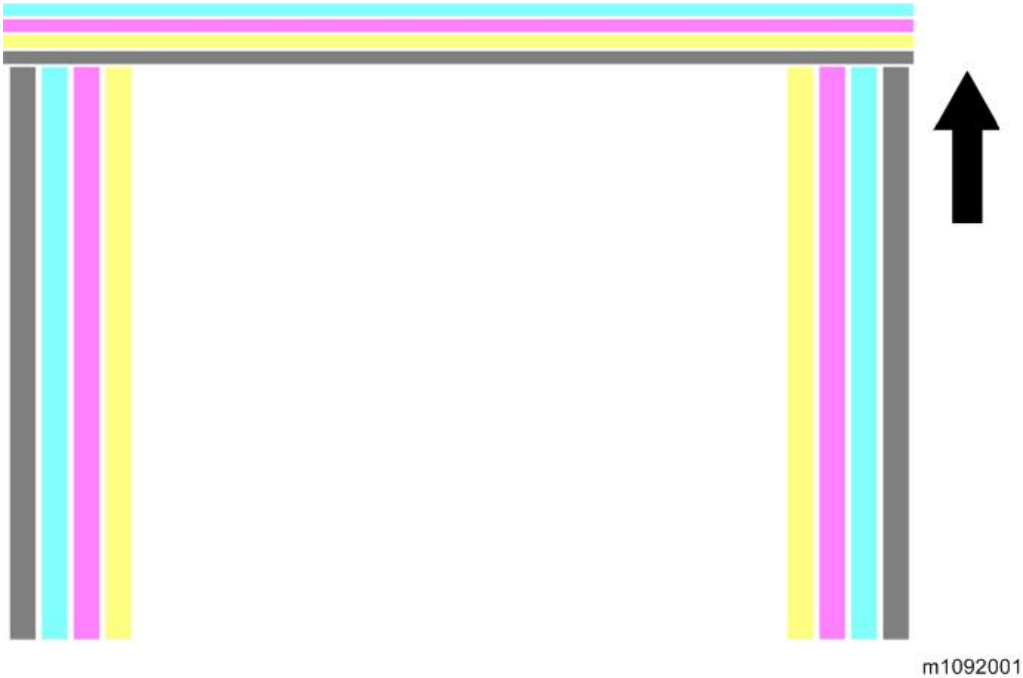


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Checking a Sample Printout

Print out a mono-color pattern (all K, C, M, or Y), which will clarify if the cause is a problem with one of the Drum unit, Image transfer belt, image transfer roller, or the fusing unit. A sample page is provided with the printer driver's CD. You can print the sample page from the printer driver's CD. Before printing, you have to adjust the printer driver settings to make the problem become obvious. For details about adjusting the settings, refer to "Printer Driver Setting for Printing a Sample" described below.

- Occurs with 1-3 colors: Drum unit, or LED head failure
- Occurs with all four colors: Image transfer belt, transfer roller or fusing unit failure

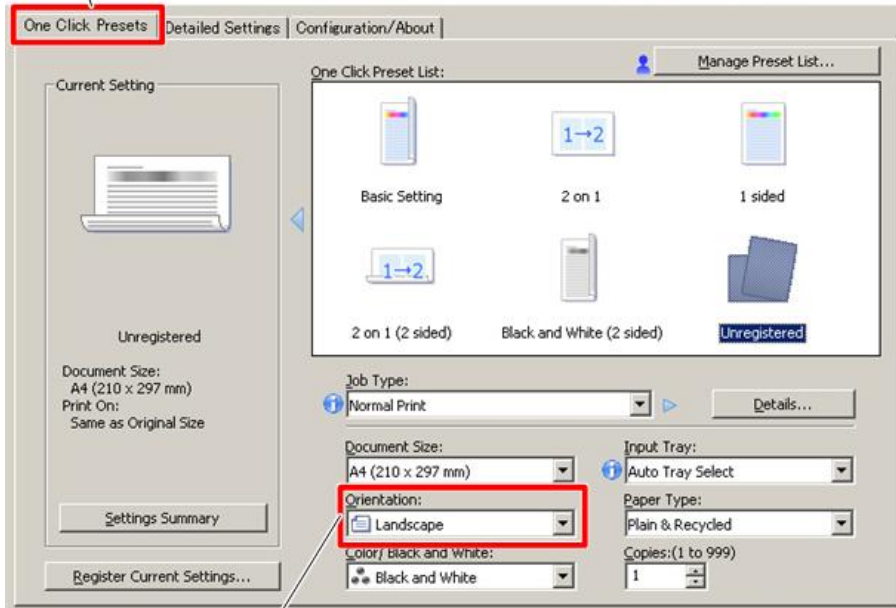


Printer Driver Setting for Printing a Sample

1. Set the sheet (A4 LEF/8.5"×11" LEF).
2. Click "Properties" on the printer driver.
3. Click the "One Click Presets" tab [A] in the printing preferences screen.
4. Select "Landscape" from the pull-down menu in "Orientation" [B].
5. Click the "Detailed Settings" tab [C] in the printing preferences screen.
6. Click "Print Quality" [D] in the Menu.
7. Select "User Setting" from the pull-down menu in "Settings for Image" [E].
8. Select "User Setting" from the pull-down menu in "Color Profile" [F].
9. Press "Details..." [G], and then select "Off" from the pull-down menus [H] in "Text:" and "Graphic:".

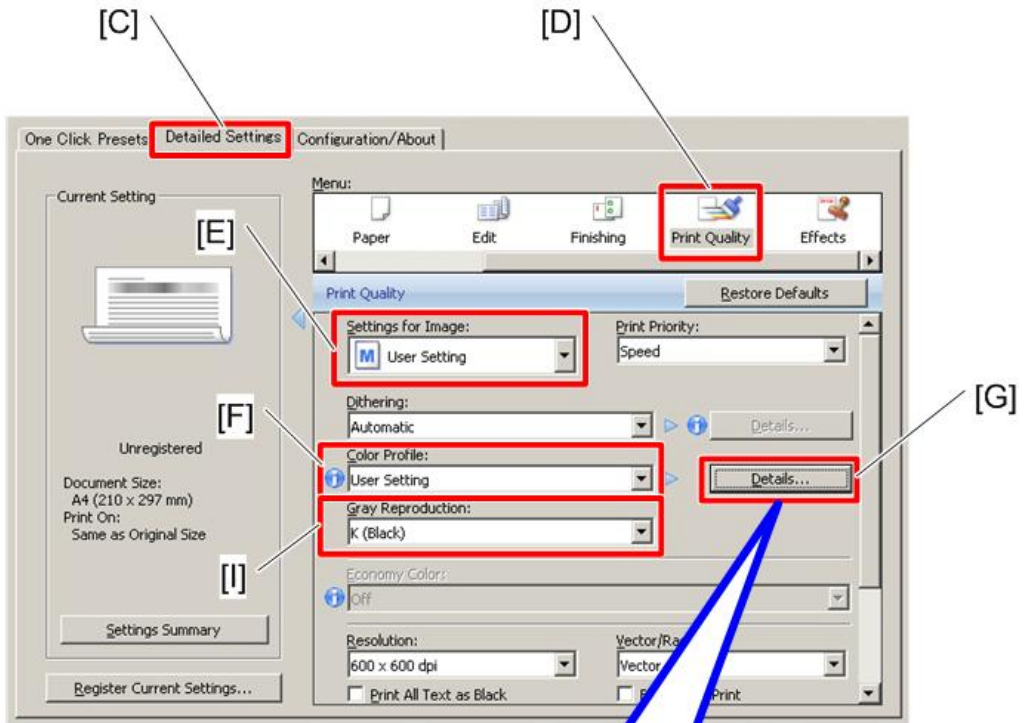
10. Select "K (Black)" from the pull-down menu in "Gray Reproduction" [I].

[A]

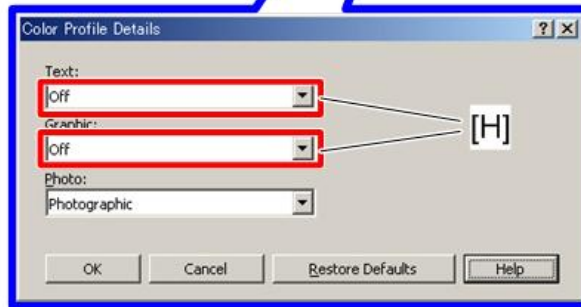


[B]

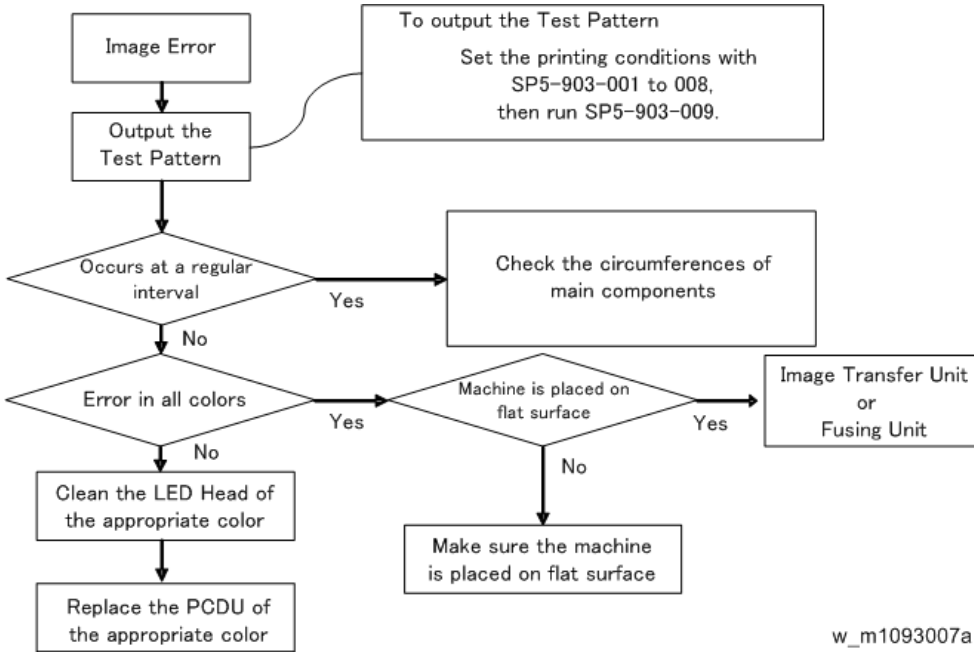
m1092004



m1092005



Other Problems



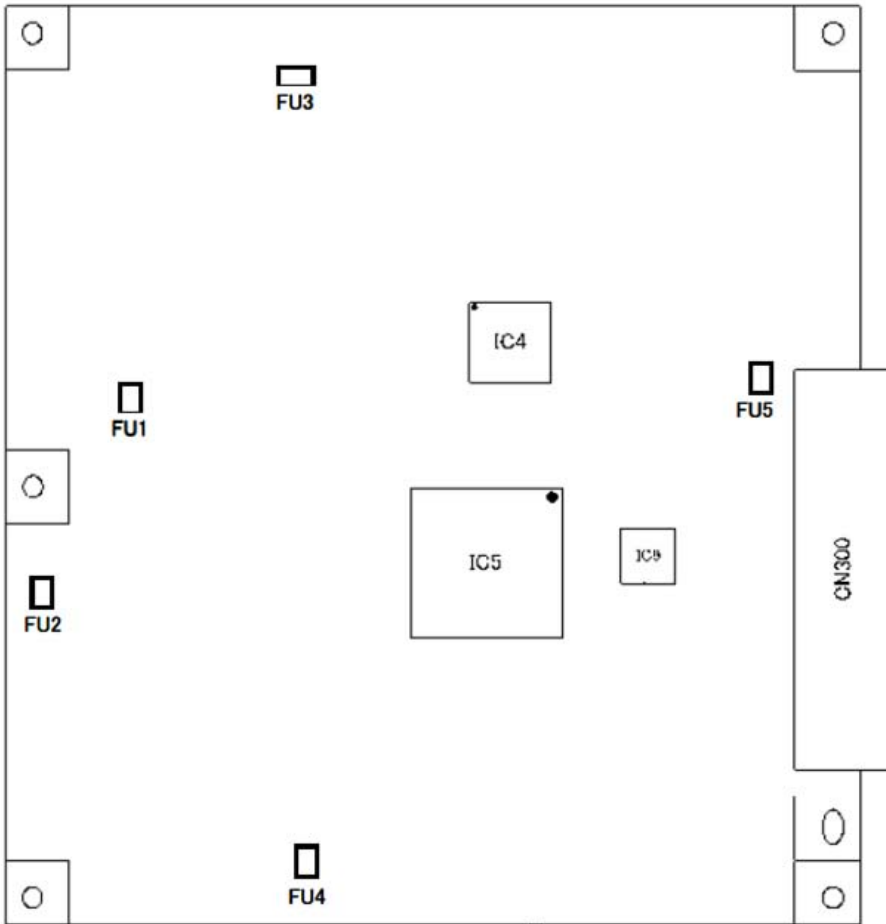
w_m1093007a

6

Unit	Parts	Interval
PCDU	Drum	95mm
	Development Roller	36mm
	Cleaning Roller	30mm
	Charge Roller	30mm
ImageTransfer	Image Transfer Belt	2357mm
Transfer	Transfer Roller	69mm
Fusing	Fusing Belt	94mm

Blown Fuse Conditions

EGB Fuses



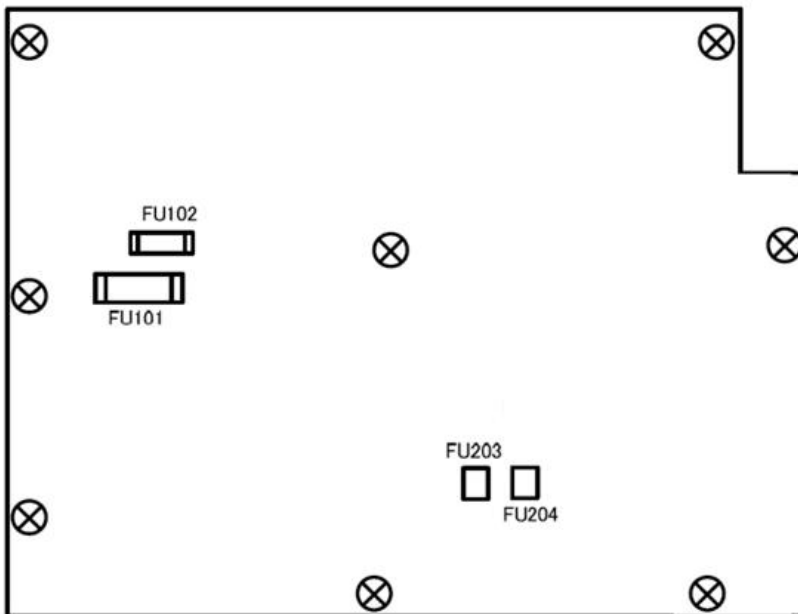
w_m1093010

FU No.	Fuse	Function	Symptom, Cause, Action
FU1	Microfuse	Overcurrent protection for Duplex Junction Gate Solenoid circuit	Symptom <ul style="list-style-type: none"> Duplex is not performed properly. Cause <ul style="list-style-type: none"> There is a short in the solenoid, or a Fuse blows caused by the GND short in the Harness.

FU No.	Fuse	Function	Symptom, Cause, Action
			<p>Action</p> <ul style="list-style-type: none"> • Replace the EGB
FU2	Microfuse	Overcurrent protection for Solenoid: Upper Cover circuit	<p>Symptom</p> <ul style="list-style-type: none"> • Toner is not supplied even though the remaining Toner in the Toner Cartridge is sufficient and supplying is performed. <p>Cause</p> <ul style="list-style-type: none"> • There is a short in the solenoid, or a Fuse blows caused by the GND short in the Harness. <p>Action</p> <ul style="list-style-type: none"> • Replace the EGB
FU3	Microfuse	Overcurrent protection for LED Power supply	<p>Symptom</p> <ul style="list-style-type: none"> • LED error <p>Cause</p> <ul style="list-style-type: none"> • Harness(+5V_LED) is shorted to GND. • Fuse blows caused by the GND short in the Harness. <p>Action</p> <ul style="list-style-type: none"> • Replace the Operation Panel or EGB
FU4	Microfuse	Overcurrent protection for Duplex Inverter Solenoid circuit	<p>Symptom</p> <ul style="list-style-type: none"> • Duplex is not performed properly. <p>Cause</p> <ul style="list-style-type: none"> • There is a short in the solenoid, or a fuse blows caused by the GND short in the Harness. <p>Action</p> <ul style="list-style-type: none"> • Replace the EGB
FU5	Microfuse	Overcurrent protection for Operation Panel	<p>Symptom</p> <ul style="list-style-type: none"> • The Operation Panel does not work even though the power is turned on. <p>Cause</p> <ul style="list-style-type: none"> • Harness (+5V_LED) is shorted to GND.

FU No.	Fuse	Function	Symptom, Cause, Action
			<ul style="list-style-type: none"> Fuse blows caused by the GND short in the Harness. Action <ul style="list-style-type: none"> Replace the Operation Panel or EGB

PSU Fuses



w_m1093011

FU No.	Fuse	Function	Symptom, Cause, Action
FU101	Ceramic tube Fuse	Overcurrent protection for the Fusing Heater circuit	Symptom <ul style="list-style-type: none"> Fusing errors occur. Cause <ul style="list-style-type: none"> The harness of the Fusing became shorted with GND. Broken Fusing circuit in the PSU Action

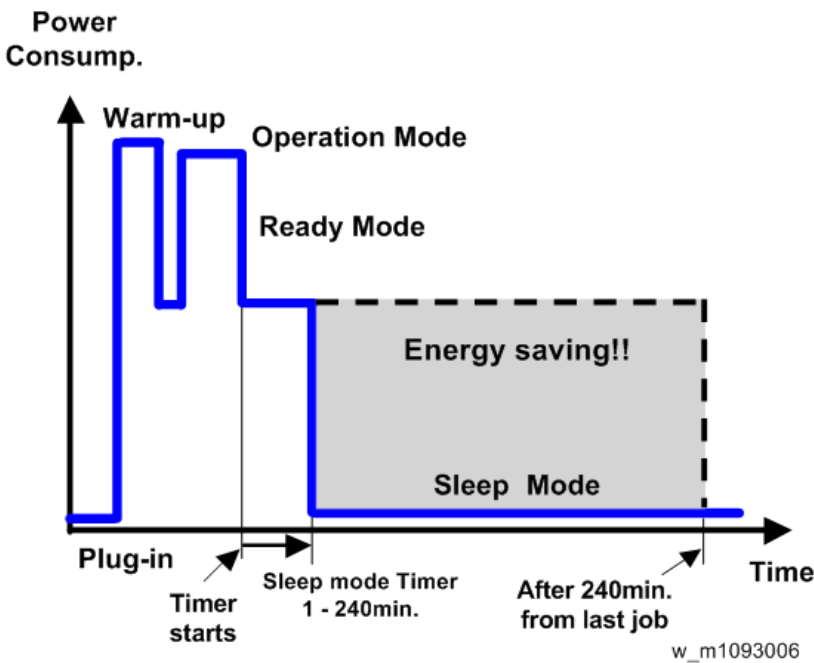
FU No.	Fuse	Function	Symptom, Cause, Action
			<ul style="list-style-type: none"> Replace the PSU
FU102	Ceramic tube Fuse	Overcurrent protection for the Power circuit	<p>Symptom</p> <ul style="list-style-type: none"> The power cannot be turned on. <p>Cause</p> <ul style="list-style-type: none"> Varistor 4 has shorted out because of excess voltage, which resulted in excess current flow, causing a FU102 blowout. Primary circuit of the PSU is shorted with GND. Broken the Primary circuit of PSU <p>Action</p> <ul style="list-style-type: none"> Replace the PSU
FU203	Microfuse	Protection for the secondary side Harness of the +24V output	<p>Symptom</p> <ul style="list-style-type: none"> Engine does not start even though the power of the main body is turned on. <p>Cause</p> <ul style="list-style-type: none"> The overcurrent protection equipment of the PSU suffered a breakdown and the +24V_LPS output became shorted with GND. <p>Action</p> <ul style="list-style-type: none"> Replace the PSU
FU204	Microfuse	Protection for the secondary side Harness of the +24V output	<p>Symptom</p> <ul style="list-style-type: none"> Problems occur, including Process Control error, Jam; an image is not generated; and Toner supply is not carried out. <p>Cause</p> <ul style="list-style-type: none"> The overcurrent protection equipment of the PSU suffered a breakdown and the +24V_LPS output became shorted with GND. <p>Action</p> <ul style="list-style-type: none"> Replace the PSU

7. Energy Save

Energy Save

Energy Saver Modes

Customers should use energy saver modes properly, to save energy and protect the environment.



The area shaded grey in this diagram represents the amount of energy that is saved when the timers are at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 240 min., the grey area will disappear, and no energy is saved before 240 min. expires.

Timer Settings

The user can set these timers with User Tools (System settings > Timer setting)

- Sleep Mode timer (1, 5, 15, 30, 45, 60, 120 or 240 min): Sleep Mode

Default settings: 1 min.

Eco Night Mode

This machine has "Eco Night Mode" to save energy by other means than energy saver timer settings. The ECO Night Sensor (ambient light sensor) allows the printer to automatically turn the main power off and on, or enter and exit Sleep mode by detecting ambient light level.

- Eco night sensor auto off timer (1, 5, 30, 60 or 120 min): Eco Night Mode.
 - Default setting: On (120 min.)

Weekly Timer

You can set the timer for the printer to turn off and on the main power or enter and exit Sleep mode every day or on specified days of the week. Three sets of Power On Time and Power Off Time can be set for each day.

Fusing Off Mode

Fusing Off Mode(EnSav)On/Off

You can specify whether or not to use Energy Saver mode.

Default: [Off]

- On

Turns on Energy Saver mode. This setting further reduces power consumption, but the printer may take longer to recover from Energy Saver mode.

When you select [On], you can set [Exit Fusing Unit Off Mode] and [Fusing Unit Off Mode Timer].

- Off

Turns off Energy Saver mode.

Exit Fusing Unit Off Mode

You can specify the condition for the printer to exit Energy Saver mode.

Default: [On Printing]

- On Printing

The printer exits Energy Saver mode when printing is done.

- On Operating Control Panel

The printer exits Energy Saver mode when any key on the operation panel is pressed.

Fusing Unit Off Mode Timer

You can specify the period of time the printer waits before entering Energy Saver mode.

The timer is reset if any key on the operation panel is pressed or printing is done.

Default: [10 seconds]

- 10 seconds
- 30 seconds
- 1 minute
- 15 minutes
- 30 minutes
- 60 minutes
- 120 minutes
- 240 minutes

Return to Stand-by Mode

Sleep Mode

Recovery time: 10 sec.

Eco Night Sensor, Weekly timer

Recovery time: 20 sec.

Recommendation

We recommend that the default settings should be kept.

- If the customer requests that these settings should be changed, please explain that their energy costs could increase, and that they should consider the effects on the environment of extra energy use.
- If it is necessary to change the settings, please try to make sure that the Sleep Mode timer is not too long. Try with a shorter setting first, such as 5 min., then go to a longer one (such as 15 min.) if the customer is not satisfied.
- If the Sleep Mode timer is all set to the maximum value, the machine will not begin saving energy until 240 minutes has expired after the last job. This means that after the customer has finished using the machine for the day, energy will be consumed that could otherwise be saved.
- If you change the settings, the energy consumed can be measured using SP8941, as explained below.

Energy Save Effectiveness

SP 8941 (Machine Status) keeps a record of the amount of time that the machine spends in each mode.

- 8941-001: Operating mode
- 8941-002: Standby mode

- 8941-003: Panel off mode (Not used in this model)
- 8941-004: Low power mode
- 8941-005: Sleep mode

With this data, and the power consumption values from the specifications, we can estimate the amount of energy that is used by the machine.

This should only be used as a reference value, because the power consumption specifications are measured in a controlled environment with a constant power supply.

To get an exact measurement at the customers site, a watt meter must be used to measure the actual energy consumed.

To use SP8941 to calculate the energy consumed:

- At the start of the measurement period, read the values of SP8941 001 to 005.
- At the end of the measurement period, read the values of SP8941 001 to 005 again.
- Find the amount of time spent in each mode (subtract the earlier measurement from the later measurement).
- Multiply this by the power consumption spec for each mode.
- Convert the result to kWh (kilowatt hours)

Here is an example calculation.

Machine Date	Power Consumption (W): Data: a	SP8941: Machine Status	Start Time: (min.) Data: b	End Time: (min.) Data: c	Time Differences (Data:b - Data: c) (min.) Data: d	Power Consumption (Data:a x Data:d) (Wmin.) Data: e
Operating mode	NA: 543W EU: 565W	001: Operating Time	21089	21386	21386	NA: 161271 EU: 167805
Ready mode (stand by)	51W	002: Standby Time	306163	308046	308046	96033
Energy mode (Panel off)	1W or less	003: Energy Save Time	0	0	0	0

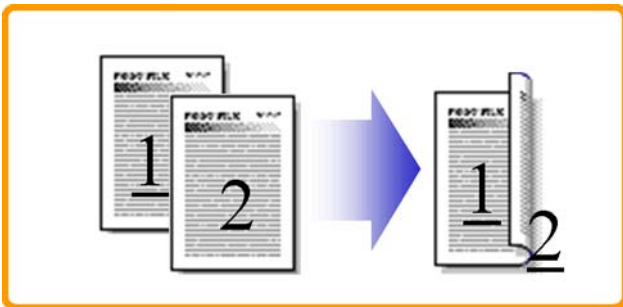
Low power mode	20W or less	004: Low power Time	71386	71386	75111	74500
Sleep mode	1W or less	005: Off mode Time	508776	508776	520377	11601
Total Time of Data: d (min.)					17506	
Total Time of Data: d/60min. (Hour)					291.7667	
Total Power Consumption of Data: e (Wmin.)						NA: 343405 EU: 349939
Total Power Consumption of Data: e /60min./1000W (KWH)						NA: 5.72342 EU: 5.83232

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:

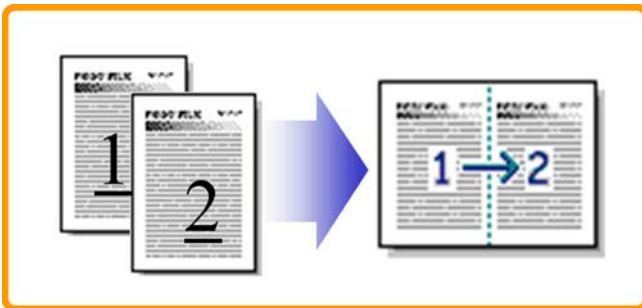


d062d102

7

Reduce paper volume in half!

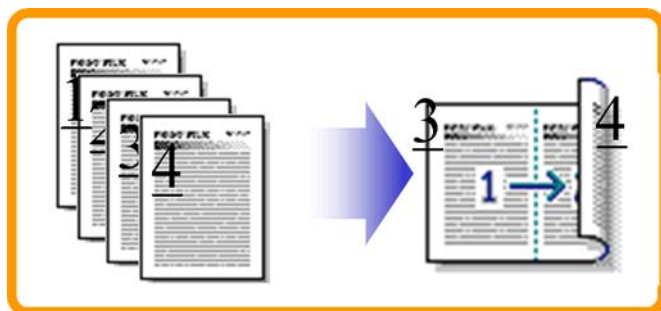
2. Combine mode:



d062d100

Reduce paper volume in half!

3. Duplex + Combine:



d062d101

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.

7

Recommendation

Please explain the above features to the customers, so that they can reduce their paper usage.

- 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 SP8581-001	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 SP8581-001	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 SP8581-001	Duplex counter SP8421-004
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 SP8581-001	Duplex counter SP8421-005
1	1	1	0	1	1
2	2	1	1	1	1
3	3	1	2	2	2

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8581-001	Duplex counter SP8421-005
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 TI-P1
Machine Code: M109
Appendices

18 December, 2012

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1. Appendix: General Specifications

General Specifications

Mainframe

Engine

Type	Desktop		
Print Process:	LED array & Dry electrostatic transfer system		
Resolution (dpi)	300 dpi x 300 dpi, 600 dpi x 600 dpi, 1,200 x 1,200dpi, 600 dpi x 1,200 dpi equivalent, 600 x 2,400dpi equivalent		
Printing Speed	General Paper	A4/LEF, LT/LEF	Black/Full Color: 32 ppm
First Print Speed	Mono		Less than 7.5 seconds
(A4/LT, SEF, Std. Tray)	F/C		Less than 9.8 seconds
Duplex Printing	A6 to A3/DLT		Automatic
Dimensions (W x D x H)	481 x 515 x 360 mm / 18.9 x 20.3 x 14.2 inch		
	481 x 535 x 372 mm / 18.9 x 20.3 x 14.2 inch *include projection size		
Weight	40.0 kg / 88.2lb or less		
Input capacity (80g/mf, 20lb.Bond)	Standard	Std Tray	250 sheets
		Bypass tray	100 sheet
	Op. Paper Tray	Paper Feed Unit	500 sheets
	Max	Up to 1,850 sheets total capacity (Std tray + Option x 3 + Bypass)	

Output capacity (80g/m ² , 20lb.Bond)	Standard Tray	Face down	Up to 200sheets
Input Paper Size (Available the dial)	Standard Tray	A3, B4, A4,B5, A5, B6,A6, DLT, Legal, Letter, HLT, Executive, F, Foolscap, Folio,8K, 16K Custom size: Min. 90mm x 148mm (5.8"x8. 3"), Max. 297mm x 432mm (8.5"x14.0")	
	Bypass Tray	A3, B4, A4, B5, A5, B6, A6, DLT, Legal, Letter, HLT, Executive, F, Foolscap, Folio,8K, 16K Custom size: Min. 64mm x 127mm (2.5" x 5.0"), Max. 297mm x 1260mm (11.7" x 49.6")	
	Op. Paper Tray	A3, B4, A4, B5, A5, DLT, Legal, Letter, HLT, Executive, F, Foolscap, Folio,8K, 16K Custom size: Min. 139.7mm x 182mm (5.5" x 7.2"), Max. 297mm x 432mm (11.7" x 17.0")	
Media Type	Std. Tray	Plain Paper / Middle Thick Paper / Thin Paper / Special Paper 1 to 3 / Color Paper / Letterhead / Preprinted / Bond / Cardstock / Label Paper / Coated Paper / Envelope	
	Bypass Tray	Plain Paper / Middle Thick Paper / Thin Paper / Color Paper / Letterhead / Preprinted / Bond / Cardstock / Label Paper / Coated Paper / Envelope	
	Op. Paper Feed Unit	Plain Paper / Middle Thick Paper / Thick Paper 1 to 3 / Thin Paper / Special Paper 1 to 3 / Color Paper / Letterhead / Preprinted / Bond / Cardstock / Label Paper / Coated Paper	
Paper Weight	Standard Tray	56 - 220 g/m ² (15 lb. Bond - 80 lb. Cover)	
	Bypass tray	56 - 256 g/m ² (15 lb. Bond - 140 lb. Index)	
	Duplex	56 - 163 g/m ² (15 lb. Bond - 90 lb. Index)	

	Op. Paper Tray	Paper Feed Unit	56 - 220 g/m ² (15 lb. Bond - 80 lb. Cover)
Memory		Standard: 512 MB Option: 1 GB	
HDD		Option	
Rating Power Spec.	NA version		120-127V, 60Hz
	EU, Asia, China version		220 - 240V, 50/60Hz
Power Consumption	NA version	Max.	1400W or less
		Energy Saver	1.0W or less
	EU, AP, C HN version	Max.	1300W or less
		Energy Saver	1.0 W or less
Warm-up Time		20 seconds or less from main power on. (23°C)	
Energy Save Mode		Sleep Mode	Adjustable (1 / 5 / 15 / 30 / 45 / 60 / 120 / 240 min.: default 1 min.)
Sound Power Level (ISO7779)		Stand by/ Energy Saving	Main unit only: 28 dB (A) Complete system: 28 dB (A)
		Printing	Main unit only: 63 dB (A) Complete system: 68 dB (A)
Sound Pressure Level		Stand by/ Energy Saving	Main unit only: 17 dB (A) Complete system: 17 dB (A)
		Printing	Main unit only: 51 dB (A) Complete system: 54 dB (A)

Controller

CPU		533 MHz
Interface	Standard	Gigabit Ethernet (1000/100/10 Base-T) USB2.0, USB2.0-Host,

	Optional	IEEE1284 ECP, IEEE 802.11 a/b/g/n
Language	Standard	PCL6/5c, RPCS, PostScript 3, PDF Direct
	Option	PictBridge, IPDS
Font		PCL 6 : 45 fonts PCL 5c : 45 fonts + International fonts 13 fonts PS 3 : 136 fonts IPDS: 108 fonts (Option)
Operating Systems		Standard: XP/ Vista/ 7/ Server2003/ Server2008, MacOS (X 10.5 or later)*PS only, MetalFrame/ CPS/ XenApp, Novell Netware (V 6.5 or later)*Need Netware option
Network Protocols		TCP/IP, IPX/SPX(Netware option)

Option

Paper Feed Unit

Paper Tray (500x1)	Paper Size	A3,A4,DLT,LT,
	Paper Weight	56 - 220g/m ² (15 lb. BOND – 80 lb. COVER)
	Paper capacity	500 sheets x 1 tray
	Dimensions (W x D x H)	481 x 515 x 125mm / 18.9" x 20.3" x 4.9"
	Weight	7kg (15.4 lb.) or less

Supported Paper Sizes

Paper Feed

Paper	Size (W x L)	Standard Tray	Optional Tray	Bypass Tray	Duplex
A3 W	12" x 18"	N	N	N	N
A3 SEF	297 x 420mm	A	A	C	D
B4 SEF	257 x 364mm	B	B	C	D
A4 SEF	210 x 297mm	A	A	C	D
A4 LEF	297 x 210mm	A	A	C	D
B5 SEF	182 x 257mm	B	B	C	D
B5 LEF	257 x 182mm	B	B	C	D
A5 SEF	148 x 210mm	A	B	C	D
A5 LEF	210 x 148mm	A	N	C	D
B6 SEF	128 x 182mm	B	N	C	D
B6 LEF	182 x 128mm	N	N	C	N
A6 SEF	105 x 148mm	A	N	C	D
A6 LEF	148 x 105mm	N	N	N	N
DLT SEF	11" x 17"	A	A	C	D
Legal SEF	8 1/2" x 14"	A	B	C	D
Letter SEF	8 1/2" x 11"	A	A	C	D
Letter LEF	11" x 8 1/2"	A	A	C	D
Half Letter SEF	5 1/2" x 8 1/2"	B	B	C	D
Half Letter LEF	8 1/2" x 5 1/2"	N	N	C	N
Executive SEF	7 1/4" x 10 1/2"	A	B	C	D

Paper	Size (W x L)	Standard Tray	Optional Tray	Bypass Tray	Duplex
Executive LEF	10 1/2" x 7 1/4"	B	B	C	D
F SEF	8" x 13"	B	B	C	D
Foolscap SEF	8 1/2" x 13"	B	B	C	D
Folio SEF	8 1/4" x 13"	A	B	C	D
8 K SEF	267 x 390 mm	A	B	C	D
16 K SEF	195 x 267mm	A	B	C	D
16K LEF	267 x 195mm	B	B	C	D
Com10 SEF	4 1/8" x 1 1/2"	B	N	C	N
Monarch SEF	3 7/8" x 7 1/2"	B	N	C	N
C6 SEF	114 x 162mm	B	N	C	N
C5 SEF	162 x 229mm	B	N	C	N
C5 LEF	229 x 162mm	B	N	C	N
Custom Width (mm)		90 to 297	139.7 to 297	64 to 297	100 to 297
Custom Length (mm)		148 to 432	182 to 432	127 to 1260	148 to 432
Custom Width (inch)		3.5 to 11.7	5.5 to 11.7	2.5 to 11.7	3.9 to 11.7
Custom Length (inch)		5.8 to 17.0	7.2 to 17.0	5.0 to 49.6	5.8 to 17.0

Remarks: Standard Tray, Optional Tray

A	Supported and the size is molded in the tray. Need to set the dial to the paper size and select the paper size by driver.
B	Supported but size is not molded in the tray. Need to set the dial "*" and select the paper size by operation panel and driver.
N	Not supported.

Remarks: Bypass Tray

C	Supported. Need to select the Bypass Tray and the paper size on operation panel and driver.
N	Not supported.

Remarks: Duplex

D	Supported.
N	Not supported.

Paper Exit**Mainframe**

Paper	Size (W x L)	Output Tray
A3 W	12" x 18"	N
A3 SEF	297 x 420mm	D
B4 SEF	257 x 364mm	D
A4 SEF	210 x 297mm	D
A4 LEF	297 x 210mm	D
B5 SEF	182 x 257mm	D
B5 LEF	257 x 182mm	D
A5 SEF	148 x 210mm	D
A5 LEF	210 x 148mm	D
B6 SEF	128 x 182mm	D
B6 LEF	182 x 128mm	D
A6 SEF	105 x 148mm	D
A6 LEF	148 x 105mm	N
DLT SEF	11" x 17"	D

Paper	Size (W x L)	Output Tray
Legal SEF	8 1/2" x 14"	D
Letter SEF	8 1/2" x 11"	D
Letter LEF	11" x 8 1/2"	D
Half Letter SEF	5 1/2" x 8 1/2"	D
Half Letter LEF	8 1/2" x 5 1/2"	D
Executive SEF	7 1/4" x 10 1/2"	D
Executive LEF	10 1/2" x 7 1/4"	D
F SEF	8" x 13"	D
Foolscap SEF	8 1/2" x 13"	D
Folio SEF	8 1/4" x 13"	D
8 K SEF	267 x 390 mm	D
16 K SEF	195 x 267mm	D
16K LEF	267 x 195mm	D
Com10 SEF	4 1/8" x 1 1/2"	D
Monarch SEF	3 7/8" x 7 1/2"	D
C6 SEF	114 x 162mm	D
C5 SEF	162 x 229mm	D
C5 LEF	229 x 162mm	D
Custom Width (mm)		64 - 297
Custom Length (mm)		127 - 1260
Custom Width (inch)		2.5 - 11.7
Custom Length (inch)		5.0 - 49.6

Remarks: Output Tray

D	Supported.
---	------------

N	Not supported.
---	----------------

Software Accessories

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer lets you select the components you want to install.

1

Printer Drivers

Printer Language	Windows XP	Windows Vista	Windows 7
PCL 5c / 6	Yes	Yes	Yes
PS3	Yes	Yes	Yes

Printer Language	Windows Server 2003	Windows Server 2008 / 2008 R2	Mac OSX 10.5 or later
PCL 5c / 6	Yes	Yes	No
PS3	Yes	Yes	Yes

↓ Note

- The PCL5c/6 and PS3 drivers are provided on the CD-ROM
- The PS3 drivers are all genuine Adobe PS drivers, except for Windows XP / 2003 / Vista / 7.
- A PPD file for each operating system is provided with the driver.

Utility Software

Bundled Utility

Software	Description
Font Manager 2000 (XP / Vista)	A font management utility with screen fonts for the printer This is provided on the printer drivers CD-ROM

Optional Equipment

LCT Paper Feed Unit TK2000

Paper Feed System:	Friction Pad
Paper Height Detection:	
Capacity:	500 sheets x 1 tray
Paper Weight:	56 - 220 g/m ² (15 lb. Bond - 80 lb. Cover)
Paper Size:	A3 SEF to A5 SEF / DLT SEF to HLT SEF
Power Source:	DC 24V, 5V (from the main frame)
Power Consumption:	Less than 9.8W (Ave.)
Dimensions (W x D x H):	481 x 515 x 125mm
Weight:	7kg or less

Hard Disk Drive Option Type C730

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Memory Unit Type N 1GB

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IEEE802.11 Interface Unit Type O

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IPDS Unit Type C730

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2. Appendix: PM Tables

Preventive Maintenance

User Replaceable Items

2

Item	Yield
Toner Cartridge	Starter: Approx. BK 3k prints / CMY 2.5K prints Normal: Approx. BK 8k prints / CMY 7k prints
PCDU	Approx. 38k prints/ unit
Fusing Unit	Approx. 150k prints/ unit
Image Transfer Belt Unit	Approx. 130k prints/ unit
Paper Transfer Roller Unit	Approx. 130k prints/ unit
Air Filter	Approx. 130k prints
Waste Toner Bottle	Approx. 17k prints

Condition:

1. An A4 (8.5"x11")/ 5% chart is used.
2. The condition is standard temperature and humidity.
3. These replacement timings may change depending on the circumstances and printing conditions.
4. The replacement timings are measured by 3P/J when the printer is used 50% for color and 50% for black-and-white.

Yield Items

The following items are not user replaceable items. However, replacement at its yield is required for the following items to maintain the printing operation.

Item	Yield
Paper Feed Roller (Mainframe & Paper Feed Unit)	Approx. 180k prints/ piece

Item	Yield
Separation Pad (Mainframe & Paper Feed Unit)	Approx. 180k prints/ piece
Friction Pad (Paper Feed Unit)	Approx. 180k prints/ piece
Paper Feed Roller(Bypass)	Approx. 100k prints/ piece
Friction Pad(Bypass)	Approx. 100k prints/piece

Service Maintenance

To enable the machine for the maintenance by the service technician, the meter-click charge mode must be set to "1 (On)" with SP5930-001.

Also, make the following settings for meter-click charge mode depending on the type of service contract: SP5930-010, 014, 016 (Supply End Option.), SP1007-002, 004, 006 (PDCU, Image Transfer Belt, Fusing unit: Remaining Supply Display), SP5083 (LED Light Switch)

PM items serviced by the service technician are designated as user replaceable items and yield items.

The following table shows the expected yield values for PM items when replacing them by the service technician with the meter-charge mode on.

Item	Yield
PDCU	50K prints/ unit
Fusing Unit	180K prints/ unit
Image Transfer Belt Unit	150K prints/ unit
Paper Transfer Roller Unit	150k prints/ unit
Air Filter	150k prints
Waste Toner Bottle	17k prints

The replacement timing for the customer maintenance is set earlier than the target yield for the service maintenance in order to ensure that the parts of the machine are replaced before an image problem occurs.

Preventive Maintenance Items

Chart: A4 (LT)/5%

Mode: 3 prints/job

Ratio: 50%

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	50K	100K	150K	180K	EM	Remarks
PCDU						
PCDU	R					
LED lens cleaning					C	-
Paper Feed						
Paper Feed Roller		C		R		Damp cloth , dry cloth
Friction Pad		C		R		Dry cloth
Registration Roller		C				Damp cloth , dry cloth
Registration Sensor		C				Blower brush
Vertical Transport Roller		C				Blower brush
Bypass Feed Roller		R/C				Damp cloth , dry cloth
Bypass Friction Pad		R/C				Dry cloth
Paper Path						
Image Transfer Belt Unit			R			
Paper Exit Roller		C				Damp cloth , dry cloth
Reverse Roller		C				Damp cloth , dry cloth

Item	50K	100K	150K	180K	EM	Remarks
Transport Roller		C				Damp cloth , dry cloth
Paper Transfer Roller			R			
Fusing Unit				R		
Air Filter			R			
Fusing Entrance Sensor		C				Blower brush
Duplex Unit						
Transport Roller		C				Damp cloth , dry cloth

3. Appendix: Service Program Mode Tables

Service SP Tables

Service Table Key

Notation	What it means
[range / default / step]	Example: [-9 to +9 / 0 / 0.1 mm step]. The setting can be adjusted in the range ± 9 , value reset to +3.0 after an NVRAM reset, and the value can be changed in 0.1 mm steps with each key press.
*	Value stored in NVRAM. After a RAM reset, this default value (factory setting) is restored.
DFU	Denotes "Design or Factory Use". Do not change this value.
Japan only	The feature or item is for Japan only. Do not change this value.
SSP	This denotes a "Special Service Program" mode.
FSP	This denotes a "Factory Service Program" mode.

SP1-XXX (Service Mode)

1001	[Bit Switch]			
001	Bit Switch 1		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	No I/O Timeout	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]			
002	Bit Switch 2		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	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	Switch dither *Please refer to RTB#RD014018	Use normal dither	Use alternative dither
bit 7	DFU	-	-	

1001	[Bit Switch]			
003	Bit Switch 3		0	1
	bit 0	DFU	-	-

	bit 1	DFU	-	-
	bit 2	[PCL5e/c]: Legacy HP compatibility	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]			
004	Bit Switch 4		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	[PCL, PS, PDF]: Changes the paper direction used with the settings "Any Size/Type" or "Any Custom Size/Type".	LEF	SEF
		By default "Any Size/Type" and "Any Custom Size/Type" treat all paper in the bypass tray as if it were loaded in the SEF direction. This bit switch changes the assumed direction to LEF.		
	bit 7	DFU	-	-

1001	[Bit Switch]			
005	Bit Switch 5		0	1
	bit 0	Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.	Disabled	Enabled
		<p>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.</p> <p>After enabling the function, the settings will appear under: "User Tools > Printer Features > System"</p>		
	bit 1	Multiple copies if a paper size or type mismatch occurs	Disabled (single copy)	Enabled (multiple)
		<p>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.</p>		
	bit 2	Prevent SDK applications from altering the contents of a job.	Disabled	Enabled
		<p>If this switch is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter".</p> <p>Note: The main purpose of this switch is for troubleshooting the effects of SDK applications on data.</p>		
	bit 3	[PS] PS Criteria	Pattern3	Pattern 1
		<p>Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not.</p> <p>Pattern3: includes most PS commands.</p> <p>Pattern1: A small number of PS tags and headers</p>		
	bit 4	Increase max number of the stored jobs.	Disabled (100)	Enabled (750)
		<p>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.</p>		
	bit 5	DFU	-	-

	bit 6	Method for determining the image rotation for the edge to bind on.	Disabled	Enabled
		<p>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.</p> <p>The old models are below:</p> <ul style="list-style-type: none"> - PCL: Pre-04A models - PS/PDF/RPCS:Pre-05S models 		
	bit 7	Letterhead mode printing	Disabled	Enabled (Duplex)
		<p>Routes all pages through the duplex unit.</p> <p>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.</p> <p>Only affects pages specified as Letterhead paper.</p>		

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

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

	bit 7	DFU	-	-
--	-------	-----	---	---

1001	[Bit Switch]				
008	Bit Switch 8		0	1	
	bit 0	DFU	-	-	
	bit 1	DFU	-	-	
	bit 2	DFU	-	-	
	bit 3	[PCL,PS]: Allow BW jobs to print without requiring User Code	Disabled	Enabled (allow BW jobs to print without a user code)	
	BW jobs submitted without a user code will be printed even if usercode authentication is enabled. Note: Color jobs will not be printed without a valid user code.				
	bit 4	DFU	-	-	
	bit 5	DFU	-	-	
	bit 6	PCL, RPCS, PS: Forced BW print		Enabled	Disabled
		Switches whether to ignore PDL color command.			
bit 7	DFU	-	-		

1001	[Bit Switch]			
009	Bit Switch 9		0	1
	bit 0	PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).	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)
	<p>If this bit switch, all jobs will be cancelled after a jam occurs.</p> <p>Note: If this bit switch is enabled, printing under the following conditions might result in problems:</p> <ul style="list-style-type: none"> - Job submission via USB or Parallel Port - Spool printing (WIM > Configuration > Device Settings > System) 		
bit 3	DFU	-	-
bit 4	Timing of the PJI Status ReadBack (JOB END) when printing multiple collated copies.	Disable	Enable
	<p>This switch determines the timing of the PJI USTATUS JOB END sent when multiple collated copies are being printed.</p> <p>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.</p> <p>1: JOB END is sent by the device to the client after the last copy has finished printing. This causes the page counter to be incremented at the end of each job.</p>		
bit 5	Display UTF-8 text in the operation panel	Enabled	Disabled
	<p>Enabled (=0): Text composed of UTF-8 characters can be displayed in the operation panel.</p> <p>Disabled (=1): UTF-8 characters cannot be displayed in the operation panel.</p> <p>For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this switch is enabled (=0).</p>		
bit 6	Disable super option	OFF	ON
	<p>Switches super option disable on / off.</p> <p>If this is On, multiple jobs are grouped at LPR port. PJI settings are enabled even jobs that are specified queue names are sent.</p>		
bit 7	Enable/Disable Print from USB/SD's Preview function	Enabled	Disabled
	Determines whether Print from USB/SD will have the Preview function.		

	Enabled (=0): Print from USB/SD will have the Preview function. Disabled (=1): Print from USB/SD will not have the Preview function.
--	---

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

1001	[Bit Switch]		
011	Bit Switch B	0	1
	bit 0	DFU	-
	bit 1	Print job interruption	Does not allow interruption
			Allow interruption
	0 (default): Print jobs are not interrupted. If a job is promoted to the top of the print queue, it will wait for the currently printing job to finish.		

		1: If a job is promoted to the top of the queue, it will interrupt the currently printing job and start printing immediately.		
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

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

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

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

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

1007	[Supply Display]		
	Sets displaying remaining supply amount information or not. 0: Displays remaining supply amount information 1: Does not display remaining supply amount information		
001	Development	*CTL	[0 or 1 / 1 / 1 /step] *The Default setting is 1 but the Factory setting is 0
002	PCU	*CTL	
004	Int. Transfer	*CTL	
006	Fuser	*CTL	

1101	[ToneCtISet]		
	Recalls a set of gamma settings. This can be either a) the factory setting, b) the previous setting, or c) the current setting.		
001	Tone (Factory)	*CTL	[- / - / -] [Execute]
002	Tone (Previous)	*CTL	
003	Tone (Current)	*CTL	

1102	[ToneCtISet]		
	Selects the printing mode (resolution) for the printer gamma adjustment.		
001	ToneCtISet	CTL	[0 to 7 / 0 / 1/step] 0: 1200x1200 Photo (1bit/4col) 1: 600x600 Photo (4bit/4col)

			2: 600x600 Photo (2bit/4col) 3: 600x600 Photo (1bit/4col) 4: 1200x1200 Text (1bit/4col) 5: 600x600 Text (4bit/4col) 6: 600x600 Text (2bit/4col) 7: 600x600 Text (1bit/4col)
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1103	[PrnColorSheet]		
	Prints the test page to check the color balance before and after the gamma adjustment.		
001	ToneCtSheet	CTL	[- / - / -]
002	ColorChart	CTL	[Execute]

1104	[ToneCtValue]		
	Adjusts the printer gamma for the mode selected in the "Mode Selection" menu.		
001	Set Black 1	CTL	[0 to 30 / 00 / 1/step]
002	Set Black 2	CTL	
003	Set Black 3	CTL	
004	Set Black 4	CTL	
005	Set Black 5	CTL	
006	Set Black 6	CTL	
007	Set Black 7	CTL	
008	Set Black 8	CTL	
009	Set Black 9	CTL	
010	Set Black 10	CTL	
011	Set Black 11	CTL	
012	Set Black 12	CTL	
013	Set Black 13	CTL	
014	Set Black 14	CTL	

015	Set Black 15	CTL	
016	Set Black 16	CTL	
021	Set Cyan 1	CTL	[0 to 30 / 00 / 1/step]
022	Set Cyan 2	CTL	
023	Set Cyan 3	CTL	
024	Set Cyan 4	CTL	
025	Set Cyan 5	CTL	
026	Set Cyan 6	CTL	
027	Set Cyan 7	CTL	
028	Set Cyan 8	CTL	
029	Set Cyan 9	CTL	
030	Set Cyan 10	CTL	
031	Set Cyan 11	CTL	
032	Set Cyan 12	CTL	
033	Set Cyan 13	CTL	
034	Set Cyan 14	CTL	
035	Set Cyan 15	CTL	
036	Set Cyan 16	CTL	
041	Set Magenta 1	CTL	[0 to 30 / 00 / 1/step]
042	Set Magenta 2	CTL	
043	Set Magenta 3	CTL	
044	Set Magenta 4	CTL	
045	Set Magenta 5	CTL	
046	Set Magenta 6	CTL	
047	Set Magenta 7	CTL	
048	Set Magenta 8	CTL	

049	Set Magenta 9	CTL		
050	Set Magenta 10	CTL		
051	Set Magenta 11	CTL		
052	Set Magenta 12	CTL		
053	Set Magenta 13	CTL		
054	Set Magenta 14	CTL		
055	Set Magenta 15	CTL		
056	Set Magenta 16	CTL		
061	Set Yellow 1	CTL		[0 to 30 / 00 / 1/step]
062	Set Yellow 2	CTL		
063	Set Yellow 3	CTL		
064	Set Yellow 4	CTL		
065	Set Yellow 5	CTL		
066	Set Yellow 6	CTL		
067	Set Yellow 7	CTL		
068	Set Yellow 8	CTL		
069	Set Yellow 9	CTL		
070	Set Yellow 10	CTL		
071	Set Yellow 11	CTL		
072	Set Yellow 12	CTL		
073	Set Yellow 13	CTL		
074	Set Yellow 14	CTL		
075	Set Yellow 15	CTL		
076	Set Yellow 16	CTL		

1105

[ToneCtlSave]

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

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

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

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

1113	[IBACC Exec]		
	Sets IBACC correction execution (calculation IBACC gamma) on / off. 0: Not calculate IBACC gamma. (Sets IBACC gamma linear) 1: Calculate IBACC gamma		
001	0:Off 1:On	*CTL	[0 or 1 / 1 / 1/step]

1114	[IBACC ToneCtlSet]		
	Sets back to the previous value of IBACC gamma correction for all resolutions. If there is no previous value, sets to the factory default values.		
001	Tone (Prev.)	CTL	-
002	Tone (Factory)	CTL	-

1115	[IBACC Exec Time]		
	Displays the time when IBACC is executed or sets back to the previous / initial value.		
001	Time	CTL	-

Engine SP Tables-1

SP1-XXX (Feed)

3

1001	<p>[Leading Edge Reg] Leading Edge Registration (Tray or By-pass, Paper Type, Process Speed) Process Speed: LowSpd: Low Speed, HlfSpd: Half speed, NorSpd: Normal speed</p>		
	<p>Note</p> <ul style="list-style-type: none"> Adjusts the leading edge registration by changing the registration motor operation timing for each mode. Increasing a value: an image is moved to the trailing edge of paper. Decreasing a value: an image is moved to the leading edge of paper. It is recommended that these service programs are set up by the user program. 		
001	Tray1	*ENG	[-9.0 to 9.0 / 0.0 / 0.1 mm/step]
002	By-pass	*ENG	
003	Duplex	*ENG	
004	Tray2	*ENG	
005	Tray3	*ENG	
006	Tray4	*ENG	
013	Tray1:Std Spd (DFU)	*ENG	[-9.0 to 9.0 / -2.3 / 0.1 mm/step]
014	Tray1:Mid Spd (DFU)	*ENG	[-9.0 to 9.0 / -1.2 / 0.1 mm/step]
015	Tray1:Low Spd (DFU)	*ENG	[-9.0 to 9.0 / -0.8 / 0.1 mm/step]
016	By-pass:Std Spd (DFU)	*ENG	[-9.0 to 9.0 / -2.1 / 0.1 mm/step]
017	By-pass:Mid Spd (DFU)	*ENG	[-9.0 to 9.0 / -0.9 / 0.1 mm/step]
018	ByPas:Low Spd (DFU)	*ENG	[-9.0 to 9.0 / 0.3 / 0.1 mm/step]
019	Duplex:Std Spd (DFU)	*ENG	[-9.0 to 9.0 / -2.0 / 0.1 mm/step]
020	Duplex:Mid Spd (DFU)	*ENG	[-9.0 to 9.0 / -0.6 / 0.1 mm/step]
021	Duplex:Low Spd (DFU)	*ENG	[-9.0 to 9.0 / 0.0 / 0.1 mm/step]

022	Tray2/3/4:Std Spd (DFU)	*ENG	[-9.0 to 9.0 / -2.0 / 0.1 mm/step]
023	Tray2/3/4:Mid Spd (DFU)	*ENG	[-9.0 to 9.0 / -1.2 / 0.1 mm/step]
024	Tray2/3/4:Low Spd (DFU)	*ENG	[-9.0 to 9.0 / -0.4 / 0.1 mm/step]

1002	[Side-to-Side Reg] Side-to-Side Registration Adjustment		
	Adjusts the side-to-side registration for each mode. This SP changes the laser main scan start position and it is recommended that these service programs are set up by the user program.		
001	Tray1	*ENG	[-20.0 to 20.0 / 0.0 / 0.1 mm/step]
002	By-pass	*ENG	[-20.0 to 20.0 / 0.0 / 0.1 mm/step]
003	Duplex	*ENG	[-20.0 to 20.0 / 0.0 / 0.1 mm/step]
004	Tray2	*ENG	[-20.0 to 20.0 / -0.9 / 0.1 mm/step]
005	Tray3	*ENG	[-20.0 to 20.0 / -0.8 / 0.1 mm/step]
006	Tray4	*ENG	[-20.0 to 20.0 / -0.2 / 0.1 mm/step]

1003	[Paper Buckle] Paper Buckle Adjustment (Tray or By-pass, Paper Type, Process Speed)		
	Adjusts the amount of paper buckle at the registration roller by changing the paper feed timing.		
001	Tray1:Std Spd	*ENG	[-9.0 to 9.0 / -0.5 / 0.1 mm/step]
002	Tray1:Mid Spd	*ENG	[-9.0 to 9.0 / -2.5 / 0.1 mm/step]
003	Tray1:Low Spd	*ENG	[-9.0 to 9.0 / -2.0 / 0.1 mm/step]
004	By-pass:Std Spd	*ENG	[-9.0 to 9.0 / 1.5 / 0.1 mm/step]
005	By-pass:Mid Spd	*ENG	[-9.0 to 9.0 / -0.5 / 0.1 mm/step]
006	By-pass:Low Spd	*ENG	[-9.0 to 9.0 / -2.8 / 0.1 mm/step]
007	Duplex:Std Spd	*ENG	[-9.0 to 9.0 / -2.5 / 0.1 mm/step]
008	Duplex:Mid Spd	*ENG	[-9.0 to 9.0 / -2.5 / 0.1 mm/step]
009	Duplex:Low Spd	*ENG	[-9.0 to 9.0 / -0.0 / 0.1 mm/step]

010	Tray2/3/4:Std Spd	*ENG	[-9.0 to 9.0 / -1.0 / 0.1 mm/step]
011	Tray2/3/4:Mid Spd	*ENG	[-9.0 to 9.0 / -1.0 / 0.1 mm/step]
012	Tray2/3/4:Low Spd	*ENG	[-9.0 to 9.0 / -2.0 / 0.1 mm/step]

1101	[Reload Permit Set] DFU		
	Specifies the settings of the reload permit for cold temperature in color mode. These SPs can be adjusted by UP mode. The setting range of SP1100 is different from the setting range of SP1001.		
001	Idling Start Temp	*ENG	[40 to 60 / 50 / 1 deg/step]
002	Reload Temp:Center	*ENG	[120 to 155 / 140 / 1 deg/step]
003	Reload Temp:Press	*ENG	[50 to 80 / 70 / 1 mm/step]
004	TempDelta:CldCtr	*ENG	[20 to 50 / 30 / 1 deg/step]
005	TempDelta:CldEnd	*ENG	[55 to 70 / 55 / 1 deg/step]
006	TempDelta:CldPress	*ENG	[0 to 30 / 30 / 1 deg/step]
007	Rotation Time:Cld	*EGB	[0 to 10 / 2 / 0.1 deg/step]
1101	[Reload Permit Set] DFU		
	Specifies the settings of the reload permit for hot temperature in color mode.		
008	TempDelta:HotCtr	*ENG	[20 to 50 / 30 / 1 deg/step]
009	TempDelta:HotEnd	*ENG	[55 to 70 / 55 / 1 deg/step]
010	TempDelta:HotPress	*ENG	[0 to 30 / 20 / 1 deg/step]
011	Rotation Time:Hot	*ENG	[0 to 10 / 2 / 0.1 deg/step]
012	TempDelta:BW1Ctr	*ENG	[20 to 50 / 20 / 1 deg/step]
013	TempDelta:BW1End	*ENG	[55 to 70 / 55 / 1 deg/step]
014	TempDelta:BW1Press	*ENG	[0 to 30 / 20 / 1 deg/step]
015	Rotation Time:BW1	*ENG	[0.0 to 10.0 / 2.0 / 0.1 deg/step]
101	TempDelta:BW2Ctr	*ENG	[20 to 100 / 70 / 1 deg/step]
102	TempDelta:BW2End	*ENG	[55 to 100 / 80 / 1 deg/step]

103	TempDelta:BW2Press	*ENG	[0 to 50 / 40 / 1 deg/step]
104	Rotation Time:BW2	*ENG	[0.0 to 10.0 / 1.4 / 0.1 deg/step]
105	ReloadedTemp:C:BW2	*ENG	[120 to 155 / 140 / 1 deg/step]
106	ReloadedTemp:P:BW2	*ENG	[50 to 80 / 70 / 1 deg/step]
1101	[Reload Permit Set] DFU		
	Specifies the settings of the reload permit for low temperature.		
151	TempDelta:LowCtr	*ENG	[20 to 50 / 20 / 1 deg/step]
152	TempDelta:LowEnd	*ENG	[55 to 70 / 55 / 1 deg/step]
153	TempDelta:LowPress	*ENG	[0 to 30 / 10 / 1 deg/step]
1101	[Reload Permit Set] DFU		
	Specifies the setting of the forced reload permit for low temperature.		
154	Rotation Time:Low	*ENG	[0.0 to 10.0 / 2.0 / 0.1 sec/step]

1102	[Feed Permit Set] DFU		
	Specified the settings of the paper feeding timing.		
001	Tmp:LwDlt:Ctr	*ENG	[0 to 30 / 15 / 1 deg /step]
002	Tmp:LwDlt:End	*ENG	[40 to 80 / 65 / 1 deg /step]
003	Tmp:UpDlt:Ctr	*ENG	[0 to 20 / 15 / 1 deg /step]
004	Tmp:UpDlt:End	*ENG	[0 to 20 / 15 / 1 deg /step]
005	Tmp:LwDlt:Prs	*ENG	[40 to 80 / 60 / 1 deg /step]
006	Rotation Time	*ENG	[0.0 to 3.0 / 0.0 / 0.1 sec /step]
007	Tmp:LwDlt:Ex:C	*ENG	[0 to 30 / 10 / 1 deg /step]
008	Tmp:LwDlt:ExEnd	*ENG	[40 to 80 / 65 / 1 deg /step]
009	Tmp:UpDlt:ExCtr	*ENG	[0 to 20 / 15 / 1 deg /step]
010	Tmp:UpDlt:ExEnd	*ENG	[0 to 20 / 15 / 1 deg /step]
011	Tmp:LwDlt:ExPrs	*ENG	[40 to 80 / 50 / 1 deg /step]

012	Rotation Time:Ex	*ENG	[0.0 to 3.0 / 0.0 / 0.1 deg /step]
013	Tmp:LwDlt:Ex:2C	*ENG	[0 to 100 / 80 / 1 deg /step]
014	Tmp:LwDlt:Ex2End	*ENG	[40 to 80 / 65 / 1 deg /step]
015	Tmp:UpDlt:Ex2Ctr	*ENG	[0 to 20 / 15 / 1 deg /step]
016	Tmp:UpDlt:Ex2End	*ENG	[0 to 20 / 15 / 1 deg /step]
017	Tmp:LwDlt:Ex2Prs	*ENG	[40 to 80 / 60 / 1 deg /step]
018	Rotation Time;Ex2	*ENG	[0.0 to 4.0 / 3.7(NA,TW), 2.1(EU,ASIA,CHN,KOR) / 0.1 deg /step]
019	Feed Permit Time	*ENG	[0 to 200 / 60 / 1 deg /step]
030	Start:PTmp:Ctr	*ENG	[0 to 100 / 63 / 1 deg /step]
040	Judging Temp:C	*ENG	[0 to 150 / 105(NA,TW), 108(EU,ASIA,CHN,KOR) / 1 deg /step]
041	Judging Time	*ENG	[0.0 to 3.0 / 1.8 / 0.1 deg /step]
042	Feed Permit Ex	*ENG	[0 to 30 / 8 / 1 deg /step]

1105	[Print Target Temp] DFU		
	(Printing Mode, Roller Type, [Color], Simplex/Duplex) Roller Type > Center and Ends: Heating roller, Pressure > Pressure roller Paper Type > Plain, Thin, Thick, OHP, Middle Thick, Special, Postcard		
001	Plain1:FC:Center.	*ENG	[130 to 170 / 148 / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in full color printing.		
002	Plain1:BW:Center	*ENG	[130 to 170 / 145 / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in BW printing.		
003	Plain2:FC:Center	*ENG	[130 to 170 / 153 / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in full color printing.		
004	Plain2:BW:Center	*ENG	[130 to 170 / 150 / 1 deg/step]
	Specifies the heating roller target temperature for the ready condition in BW printing.		

005	Thin:FC:Center	*ENG	[130 to 170 / 145 / 1 deg/step]
006	Thin:BW:Center	*ENG	[130 to 170 / 142 / 1 deg/step]
009	M-Thick:FC:Center	*ENG	[130 to 170 / 153 / 1 deg/step]
010	M-Thick:BW:Center	*ENG	[120 to 170 / 148 / 1 deg/step]
011	Thick1:FC:Center	*ENG	[130 to 170 / 155 / 1 deg/step]
012	Thick1:BW:Center	*ENG	[130 to 170 / 150 / 1 deg/step]
015	Thick2:FC:Center	*ENG	[130 to 170 / 155 / 1 deg/step]
016	Thick2:BW:Center	*ENG	[130 to 170 / 150 / 1 deg/step]
017	Spe1:FC:Center	*ENG	[130 to 170 / 142 / 1 deg/step]
018	Spe1:BW:Center	*ENG	[130 to 170 / 137 / 1 deg/step]
019	Spe2:FC:Center	*ENG	[130 to 170 / 148 / 1 deg/step]
020	Spe2:BW:Center	*ENG	[130 to 170 / 143 / 1 deg/step]
021	Plain1:Glo:Center	*ENG	[120 to 170 / 130 / 1 deg/step]
025	Env:Center	*ENG	[130 to 170 / 145 / 1 deg/step]
027	Thick3:FC:Center	*ENG	[130 to 170 / 158 / 1 deg/step]
028	Thick3:BW:Center	*ENG	[130 to 170 / 153 / 1 deg/step]
029	Thick4:FC:Center	*ENG	[0 to 200 / 163 / 1 deg/step]
030	Thick4:BW:Center	*ENG	[0 to 200 / 160 / 1 deg/step]
031	Spe3:FC:Center	*ENG	[130 to 170 / 153 / 1 deg/step]
032	Spe3:BW:Center	*ENG	[130 to 170 / 150 / 1 deg/step]
033	Env:Low:Center	*ENG	[120 to 170 / 140 / 1 deg/step]
035	Card:Center	*ENG	[120 to 170 / 140 / 1 deg/step]
041	OHP:Center	*ENG	[140 to 180 / 160 / 1 deg/step]
101	Plain1:FC:Press	*ENG	[50 to 150 / 95 / 1 deg/step]
102	Plain1:BW:Press	*ENG	[50 to 150 / 95 / 1 deg/step]
103	Plain2:FC:Press	*ENG	[50 to 150 / 95 / 1 deg/step]

104	Plain2:BW:Press	*ENG	[50 to 150 / 95 / 1 deg/step]
105	Thin:FC:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
106	Thin:BW:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
109	M-Thick:FC:Press	*ENG	[50 to 150 / 120 / 1 deg/step]
110	M-Thick:BW:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
111	Thick1:FC:Press	*ENG	[100 to 150 / 125 / 1 deg/step]
112	Thick1:BW:Press	*ENG	[100 to 150 / 125 / 1 deg/step]
115	Thick2:FC:Press	*ENG	[100 to 160 / 125 / 1 deg/step]
116	Thick2:BW:Press	*ENG	[100 to 160 / 120 / 1 deg/step]
117	Spe1:FC:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
118	Spe1:BW:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
119	Spe2:FC:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
120	Spe2:BW:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
121	Plain1:Glo:Press	*ENG	[50 to 150 / 80 / 1 deg/step]
125	Env:Press	*ENG	[50 to 150 / 110 / 1 deg/step]
127	Thick3:FC:Press	*ENG	[100 to 160 / 120 / 1 deg/step]
128	Thick3:BW:Press	*ENG	[100 to 160 / 120 / 1 deg/step]
129	Thick4:FC:Press	*ENG	[100 to 160 / 120 / 1 deg/step]
130	Thick4:BW:Press	*ENG	[100 to 160 / 120 / 1 deg/step]
131	Spe3:FC:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
132	Spe3:BW:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
133	Env:Low:Press	*ENG	[50 to 150 / 115 / 1 deg/step]
135	Card:Press	*ENG	[50 to 150 / 100 / 1 deg/step]
141	OPH:Press	*ENG	[50 to 150 / 100 / 1 deg/step]

1107	[Stdby Target Temp] DFU
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001	PreHeat1:Center	*ENG	[100 to 120 / 110 / 1 deg/step]
	Specifies the temperature of the pressure roller for the ready or energy save 1 mode.		
002	PreHeat1:Press	*ENG	[100 to 120 / 110 / 1 deg/step]
	Specifies the temperature of the pressure roller for the ready or energy save 1 mode.		
007	PrintReady:Center	*ENG	[120 to 150 / 130 / 1 deg/step]
	Specifies the temperature of the heating roller for the print ready condition.		
008	PrintReady:Press	*ENG	[100 to 150 / 110 / 1 deg/step]
	Specifies the temperature of the pressure roller for the print ready condition.		

1108	[Afr Rld/PtTrgtTmp] DFU		
001	Center	*ENG	[100 to 150 / 130 / 1 deg/step]
	Specifies the temperature of the heating roller after re-load or job.		
002	Press	*ENG	[100 to 150 / 110 / 1 deg/step]
	Specifies the temperature of the pressure roller after re-load or job.		
011	Center:BW2	*ENG	[100 to 150 / 140 / 1 deg/step]
	Specifies the temperature of the pressure roller after re-load or job in BW mode 2.		
012	Press:BW2	*ENG	[100 to 150 / 110 / 1 deg/step]
	Specifies the temperature of the pressure roller after re-load or job in BW mode 2.		

1109	[Upper Limit Temp] DFU		
001	BootRecovery:Heat	*ENG	[160 to 200 / 180 / 1 deg/step]
	Specifies the upper limit heating target temperature when the printer is warming up.		
002	BootRecovery:Press	*ENG	[160 to 200 / 180 / 1 deg/step]
	Specifies the upper limit of target temperature for the pressure roller when the printer is warming up.		
003	Other:Heat	*ENG	[170 to 200 / 190 / 1 deg/step]
	Specifies the upper limit temperature for the heating roller when printing or idling.		

004	Press	*ENG	[170 to 200 / 190 / 1 deg/step]
	Specifies the upper limit temperature for the pressure roller when printing or idling.		

1110	[Flicker mode] DFU		
001	Flicker mode	*ENG	[0 or 1 / 0 / 1 /step]
	<ul style="list-style-type: none"> • 0: Flicker control OFF • 1: Flicker control ON <p>If it is set to "ON", the fusing performance becomes worse a little.</p>		

1111	[Env.Crrct:Fusing] DFU		
001	Temp:Thresh:Low	*ENG	[10 to 20 / 17 / 1 deg/step]
	Specifies the threshold temperature for low temperature. If the fusing temperature is 17°C or less, the machine executes the fusing mode for low temperature.		
002	Temp:Thresh:High	*ENG	[40 to 20 / 30 / 1 deg/step]
	Sepcifies the threshold temperature for high temperature. If the fusing temperature is 30°C or more, the machine executes the fusing mode for high temperature.		
003	LowCorrection	*ENG	[0 to 10 / 0 / 1 deg/step]
	Specifies the additional temperature for the target temperature. If the fusing temperature is in low temperature condition, this temperature is added to the target temperature.		
004	HighCorrection	*ENG	[0 to 10 / 0 / 1 deg/step]
	Specifies the additional temperature for the target temperature. If the fusing temperature is in high temperature condition, this temperature is added to the target temperature.		
005	Print:LowCorrect	*ENG	[0 to 10 / 5 / 1 deg/step]
006	Print:HighCorrect	*ENG	[0 to 10 / 0 / 1 deg/step]
007	Prnt:LowCrrct:Sp	*ENG	[0 to 20 / 10 / 1 deg/step]
008	Prnt:HighCrrct:Sp	*ENG	[0 to 20 / 0 / 1 deg/step]

1112	[ImageTempCorrect] DFU		
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	These SPs are used for fusing temperature control for variable job images. This control reduces the power consumption when the machine copies or prints a job text image in black and white mode.		
001	Temp:Level1	*ENG	[-10 to 0 / 0 / 1 deg/step]
	Specifies the subtractive temperature level 1 of the fusing temperature control for variable job images.		
002	Temp:Level2	*ENG	[-30 to 0 / -14 / 1 deg/step]
	Specifies the subtractive temperature level 2 of the fusing temperature control for variable job images. Usage Limitation: Use 0°C or less for this setting.		

1113	[Curl Correction]		
001	Execute Pattern	*ENG	[0 or 1 / 0 / 1 /step] 0: Off, 1: On (No Decurl), 2: On
	If it is set to On, printing speed goes 20% down and warming up time for the first print will take another 1 min.		
004	TmpDlt:PrssM-Hum (DFU)	*ENG	[0 to 50 / 10 / 1 deg/step]
	Specifies the threshold temperature for the curl control in middle humidity.		
005	TmpDlt:PrssH-Hum (DFU)	*ENG	[0 to 50 / 0 / 1 deg/step]
	Specifies the threshold temperature for the curl control in high humidity.		
006	TmpDlt:PrssH-HumS (DFU)	*ENG	[0 to 50 / 0 / 1 deg/step]
	Specifies the threshold temperature for the no curl control in middle humidity.		
008	CPM:M-humid (DFU)	*ENG	[0 to 100 / 80 / 1 %/step]
	Specifies the CPM ratio of the decurl control against to the normal operation in middle humidity.		
009	CPM:H-humid (DFU)	*ENG	[0 to 100 / 80 / 1 %/step]
	Specifies the CPM ratio of the decurl control against to the normal operation in high humidity.		
010	Paper Width:A (DFU)	*ENG	[0.0 to 300.0 / 182.0 / 0.1 mm/step]

011	Paper Width:B (DFU)	*ENG	[0.0 to 300.0 / 257.0 / 0.1 mm/step]
012	CPM:H-humid:S (DFU)	*ENG	[0 to 100 / 50 / 1 %/step]

1114	[HeatStorageStatus] DFU		
001	Temp:Thresh:Press	*ENG	[50 to 100 / 75 / 1 deg/step]
	Specifies the threshold temperature of the pressure roller for the heat storage status.		

1115	[Target Temp Crrct] DFU		
	Corrects the temperature based on the difference in the target temperatures of the end of the hot roller.		
001	Temp;Delta:End	*ENG	[-10 to 10 / 10 / 1 deg/step]
002	Pri:Delta:End	*ENG	[-10 to 10 / 0 / 1 deg/step]
003	Stdby:Delta:End	*ENG	[-10 to 10 / 0 / 1 deg/step]
010	Pri:Del:Ple1:FC	*ENG	[-10 to 10 / 10 / 1 deg/step]
011	Pri:Del:Ple1:BW	*ENG	[-10 to 10 / 10 / 1 deg/step]
012	Pri:Del:Ple2:FC	*ENG	[-10 to 10 / 10 / 1 deg/step]
013	Pri:Del:Ple2:BW	*ENG	[-10 to 10 / 10 / 1 deg/step]
014	Pri:Del:thin:FC	*ENG	[-10 to 10 / 10 / 1 deg/step]
015	Pri:Del:thin:BW	*ENG	[-10 to 10 / 10 / 1 deg/step]
016	Pri:Del:Ple1:BW2	*ENG	[-10 to 10 / 5 / 1 deg/step]
017	Pri:Del:Ple2:BW2	*ENG	[-10 to 10 / 5 / 1 deg/step]
020	Pri:Del:END:Ssize	*ENG	[-10 to 10 / 0 / 1 deg/step]

1116	[StorageFBCrrct] DFU		
001	ONOFF Switch Temp	*ENG	[0 to 2 / 1 / 1 step]
	Adjusts the scope of application for fusing temperature correction, depending on the thermal storage state of the pressure roller.		
011	Time Out	*ENG	[0 to 500 / 0 / 1 sec/step]

	Applies exclusion time of the thermal storage feed back correction from the point of start printing.		
021	Delay:Std:FC1	*ENG	[0 to 20000 / 0 / 1 msec/step]
	Adjusts correction timing of 1st page while printing in FC.		
022	Delay:Std:BW1	*ENG	[0 to 20000 / 0 / 1 msec/step]
	Adjusts correction timing of 1st page while printing in BW.		
031	Delay:Std:FC2	*ENG	[0 to 20000 / 0 / 1 msec/step]
	Adjusts correction timing of the 2nd and 3rd pages while printing in FC.		
032	Delay:Std:BW2	*ENG	[0 to 20000 / 0 / 1 msec/step]
	Adjusts correction timing of the 2nd and 3rd pages while printing in BW.		
041	PressStandardTemp	*ENG	[0 to 200 / 60 / 1 deg/step]
	The standard temperature of the pressure to determine the fusing temperature correction.		
042	TmpCrrctLowLimit	*ENG	[-30 to 0 / -4 / 1 deg/step]
	Modifies lower limit of the fusing temperature correction.		
043	TmpCrrctHigh_Limit	*ENG	[0 to 30 / 0 / 1 deg/step]
	Modifies upper limit of the fusing temperature correction.		
051	PprThickCoef:Nm1	*ENG	[0 to 100 / 50 / 1 /step]
	Modifies correction coefficient of fusing temperature for plain paper 1.		
052	PprThickCoef:Nm2	*ENG	[0 to 100 / 50 / 1 /step]
	Modifies correction coefficient of fusing temperature for plain paper 2.		


1117	[Repeat Temp Crrct] DFU		
001	Control Time1:A	*ENG	[0 to 300 / 0 / 1 sec/step]
	Modifies time to execute 1st stage of fusing temperature correction. (paper width more than 257mm)		
002	Control Time2:A	*ENG	[0 to 300 / 0 / 1 sec/step]

	Modifies time to execute 2nd stage of fusing temperature correction. (paper width more than 257mm)		
003	Temp:Center:1:A	*ENG	[-15 to 20 / 0 / 1 deg/step]
	1st stage of temperature correction for center of the fusing. (paper width more than 257mm)		
004	Temp:End:1:A	*ENG	[-15 to 20 / 0 / 1 deg/step]
	1st stage of temperature correction for end of the fusing. (paper width more than 257mm)		
005	Temp:Center:2:A	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for center of the fusing. (paper width more than 257mm)		
006	Temp:End:2:A	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for end of the fusing. (paper width more than 257mm)		
011	Control Time 1:B	*ENG	[0 to 300 / 0 / 1 sec/step]
	Modifies time to execute 1st stage of fusing temperature correction. (paper width more than 257mm and also eco print mode)		
012	Control Time 2:B	*ENG	[0 to 300 / 37 / 1 sec/step]
	Modifies time to execute 2nd stage of fusing temperature correction. (paper width more than 257mm and also eco print mode)		
013	Temp:Center:1:B	*ENG	[-15 to 20 / 0 / 1 deg/step]
	1st stage of temperature correction for center of the fusing. (paper width more than 257mm and also eco print mode)		
014	Temp:End:1:B	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for center of the fusing. (paper width more than 257mm and also eco print mode)		
015	Temp:Center:2:B	*ENG	[-15 to 20 / 10 / 10 deg/step]
	2nd stage of temperature correction for center of the fusing. (paper width more than 257mm and also eco print mode)		
016	Temp:End:2:B	*ENG	[-15 to 20 / 10 / 1 deg/step]

	2nd stage of temperature correction for end of the fusing. (paper width more than 257mm and also eco print mode)		
021	Control Time1:C	*ENG	[0 to 300 / 0 / 1 sec/step]
	Modifies time to execute 1st stage of fusing temperature correction. (paper width less than 210mm and also print on envelope / postcard)		
022	Control Time2:C	*ENG	[0 to 300 / 0 / 1 sec/step]
	Modifies time to execute 2nd stage of fusing temperature correction. (paper width less than 210mm and also print on envelope / postcard)		
023	Temp:Center:1:C	*ENG	[-15 to 20 / 0 / 1 deg/step]
	1st stage of temperature correction for center of the fusing. (paper width less than 210mm and also print on envelope / postcard)		
024	Temp:End:1:C	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for center of the fusing. (paper width less than 210mm and also print on envelope / postcard)		
025	Temp:Center:2:C	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for center of the fusing. (paper width less than 210mm and also print on envelope / postcard)		
026	Temp:End:2:C	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for end of the fusing. (paper width less than 210mm and also print on envelope / postcard)		
027	Control Time1:D	*ENG	[0 to 300 / 0 / 1 sec/step]
	Modifies time to execute 1st stage of fusing temperature correction. (paper width less than 215.9mm)		
028	Control Time2:D	*ENG	[0 to 300 / 0 / 1 sec/step]
	Modifies time to execute 2nd stage of fusing temperature correction. (paper width less than 215.9mm)		
029	Temp:Center:1:D	*ENG	[-15 to 20 / 0 / 1 deg/step]
	1st stage of temperature correction for center of the fusing. (paper width less than 215.9mm)		
030	Temp:End:1:D	*ENG	[-15 to 20 / 0 / 1 deg/step]

	1st stage of temperature correction for center of the fusing. (paper width less than 215.9mm)		
031	Temp:Center:2:D	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for center of the fusing. (paper width less than 215.9mm)		
032	Temp:End:2:D	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for end of the fusing. (paper width less than 215.9mm)		
033	Control Time1:E	*ENG	[0 to 300 / 5 / 1 sec/step]
	Modifies time to execute 1st stage of fusing temperature correction. (paper width more than 215.9mm and less than 257mm)		
034	Control Time2:E	*ENG	[0 to 300 / 20 / 1 sec/step]
	Modifies time to execute 2nd stage of fusing temperature correction. (paper width more than 215.9mm and less than 257mm)		
035	Temp:Center:1:E	*ENG	[-15 to 20 / 0 / 1 deg/step]
	1st stage of temperature correction for center of the fusing. (paper width more than 215.9mm and less than 257mm)		
036	Temp:End:1:E	*ENG	[-15 to 20 / 10 / 1 deg/step]
	1st stage of temperature correction for end of the fusing. (paper width more than 215.9mm and less than 257mm)		
037	Temp:Center:2:E	*ENG	[-15 to 20 / 0 / 1 deg/step]
	2nd stage of temperature correction for center of the fusing. (paper width more than 215.9mm and less than 257mm)		
038	Temp:End:2:E	*ENG	[-15 to 20 / 15 / 1 deg/step]
	2nd stage of temperature correction for end of the fusing. (paper width more than 215.9mm and less than 257mm)		

1118	[Water Drop Reduce]		
001	Execute Pattern	*ENG	[0 or 1 / 0 / 1 /step] 0: OFF, 1: ON
	Reduces image missing by the water drop on the paper path.		

	 Note <ul style="list-style-type: none"> If "0" is selected, 1st duplex print start from ready mode or process control/MUSIC will be delayed about 20 sec. 		
002	RotationTime:1 (DFU)	*ENG	[0 to 99 / 20 / 1 sec/step]
	Sets time to perform preheat operation before printing.		
003	RotationTime:0 (DFU)	*ENG	[0 to 30 / 10 / 1 sec/step]
	Not use		

1119	[Pre Temp Crrct] DFU		
	Adds temperature from print start to transport start when printing in eco mode.		
001	Temp:Center:LTY	*ENG	[-10 to 20 / 5 / 1 deg/step]
002	Temp:End:LTY	*ENG	[-10 to 20 / 5 / 1 deg/step]
003	Temp:Center:B5Y	*END	[-10 to 20 / 0 / 1 deg/step]
004	Temp:End:B5Y	*END	[-10 to 20 / 0 / 1 deg/step]

1121	[SwRotate Strt/Stp] DFU		
	Sets the time interval for the shift from reload temperature to standby temperature.		
001	Time:After Reloaded	*ENG	[0 to 200 / 100 / 1 sec/step]
002	Time:After Recov	*ENG	[0 to 20 / 10 / 1 sec/step]
003	Time:After Job	*ENG	[0 to 30 / 20 / 1 sec/step]
004	Press:AfterReload	*END	[0 to 160 / 160 / 1 deg/step]
005	End:AfterPrint:A3	*END	[150 to 200 / 190 / 1 deg/step]
006	End:AfterPrt:LTL	*ENG	[150 to 200 / 190 / 1 deg/step]
008	StrtTp:OverToPrev	*ENG	[150 to 200 / 190 / 1 deg/step]
009	RotatTm:OvrTmPrev	*ENG	[10 to 30 / 17 / 1 sec/step]
010	End:AfterPrt:B5T	*ENG	[120 to 200 / 160 / 1 deg/step]
011	End:AfterPrt:A6T	*ENG	[120 to 200 / 160 / 1 deg/step]

012	End:AfterPrt:B6T	*ENG	[120 to 200 / 160 / 1 deg/step]
023	HeatOFF:Sto:AfRld	*ENG	[0 to 50000 / 3000 / 1 msec/step]
024	HeatOFF:AfterPrt	*ENG	[0 to 50000 / 3000 / 1 msec/step]
025	HeatOFF:BW2	*ENG	[0 to 50000 / 0 / 1 msec/step]
026	HeatOFF:Over:Stp	*ENG	[0 to 50000 / 3000 / 1 msec/step]
030	MotorOFF::Stp	*ENG	[500 to 50000 / 1500 / 1 msec/step]
031	MotorOFF::Stp:BW2	*ENG	[500 to 50000 / 3000 / 1 msec/step]

1122	[StdbyRotationSet] DFU		
	Sets the interval between fusing roller idle rotations during standby.		
001	Rotation Interval	*ENG	[0 to 240 / 60 / 1 min/step]
002	Rotaion Time	*ENG	[0 to 10000 / 600 / 1 msec/step]

1124	[CPM Down Setting] DFU		
	Specifies the settings for the CPM down mode.		
001	Low:Down Temp.	*ENG	[-30 to 0 / -15 / 1 deg/step]
	Specifies the CPM down threshold temperature for the low temperature condition. If the fusing temperature decreases -20°C (adjustable) below the target temperature, the machine enters the CPM down mode.		
002	Low:Up Temp.	*ENG	[-20 to 0 / -10 / 1 deg/step]
	Specifies the CPM up threshold temperature for the low temperature condition. If the fusing temperature increases -15°C (adjustable) below the target temperature, the machine enters the CPM up mode.		
003	Low:1CPM	*ENG	[10 to 100 / 50 / 1 %/step]
	Specifies the 1st CPM down ration against the normal CPM in the low temperature condition.		
004	Low:2CPM	*ENG	[10 to 100 / 25 / 1 %/step]
	Specifies the 2nd CPM down ration against the normal CPM in the low temperature condition.		

006	High:1CPM	*ENG	[10 to 100 / 50 / 1 %/step]
	Specifies the 1st CPM down ration against the normal CPM in the high temperature condition.		
007	High:2CPM	*ENG	[10 to 100 / 25 / 1 %/step]
	Specifies the 3rd CPM down ration against the normal CPM in the high temperature condition.		
009	High:1CPMDown:A3	*ENG	[0 to 225 / 180 / 1 deg/step]
010	High:2CPMDown:A3	*ENG	[0 to 225 / 190 / 1 deg/step]
012	High:1CPMDown:prss	*ENG	[0 to 225 / 180 / 1 deg/step]
013	High:2CPMDown:A4	*ENG	[0 to 225 / 190 / 1 deg/step]
014	High:1CPMDown:A6	*ENG	[0 to 225 / 180 / 1 deg/step]
015	High:2CPMDown:A6	*ENG	[0 to 225 / 190 / 1 deg/step]
020	High:1CPMDown:crd	*ENG	[0 to 225 / 180 / 1 deg/step]
021	High:2CPMDown:crd	*ENG	[0 to 225 / 190 / 1 deg/step]
022	High:1CPMDown:env	*ENG	[0 to 225 / 180 / 1 deg/step]
023	High:2CPMDown:env	*ENG	[0 to 225 / 190 / 1 deg/step]
024	Judging Interval	*ENG	[1 to 250 / 10 / 1 sec/step]
100	H:CPM:A4:press end	*ENG	[0 to 225 / 170 / 1 deg/step]
101	2CPMDown:A3:P	*ENG	[0 to 225 / 180 / 1 deg/step]
103	H:CPM:B5:press end	*ENG	[0 to 225 / 170 / 1 deg/step]
104	2CPMDown:B5:P	*ENG	[0 to 225 / 180 / 1 deg/step]
106	H:CPM:A6:press end	*ENG	[0 to 225 / 170 / 1 deg/step]
107	2CPMDown:A6:P	*ENG	[0 to 225 / 180 / 1 deg/step]
120	1CPMDown:post:P	*ENG	[0 to 225 / 185 / 1 deg/step]
121	2CPMDown:post:P	*ENG	[0 to 225 / 195 / 1 deg/step]
122	1CPMDown:env:p	*ENG	[0 to 225 / 185 / 1 deg/step]

123	2CPMDown:env:P	*ENG	[0 to 225 / 195 / 1 deg/step]
200	Start:DownTime	*ENG	[0 to 100 / 20 / 1 sec/step]

1125	[Press TmpFBCorrect] DFU		
004	Delay:Std:FC	*ENG	[0 to 20000 / 4723 / 1 msec/step]
	Corrects the timing of fusing speed correction. (Full color and standard speed)		
005	Delay:Std:BW	*ENG	[0 to 20000 / 3265 / 1 msec/step]
	Corrects the timing of fusing speed correction. (BW and standard speed)		
006	Delay:Middle:FC	*ENG	[0 to 20000 / 7914 / 1 msec/step]
	Corrects the timing of fusing speed correction. (Full color and middle speed)		
007	Delay:Middle:BW	*ENG	[0 to 20000 / 5583 / 1 msec/step]
	Corrects the timing of fusing speed correction. (BW and middle speed)		
008	Delay:Low:FC	*ENG	[0 to 20000 / 12171 / 1 msec/step]
	Corrects the timing of fusing speed correction. (Full color and low speed)		
009	Delay:Low:BW	*ENG	[0 to 20000 / 8675 / 1 msec/step]
	Corrects the timing of fusing speed correction. (BW and low speed)		
020	ONOFFSw:Rotations	*ENG	[0 or 1 / 1 / 1 /step] 0:OFF, 1:ON
	Controls the speeding fluctuating of fusing thermal expansion.		
051	GainA:Low	*ENG	[0.00 to 100.00 / 3.45 / 0.01 /step]
	Using this 1st coefficient to calculate the correction magnification of fusing speed. (Low temperature environment)		
052	GainB:Low	*ENG	[-5000 to 5000 / -305 / 1 /step]
	Using this 2nd coefficient to calculate the correction magnification of fusing speed. (Low temperature environment)		
053	GainA:Normal	*ENG	[0.00 to 100.00 / 3.45 / 0.01 /step]

	Using this 1st coefficient to calculate the correction magnification of fusing speed. (Other than the low temperature environment)		
054	GainB:Normal	*ENG	[-5000 to 5000 / -305 / 1 /step]
	Using this 2nd coefficient to calculate the correction magnification of fusing speed. (Other than the low temperature environment)		
061	Moter:LowLimit	*ENG	[-5 to 0 / -1.2 / 1 %/step]
	Limits the minimum correction magnification of fusing speed.		
062	Moter:HighLimit	*ENG	[0.0 to 5.0 / -0.3 / 0.1 %/step]
	Limits the maximum correction magnification of fusing speed.		

1131	[ContPrtModeSwitch] DFU		
	Sets the permission for paper to feed.		
001	ContPrtModeSwitch	*ENG	[0 to 2 / 0 / 1 /step] 0: Productivity Mode 1: Fusing Quality 1 2: Fusing Quality 2
	0 (Default): Focused on productivity. Image quality is no problem for general use and meets the machine spec. 1: Waits until the fusing roller gets to be stable when paper size is changed. 2: Waits until the fusing roller gets to be stable when paper size is changed or switched to single-sided printing or duplex printing.		

1132	[MaxDutySwitch] DFU		
	Switches maximum fixed duty level and power control.		
001	ControlSwitch	*ENG	[0 or 1 / 0:Fixed Duty / 1 /step] 0: Fixed Duty 1: Power Control

1133	[LstPprHeatOffCtrl] DFU		
	Sets the time to start turning off the heater after the last paper has fed.		

001	OffTime:Std:FC	*ENG	[0 to 20000 / 654 / 1 msec/step]
002	OffTime:Std:BW	*ENG	[0 to 20000 / 654 / 1 msec/step]
003	OffTime:Middle:FC	*ENG	[0 to 20000 / 1047 / 1 msec/step]
004	OffTime:Middle:BW	*ENG	[0 to 20000 / 1047 / 1 msec/step]
005	OffTime:Low:FC	*ENG	[0 to 20000 / 1570 / 1 msec/step]
006	OffTime:Low:BW	*ENG	[0 to 20000 / 1570 / 1 msec/step]
007	OffTime:Std:BW2	*ENG	[0 to 20000 / 654 / 1 msec/step]

1141	[FusingSCErrorInfo]		
	Displays the information when an SC code was issued.		
001	SC Number	*ENG	Displays the issued SC number. [0 to 999 / - / 1 /step]
002	SC Number Detail	*ENG	Displays the detail of issued SC number. [0 to 255 / - / 1 /step]
101	SC Temp:Sens1	*ENG	[0 to 255 / - / 1 deg/step]
102	SC Temp:Sens2	*ENG	[0 to 255 / - / 1 deg/step]
103	SC Temp:Sens3	*ENG	[0 to 255 / - / 1 deg/step]
104	SC Temp:Sens4	*ENG	[0 to 255 / - / 1 deg/step]
151	SC Pre1Temp:Sens1	*ENG	[0 to 255 / - / 1 deg/step]
152	SC Pre1Temp:Sens2	*ENG	[0 to 255 / - / 1 deg/step]
153	SC Pre1Temp:Sens3	*ENG	[0 to 255 / - / 1 deg/step]
154	SC Pre1Temp:Sens4	*ENG	[0 to 255 / 0 / 1 deg/step]
201	SC Pre2Temp:Sens1	*ENG	[0 to 255 / 0 / 1 deg/step]
202	SC Pre2Temp:Sens2	*ENG	[0 to 255 / 0 / 1 deg/step]
203	SC Pre2Temp:Sens3	*ENG	[0 to 255 / 0 / 1 deg/step]
204	SC Pre2Temp:Sens4	*ENG	[0 to 255 / 0 / 1 deg/step]

1148	[Full Detected]		
001	0:OFF / 1:ON	*ENG	[0 or 1 / 1 / 1/step]
	Selects the full detection function of output bin On/Off. <ul style="list-style-type: none"> • 0: Invalid • 1: Activate 		

1149	[Wait Time] DFU		
001	Duplex	*ENG	[0 to 120 / 20 / 5 sec/step]
	Specifies the paper feed wait time for duplex print after single-sided printing.		

1152	[Nip Band Check] DFU		
Checks and adjusts the nip of the hot roller and pressure roller.			
001	Execute	ENG	[- / - / -] [Execute]
	Executes the nip band measurement between heating roller and pressure roller. If the nip band width is not 8 mm, and fusing is not good, replace the pressure roller or install a new fusing unit.		
002	Pre-idling Time	*ENG	[0 to 999 / 600 / 1 sec/step]
	Specifies the fusing rotation time before executing SP1152-001.		
003	Stop Time	*ENG	[0 to 100 / 20 / 1 sec/step]
	Specifies the time for measuring the nip.		
004	Feed Time	*ENG	[1750 to 2200 / 1790 / 1 msec/step]
	Specifies the feeding time for measuring the nip.		

1153	[LowTemp:StartUp] DFU		
001	Temp:Thresh1	*ENG	[0 to 30 / 5 / 1 deg/step]
	Modifies threshold of fusing temperature to judge heat classifications when low temperature start-up control is working.		
002	Temp:Thresh2	*ENG	[0 to 30 / 17 / 1 deg/step]

	Modifies threshold of fusing temperature to judge heat classifications when low temperature start-up control is working.		
003	Temp:Target	*ENG	[50 to 100 / 100 / 1 deg/step]
	Modifies heating target temperature of fusing to warm up when low temperature start-up control is working.		
005	Temp:RotateThresh	*ENG	[0 to 50 / 30 / 1 deg/step]
	Modifies threshold of rotation start temperature when low temperature start-up control is working.		
010	Time:HeatStorage1	*ENG	[0 to 60 / 60 / 1 sec/step]
	Modifies threshold of rotation start time when low temperature start-up control is working. (Heating classification 1)		
011	Time:HeatStorage2	*ENG	[0 to 60 / 15 / 1 deg/step]
	Modifies threshold of rotation start time when low temperature start-up control is working. (Heating classification 2)		
020	ETemp:Thresh1	*ENG	[0 to 30 / 5 / 1 deg/step]
	Modifies threshold of environmental temperature to judge heating classification when low temperature start-up control is working.		
021	ETemp:Thresh2	*ENG	[0 to 30 / 17 / 1 deg/step]
	Modifies threshold of environmental temperature to judge heating classification when low temperature start-up control is working.		

1159	[Fusing Jam]		
001	SC Detection	*ENG	[0 or 1 / 0 / 1 /step]
	If the fusing jam occurred 3 times continuously, this SP can set if it detects SC or not. <ul style="list-style-type: none"> • 0: Not detects SC • 1: Detects SC 		

1801	[MotorSpeedAdjust] DFU		
	Adjusts the speeds of each motor.		
001	FeedMot Plain	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]

002	FeedMot Middle 1	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
003	FeedMot Middle 2	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
004	FeedMot Thick	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
005	BkOpcMot Plain	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
006	BkOpcMot Midle	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
007	BkOpcMot Thick	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
008	FcOpcMot Plain	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
009	FcOpcMot Middle	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
010	FcOpcMot Thick	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
011	TransMot Plain	ENG	[-10.00 to 10.00 / 0.00 / 0.05%/step]
012	TransMot Middle	ENG	[-10.00 to 10.00 / 0.00 / 0.05%/step]
013	TransMot Thick	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
014	FusingMot Plain	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
015	FusingMot Middle	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
016	FusingMot Middle2	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
017	FusingMot Thick	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
018	BankMot Plain	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
019	BankMot Middle	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]
020	BankMot Thick	ENG	[-10.00 to 10.00 / 0.00 / 0.05 %/step]

1802	[CPM SETTING] DFU		
	Specifies CPM information setting. This SP is saved to EEPROM and cannot be re-written by SP5885.		
001	CPM Setting	ENG	[0 to 255 / 32 / 1CPM/step]

Engine SP Tables-2

SP2-XXX (Drum)

2101	[System Setting] DFU		
001	SSCG On/Off	*ENG	[0 or 1 / 1 / 1 /step]
	Sets SSCG On/Off.		
002	SSCG Down/Center	*ENG	[0 or 1 / 1 / 1 /step]
	Selects SSCG setting Down Spread / Center Spread.		
003	SSCG Rate	*ENG	[0 to 1023 / 246 / 1 /step]
	Sets SSCG rate.		
004	SSCG Freq	*ENG	[0 to 3 / 0 / 1 /step]
	Sets SSCG frequency.		
005	Video I/F	*ENG	[0 to 3 / 3 / 1 /step]
	Sets controller connection setting. (type-K/PCI)		

2102	[Line speed] DFU		
	Sets the writing line speed of LEDA for normal speed, middle speed, and low speed.		
008	Normal	*ENG	[0 to 16383 / 4290 / 1 clk_w /step]
009	Hail	*ENG	[0 to 16383 / 6865 / 1 clk_w /step]
010	Low	*ENG	[0 to 16383 / 10298 / 1 clk_w /step]

2103	[ColorRegistration] DFU		
011	Sub Line: BK	*ENG	Adjusts sub line registration manually. [-472 to 472 / 0 / 1 line /step]
012	Sub Line: C	*ENG	
013	Sub Line: M	*ENG	
014	Sub Line: Y	*ENG	

015	Main Dot: Bk	*ENG	Adjusts main dot registration manually. [-188 to 188 / 0 / 1 dot /step]
016	Main Dot: C	*ENG	
017	Main Dot: M	*ENG	
018	Main Dot: Y	*ENG	

2104	[Low power mode] DFU		
019	Shift judgment	*ENG	[0 or 1 / 1 / 1 /step]
	Sets LEDA low power mode shift On/Off.		

2105	[LEDA] DFU		
020	CommClockDivRatio	*ENG	[0 to 1023 / 64 / 1 /step]
	Sets connection speed between LEDA and OROCHI.		

2106	[LEDA Setting]		
Sets the LEDA light-emission time.			
021	Stbwd normal Bk	ENG	[0 to 65535 / 0 / 1 ns/step]
022	Stbwd normal C	ENG	
023	Stbwd normal M	ENG	
024	Stbwd normal Y	ENG	
025	Stbwd half/low Bk	ENG	[0 to 65535 / 0 / 1 ns/step]
026	Stbwd half/low C	ENG	
027	Stbwd half/low M	ENG	
028	Stbwd half/low Y	ENG	
029	Stbwd Elmt normal	ENG	[0 to 65535 / 0 / 1 ns/step]
030	Stbwd Elmt half	ENG	
031	Stbwd Elmt low	ENG	
036	Stbitv normal	*ENG	[0 to 4095 / 535 / 1 clk_w /step]

			DFU
037	Stbitv half	*ENG	[0 to 4095 / 857 / 1 clk_w /step] DFU
038	Stbitv low	*ENG	[0 to 4095 / 1286 / 1 clk_w /step] DFU

3

2107	[Check sum err cnt] DFU		
	Saves number of connection error between LEDA and OROCHI.		
039	Bk	*ENG	[0 to 65535 / 0 / 1 /step]
040	C	*ENG	
041	M	*ENG	
042	Y	*ENG	

2108	[ColorShiftCorrect] DFU		
	Saves the auto adjustment of sub_line registration.		
043	Main C	*ENG	[-188 to 188 / 0 / 1 dot/step]
044	Main M	*ENG	
045	Main Y	*ENG	
046	Sub Bk	*ENG	[-472 to 472 / 0 / 1 line/step]
047	Sub C	*ENG	
048	Sub M	*ENG	
049	Sub Y	*ENG	
050	F-Phase normal Bk	*ENG	[0 to 16383 / 1 / 1 clk_w/step]
051	F-Phase normal C	*ENG	
052	F-Phase normal M	*ENG	
053	F-Phase normal Y	*ENG	
054	F-Phase half Bk	*ENG	[0 to 16383 / 1 / 1 clk_w/step]

055	F-Phase half C	*ENG	[0 to 16383 / 1 / 1 clk_w/step]
056	F-Phase half M	*ENG	
057	F-Phase half Y	*ENG	
058	F-Phase low Bk	*ENG	
059	F-Phase low C	*ENG	
060	F-Phase low M	*ENG	
061	F-Phase low Y	*ENG	

2109	[MUSIC Detect] DFU		
	Sets thresh to detect MUSIC pattern.		
062	Edge Thresh	*ENG	[0 to 65535 / 27235 / 1 /step]

2110	[Test Pattern]			
	Generates the test pattern.			
003	Pattern Selection		*ENG	[0 to 16 / 0 / 1 /step]
	0	None	9	20mm SGrid
	1	V 1Line	10	1by1
	2	H 1Line	11	2by2
	3	V 2Line	12	4by4
	4	H 2Line	13	Full Dot
	5	V Grid	14	Belt
	6	H Grid	15	10mm Gray
	7	20mm Grid	16	20mm Gray
	8	SGrid	-	-

2111	[Line Position Adj]		
	Executes the fine line position adjustment.		

001	Normal Mode	ENG	[- / - / -] [Execute]
002	Factory Mode	ENG	[- / - / -] [Execute]
003	Black mode	ENG	[- / - / -] [Execute]

2116	[MUSIC Mode] DFU		
	Changing this SP might cause the color shift.		
001	Skew	*ENG	[0 to 2 / 2 / 1 /step]
	Enables or disables skew correction. 0: Enable 1: Disable 2: Curl correction		
002	Bow	ENG	[0 or 1 / 0 / 1 /step]
	Enables or disables bow correction. 0: Enable 1: Disable		

2181	[Skew Correction]		
	The following SPs display the result of MUSIC for the skew correction.		
003	C	*ENG	[-64 to 63 / 0 / 1 line/step]
021	M	*ENG	
039	Y	*ENG	
061	Bk	*ENG	
100	Curve Table	*ENG	[0 to 9 / 2 / 1 /step] DFU

2182	[MUSIC Pattern] DFU		
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040	Pattern Offset	*ENG	[-236 to 239 / 0 / 1 dot/step]
	Displays main dot offset value for MUSIC pattern.		
041	Width	*ENG	[0 to 236 / 118 / 2 dot/step]
	Displays main dot width for MUSIC pattern.		
042	Cycle	*ENG	[-236 to 236 / 0 / 1 dot/step]
	Displays main dot cycle for MUSIC pattern.		

2183	[MUSIC Condition]		
	Displays the result of position detection pattern.		
001	Posipattern FC R	*ENG	[0 to 65535 / 0 / 1 /step]
002	Posipattern FC L	*ENG	
003	Posipattern Bk R	*ENG	
004	Posipattern BK L	*ENG	

2185	[Margin Position] DFU		
001	Mode	*ENG	[0 or 1 / 0 / 1 /step] 0:On, 1:Off
	Margin position correction mode on/off.		
002	Base Cal Flag	*ENG	[0 or 1 / 0 / 1 /step] 0:None, 1:Need
	Flag to calculate basis for the pattern of position detection		
011	Position FC Base	*ENG	[0 to 65535 / 0 / 1 /step]
012	Position Bk Base	*ENG	
Standard values for the pattern of position detection.			
021	Correct FC	*ENG	[-32768 to 32768 / 0 / 1 /step]
022	Correct Bk	*ENG	
Correction values for the margin position.			

2193	[MUSIC Condition]		
017	Judge Mode	*ENG	[0 or 1 / 0 / 1 /step] DFU
	Displays condition of MUSIC auto execution. <ul style="list-style-type: none"> 0: Auto execution enabled 1: Deterrence 		
018	Power On Mode	*ENG	[0 or 1 / 1 / 1 /step] 0:Run, 1:None DFU
	Displays MUSIC condition to execute or not to execute when power is turned on.		
019	Run Per Pages	*ENG	[0 to 65535 / 400 / 1 pages/step] DFU
	Interval pages to execute MUSIC.		
020	Forced Per Pages	*ENG	[0 to 65535 / 450 / 1 pages/step] DFU
	Interval pages forced to execute MUSIC.		
021	Normal Request	*ENG	[0 or 1 / 0 / 1 /step] 0:None, 1:Need DFU
	Execution request flag to adjust alignment in normal mode.		
022	Black Request	*ENG	[0 or 1 / 0 / 1 /step] 0:None, 1:Need DFU
	Execution request flag to adjust alignment in BW mode.		
023	Normal Pagecount	*ENG	[0 to 65535 / 0 / 1 pages/step]
	Displays page counter since alignment adjustment is executed in normal mode.		
024	Black Pagecount	*ENG	[0 to 65535 / 0 / 1 pages/step]
	Displays page counter since alignment adjustment is executed in BW mode.		

025	Judge Factor	*ENG	[0 to 255 / 0 / 1 /step]
	Displays judge factor for MUSIC.		
026	Normal Temp	*ENG	[-128 to 127 / 0 / 1 deg/step]
	Environment temperature when alignment adjustment is executed in normal mode.		
027	Black Temp	*ENG	[-128 to 127 / 0 / 1 deg/step]
	Environment temperature when alignment adjustment is executed in BW mode.		

2194	[MUSIC Result]		
	-		
007	Run Result	*ENG	[0 to 0xFFFFFFFF / 0 / 1 /step]
	Displays the run result of alignment adjustment.		
013	Normal Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the execution number of alignment adjustment in normal mode.		
014	Normal Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the failed number of alignment adjustment in normal mode.		
015	Factory Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the execution number of alignment adjustment in factory mode.		
016	Factory Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the failed number of alignment adjustment in factory mode.		
017	Margin Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the execution number of alignment adjustment in BW mode.		
018	Margin Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]
	Displays the failed number of alignment adjustment in BW mode.		

2196	[MUSIC Pattern] DFU		
	Determines the set number of patterns created when alignment adjustment is executed.		
001	Pattern Num	*ENG	[1 to 16 / 8 / 1 set/step]

2221	[LEDA Disp]		
001	Average volume Bk	ENG	Displays the average light intensity data of LEDA. [0 to 65535 / 0 / 1 /step]
002	Average volume C	ENG	
003	Average volume M	ENG	
004	Average volume Y	ENG	
005	Serial num Bk	ENG	Displays LEDA serial numbers. [0 to 255 / 0 / 1 /step]
006	Serial num C	ENG	
007	Serial num M	ENG	
008	Serial num Y	ENG	
009	LEDA Pow Err Bk	ENG	Displays the flag indicator of LEDA power error. [0 or 1 / 0 / 1 /step]
010	LEDA Pow Err C	ENG	
011	LEDA Pow Err C	ENG	
012	LEDA Pow Err Y	ENG	

2222	[LEDA Energy] DFU		
	Sets emission energy of LEDA.		
001	Normal Bk	*ENG	[0 to 1200 / 500 / 1 nJ/cm ² /step]
002	Normal C	*ENG	[0 to 1200 / 500 / 1 nJ/cm ² /step]
003	Normal M	*ENG	[0 to 1200 / 500 / 1 nJ/cm ² /step]
004	Normal Y	*ENG	[0 to 1200 / 500 / 1 nJ/cm ² /step]

2302	[Env Correct]		
	Crrnt Env Display	ENG	[0 to 7 / 0 / 1 /step]
001	Displays the environmental compartments of high pressure control. 0: SSL 1: LL 2: ML 3: MM		

	4: MH 5: HH1 6: HH2 7: HH3		
002	Temp Thresh	*ENG	[-5 to 50 / 5 / 1 deg/step] DFU
	If the temperature gets lower than threshold, it determines as SLL environment.		
003	Abs Hum:Thresh 1	*ENG	[0 to 100 / 4 / 1 g/m ³ /step] DFU
	If absolute humidity gets lower than threshold, it determines as LL environment.		
004	Abs Hum:thresh 2	*ENG	[0 to 100 / 8 / 1 g/m ³ /step] DFU
	If absolute humidity gets lower than threshold, it determines as ML environment.		
005	Abs Hum:Thresh 3	*ENG	[0.00 to 100.00 / 13.50 / 0.01 g/m ³ /step] DFU
	If absolute humidity gets lower than threshold, it determines as MM environment.		
006	Abs Hum:thresh 4	*ENG	[0.00 to 100.00 / 17.50 / 0.01 g/m ³ /step] DFU
	If absolute humidity gets lower than threshold, it determines as MH environment.		
007	Abs Hum:thresh 5	*ENG	[0.00 to 100.00 / 24.00 / 0.01 g/m ³ /step] DFU
	If absolute humidity gets lower than threshold, it determines as HH1 environment.		
008	Abs Hum:thresh 6	*ENG	[0.00 to 100.00 / 30.00 / 0.01 g/m ³ /step] DFU
	If absolute humidity gets lower than threshold, it determines as HH2 environment.		

2311	[Paper Intvl Cur] DFU		
	Sets current value of 2nd transfer unit between the papers.		
001	Trans2 Current	*ENG	[0 to 255 / 1 / 1 μ A/step]

2326	[Trans2 CL Bias] DFU		
	Sets cleaning bias value according to speed and the environment.		
001	PLUS:Spd 1:MM	*ENG	[0 to 255 / 0 / 1 μ A/step]
002	PLUS:Spd 2:MM	*ENG	
003	PLUS:Spd 3:MM	*ENG	
004	PLUS:Spd 1:HH	*ENG	
005	PLUS:Spd 2:HH	*ENG	
006	PLUS:Spd 3:HH	*ENG	
007	PLUS:Spd 1:LL	*ENG	
008	PLUS:Spd 2: LL	*ENG	
009	PLUS:Spd 3: LL	*ENG	
010	MINUS:Spd 1:MM	*ENG	[0 to 255 / 0 / 1 x10V/step]
011	MINUS:Spd 2:MM	*ENG	
012	MINUS:Spd 3:MM	*ENG	
013	MINUS:Spd 1:HH	*ENG	
014	MINUS:Spd 2:HH	*ENG	
015	MINUS:Spd 3:HH	*ENG	
016	MINUS:Spd 1:LL	*ENG	
017	MINUS:Spd 2:LL	*ENG	
018	MINUS:Spd 3:LL	*ENG	
2326	[Trans2 CL Bias] DFU		

	Sets cleaning bias value just before the image area according to speed and the environment.		
019	MODE4:Spd 1:MM	*ENG	[0 to 255 / 0 / 1 μ A/step]
020	MODE4:Spd 2:MM	*ENG	
021	MODE4:Spd 3:MM	*ENG	
022	MODE4:Spd 1:HH	*ENG	
023	MODE4:Spd 2:HH	*ENG	
024	MODE4:Spd 3:HH	*ENG	
025	MODE4:Spd 1:LL	*ENG	
026	MODE4:Spd 2:LL	*ENG	
027	MODE4:Spd 3:LL	*ENG	

2351	[Trans1 Bias] DFU		
001	Bk	*ENG	[20 to 200 / 105 / 1 x10V/step]
	Sets standard output value of 1st transfer unit bias before correction.		
002	Magenta	*ENG	[20 to 200 / 104 / 1 x10V/step]
	Sets standard output value of 1st transfer unit bias before correction.		
003	OPC low Bias	*ENG	[20 to 200 / 60 / 1 x10V/step]
	Sets output value of 1st transfer unit bias while low charging bias is applying to OPC drum.		
004	Time adj	*ENG	[0 to 255 / 20 / 1 V/step]
	Sets time correction value to offset (+) for standard output of 1st transfer unit bias.		
005	Env Adj:LL	*ENG	[0 to 255 / 104 / 1 %/step]
	Sets correction coefficient according to the environment for standard output of 1st transfer unit bias.		
006	Env Adj:HH1	*ENG	[0 to 255 / 100 / 1 %/step]
	Sets correction coefficient according to the environment for standard output of 1st transfer unit bias.		

007	Env Adj:HH3	*ENG	[0 to 255 / 90 / 1 %/step]
	Sets correction coefficient according to the environment for standard output of 1 st transfer unit bias.		
008	Bk Fixed	ENG	Sets output immediate value of 1 st transfer unit bias. [0 to 255 / 0 / 1 %/step]
009	Y Fixed	ENG	
010	M Fixed	ENG	
011	C Fixed	ENG	

2401	[Separate Bias] DFU		
	Modifies separate bias values in accordance with print speeds, print faces, or paper types. 1st: front page, 2nd: back page		
001	Spd1:1st:THIN	*ENG	[0 to 255 / 0 / 1 x100V/step]
002	Spd1:2nd:THIN	*ENG	
003	Spd1:1st:NORMAL	*ENG	
004	Spd1:2nd:NORMAL1	*ENG	
005	Spd1:1st:NORMAL2	*ENG	
006	Spd1:2nd:NORMAL2	*ENG	[0 to 255 / 0 / 1 x100V/step]
007	Spd2:1st:THICK2	*ENG	
008	Spd2:2nd:THICK2	*ENG	
009	Spd3:1st:THICK3	*ENG	
010	Spd3:2nd:THICK3	*ENG	

2402	[Separate Env Adj] DFU		
	Sets correction coefficient for separate bias according to the environment.		
001	LL	*ENG	[0 to 255 / 0 / 1 %/step]
002	MM	*ENG	
003	HH1	*ENG	

2403	[Separate Sub Adj] DFU		
	<p>Head: top edge of the paper.</p> <p>L1: means the timing to switch separate bias from top edge of the paper.</p> <ul style="list-style-type: none"> • Main dot width is more than 279mm: position of paper length x 90% • Main dot width is less than 279mm and more than 210mm: position of paper length x 90% • Main dot width is less than 210mm and more than 148mm: position of paper length x 80% • Main dot width is less than 148mm: position of paper length x 70% 		
001	HEAD_L1	*ENG	[0 to 255 / 0 / 1 %/step]
	Sets correction coefficient for separate bias according to the environment. Separation bias value to apply from top edge of the paper to L1.		
002	L1_TAIL	*ENG	[0 to 255 / 0 / 1 %/step]
	Sets correction coefficient for separate bias according to the environment. Separation bias value to apply from L1 to end of the paper.		
003	L1	*ENG	[-40.0 to 471.0 / 0.0 / 0.1 mm/step]
	Sets threshold of sub-line position for separate bias.		

2404	[Separate Timing] DFU		
	Sets start and stop timing for separate bias.		
001	Start Adj	*ENG	[-127 to 127 / 0 / 1 mm/step]
002	Stop Adj	*ENG	[-127 to 127 / 0 / 1 mm/step]

2405	[Separate:Head Adj] DFU		
	<p>Adjusts application timing for separate bias.</p> <p>A + value sets the application timing later.</p> <p>A - value sets the application timing earlier.</p>		
001	Spd1:1st:THIN	*ENG	[-127 to 127 / 0 / 1 mm/step]
002	Spd1:2nd:THIN	*ENG	

003	Spd1:1st:NORMAL1	*ENG	[-127 to 127 / 0 / 1 mm/step]
004	Spd1:2nd:NORMAL1	*ENG	
005	Spd1:1st:NORMAL2	*ENG	
006	Spd1:2nd:NORMAL2	*ENG	
007	Spd2:1st:THICK1	*ENG	
008	Spd2:2nd:THICK1	*ENG	
009	Spd3:1st:THICK3	*ENG	
010	Spd3:2nd:THICK3	*ENG	

2406	[Separate:Tail Adj] DFU		
	Adjusts application timing for separate bias. A + value sets the application timing later. A - value sets the application timing earlier.		
001	Spd1:1st:THIN	*ENG	[-127 to 127 / 0 / 1 mm/step]
002	Spd1:2nd:THIN	*ENG	
003	Spd1:1st:NORMAL1	*ENG	
004	Spd1:2nd:NORMAL1	*ENG	
005	Spd1:1st:NORMAL2	*ENG	
006	Spd1:2nd:NORMAL2	*ENG	
007	Spd2:1st:THICK1	*ENG	[-127 to 127 / 0 / 1 mm/step]
008	Spd2:2nd:THICK1	*ENG	
009	Spd3:1st:THICK3	*ENG	
010	Spd3:2nd:THICK3	*ENG	

2408	[Trans2:MM]		
	Sets 2nd transfer bias according to the environment and each printing conditions.		
001	Spd1:1st:S1:K:N	*ENG	Paper width S1 ≥ 279mm

002	Spd1:2nd:S1:K:N	*ENG	[0 to 200 / 0 / 1 μ A/step] DFU
003	Spd1:1st:S1:C:N	*ENG	
004	Spd1:2nd:S1:C:N	*ENG	
005	Spd1:1st:S2:K:N	*ENG	Paper width 210mm \leq S2 < 279mm [0 to 200 / 0 / 1 μ A/step] DFU
006	Spd1:2nd:S2:K:N	*ENG	
007	Spd1:1st:S2:C:N	*ENG	
008	Spd1:2nd:S2:C:N	*ENG	
009	Spd1:1st:S3:K:N	*ENG	Paper width 148mm \leq S3 < 210mm [0 to 200 / 0 / 1 μ A/step] FCU
010	Spd1:2nd:S3:K:N	*ENG	
011	Spd1:1st:S3:C:N	*ENG	
012	Spd1:2nd:S3:C:N	*ENG	
013	Spd1:1st:S4:K:N	*ENG	Paper width S4 < 148mm [0 to 200 / 0 / 1 μ A/step] DFU
014	Spd1:2nd:S4:K:N	*ENG	
015	Spd1:1st:S4:C:N	*ENG	
016	Spd1:2nd:S4:C:N	*ENG	
017	Spd1:1st:S1:K:PC	*ENG	Paper width S1 \geq 279mm [0 to 200 / 0 / 1 μ A/step] DFU
018	Spd1:2nd:S1:K:PC	*ENG	
019	Spd1:1st:S1:C:PC	*ENG	
020	Spd1:2nd:S1:C:PC	*ENG	
021	Spd1:1st:S2:K:PC	*ENG	Paper width 210mm \leq S2 < 279mm [0 to 200 / 0 / 1 μ A/step] DFU
022	Spd1:2nd:S2:K:PC	*ENG	
023	Spd1:1st:S2:C:PC	*ENG	
024	Spd1:2nd:S2:C:PC	*ENG	
025	Spd1:1st:S3:K:PC	*ENG	Paper width 148mm \leq S3 < 210mm [0 to 200 / 0 / 1 μ A/step] FCU
026	Spd1:2nd:S3:K:PC	*ENG	
027	Spd1:1st:S3:C:PC	*ENG	

028	Spd1:2nd:S3:C:PC	*ENG	
029	Spd1:1st:S4:K:PC	*ENG	
030	Spd1:2nd:S4:K:PC	*ENG	Paper width S4 < 148mm
031	Spd1:1st:S4:C:PC	*ENG	[0 to 200 / 0 / 1 μ A/step]
032	Spd1:2nd:S4:C:PC	*ENG	DFU
033	Spd2:1st:S1:K:T1	*ENG	
034	Spd2:2nd:S1:K:T1	*ENG	Paper width S1 \geq 279mm
035	Spd2:1st:S1:C:T1	*ENG	[0 to 200 / 0 / 1 μ A/step]
036	Spd2:2nd:S1:C:T1	*ENG	DFU
037	Spd2:1st:S2:K:T1	*ENG	
038	Spd2:2nd:S2:K:T1	*ENG	Paper width 210mm \leq S2 < 279mm
039	Spd2:1st:S2:C:T1	*ENG	[0 to 200 / 0 / 1 μ A/step]
040	Spd2:2nd:S2:C:T1	*ENG	DFU
041	Spd2:1st:S3:K:T1	*ENG	
042	Spd2:2nd:S3:K:T1	*ENG	Paper width 148mm \leq S3 < 210mm
043	Spd2:1st:S3:C:T1	*ENG	[0 to 200 / 0 / 1 μ A/step]
044	Spd2:2nd:S3:C:T1	*ENG	FCU
045	Spd2:1st:S4:K:T1	*ENG	
046	Spd2:2nd:S4:K:T1	*ENG	Paper width S4 < 148mm
047	Spd2:1st:S4:C:T1	*ENG	[0 to 200 / 0 / 1 μ A/step]
048	Spd2:2nd:S4:C:T1	*ENG	DFU
049	Spd3:1st:S1:K:T3	*ENG	
050	Spd3:2nd:S1:K:T3	*ENG	Paper width S1 \geq 279mm
051	Spd3:1st:S1:C:T3	*ENG	[0 to 200 / 0 / 1 μ A/step]
052	Spd3:2nd:S1:C:T3	*ENG	DFU
053	Spd3:1st:S2:K:T3	*ENG	Paper width 210mm \leq S2 < 279mm

054	Spd3:2nd:S2:K:T3	*ENG	[0 to 200 / 0 / 1 μ A/step] DFU
055	Spd3:1st:S2:C:T3	*ENG	
056	Spd3:2nd:S2:C:T3	*ENG	
057	Spd3:1st:S3:K:T3	*ENG	Paper width 148mm \leq S3 < 210mm [0 to 200 / 0 / 1 μ A/step] FCU
058	Spd3:2nd:S3:K:T3	*ENG	
059	Spd3:1st:S3:C:T3	*ENG	
060	Spd3:2nd:S3:C:T3	*ENG	
061	Spd3:1st:S4:K:T3	*ENG	Paper width S4 < 148mm [0 to 200 / 0 / 1 μ A/step] DFU
062	Spd3:2nd:S4:K:T3	*ENG	
063	Spd3:1st:S4:C:T3	*ENG	
064	Spd3:2nd:S4:C:T3	*ENG	

2409	[Trans2:HH]		
	Sets 2nd transfer bias according to the environment and each printing conditions.		
001	Spd1:1st:S1:K:N	*ENG	Paper width S1 \geq 279mm [0 to 200 / 0 / 1 μ A/step] DFU
002	Spd1:2nd:S1:K:N	*ENG	
003	Spd1:1st:S1:C:N	*ENG	
004	Spd1:2nd:S1:C:N	*ENG	
005	Spd1:1st:S2:K:N	*ENG	Paper width 210mm \leq S2 < 279mm [0 to 200 / 0 / 1 μ A/step] DFU
006	Spd1:2nd:S2:K:N	*ENG	
007	Spd1:1st:S2:C:N	*ENG	
008	Spd1:2nd:S2:C:N	*ENG	
009	Spd1:1st:S3:K:N	*ENG	Paper width 148mm \leq S3 < 210mm [0 to 200 / 0 / 1 μ A/step] FCU
010	Spd1:2nd:S3:K:N	*ENG	
011	Spd1:1st:S3:C:N	*ENG	
012	Spd1:2nd:S3:C:N	*ENG	

013	Spd1:1st:S4:K:N	*ENG	Paper width S4 < 148mm [0 to 200 / 0 / 1 μA/step] DFU
014	Spd1:2nd:S4:K:N	*ENG	
015	Spd1:1st:S4:C:N	*ENG	
016	Spd1:2nd:S4:C:N	*ENG	
017	Spd1:1st:S1:K:PC	*ENG	Paper width S1 ≥ 279mm [0 to 200 / 0 / 1 μA/step] DFU
018	Spd1:2nd:S1:K:PC	*ENG	
019	Spd1:1st:S1:C:PC	*ENG	
020	Spd1:2nd:S1:C:PC	*ENG	
021	Spd1:1st:S2:K:PC	*ENG	Paper width 210mm ≤ S2 < 279mm [0 to 200 / 0 / 1 μA/step] DFU
022	Spd1:2nd:S2:K:PC	*ENG	
023	Spd1:1st:S2:C:PC	*ENG	
024	Spd1:2nd:S2:C:PC	*ENG	
025	Spd1:1st:S3:K:PC	*ENG	Paper width 148mm ≤ S3 < 210mm [0 to 200 / 0 / 1 μA/step] FCU
026	Spd1:2nd:S3:K:PC	*ENG	
027	Spd1:1st:S3:C:PC	*ENG	
028	Spd1:2nd:S3:C:PC	*ENG	
029	Spd1:1st:S4:K:PC	*ENG	Paper width S4 < 148mm [0 to 200 / 0 / 1 μA/step] DFU
030	Spd1:2nd:S4:K:PC	*ENG	
031	Spd1:1st:S4:C:PC	*ENG	
032	Spd1:2nd:S4:C:PC	*ENG	
033	Spd2:1st:S1:K:T1	*ENG	Paper width S1 ≥ 279mm [0 to 200 / 0 / 1 μA/step] DFU
034	Spd2:2nd:S1:K:T1	*ENG	
035	Spd2:1st:S1:C:T1	*ENG	
036	Spd2:2nd:S1:C:T1	*ENG	
037	Spd2:1st:S2:K:T1	*ENG	Paper width 210mm ≤ S2 < 279mm [0 to 200 / 0 / 1 μA/step]
038	Spd2:2nd:S2:K:T1	*ENG	

039	Spd2:1st:S2:C:T1	*ENG	DFU
040	Spd2:2nd:S2:C:T1	*ENG	
041	Spd2:1st:S3:K:T1	*ENG	Paper width $148\text{mm} \leq S3 < 210\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] FCU
042	Spd2:2nd:S3:K:T1	*ENG	
043	Spd2:1st:S3:C:T1	*ENG	
044	Spd2:2nd:S3:C:T1	*ENG	
045	Spd2:1st:S4:K:T1	*ENG	Paper width $S4 < 148\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
046	Spd2:2nd:S4:K:T1	*ENG	
047	Spd2:1st:S4:C:T1	*ENG	
048	Spd2:2nd:S4:C:T1	*ENG	
049	Spd3:1st:S1:K:T3	*ENG	Paper width $S1 \geq 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
050	Spd3:2nd:S1:K:T3	*ENG	
051	Spd3:1st:S1:C:T3	*ENG	
052	Spd3:2nd:S1:C:T3	*ENG	
053	Spd3:1st:S2:K:T3	*ENG	Paper width $210\text{mm} \leq S2 < 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
054	Spd3:2nd:S2:K:T3	*ENG	
055	Spd3:1st:S2:C:T3	*ENG	
056	Spd3:2nd:S2:C:T3	*ENG	
057	Spd3:1st:S3:K:T3	*ENG	Paper width $148\text{mm} \leq S3 < 210\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] FCU
058	Spd3:2nd:S3:K:T3	*ENG	
059	Spd3:1st:S3:C:T3	*ENG	
060	Spd3:2nd:S3:C:T3	*ENG	
061	Spd3:1st:S4:K:T3	*ENG	Paper width $S4 < 148\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
062	Spd3:2nd:S4:K:T3	*ENG	
063	Spd3:1st:S4:C:T3	*ENG	
064	Spd3:2nd:S4:C:T3	*ENG	

2410	[Trans2:LL]		
	Sets 2nd transfer bias according to the environment and each printing conditions.		
001	Spd1:1st:S1:K:N	*ENG	Paper width $S1 \geq 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
002	Spd1:2nd:S1:K:N	*ENG	
003	Spd1:1st:S1:C:N	*ENG	
004	Spd1:2nd:S1:C:N	*ENG	
005	Spd1:1st:S2:K:N	*ENG	Paper width $210\text{mm} \leq S2 < 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
006	Spd1:2nd:S2:K:N	*ENG	
007	Spd1:1st:S2:C:N	*ENG	
008	Spd1:2nd:S2:C:N	*ENG	
009	Spd1:1st:S3:K:N	*ENG	Paper width $148\text{mm} \leq S3 < 210\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] FCU
010	Spd1:2nd:S3:K:N	*ENG	
011	Spd1:1st:S3:C:N	*ENG	
012	Spd1:2nd:S3:C:N	*ENG	
013	Spd1:1st:S4:K:N	*ENG	Paper width $S4 < 148\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
014	Spd1:2nd:S4:K:N	*ENG	
015	Spd1:1st:S4:C:N	*ENG	
016	Spd1:2nd:S4:C:N	*ENG	
017	Spd1:1st:S1:K:PC	*ENG	Paper width $S1 \geq 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
018	Spd1:2nd:S1:K:PC	*ENG	
019	Spd1:1st:S1:C:PC	*ENG	
020	Spd1:2nd:S1:C:PC	*ENG	
021	Spd1:1st:S2:K:PC	*ENG	Paper width $210\text{mm} \leq S2 < 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
022	Spd1:2nd:S2:K:PC	*ENG	
023	Spd1:1st:S2:C:PC	*ENG	
024	Spd1:2nd:S2:C:PC	*ENG	

025	Spd1:1st:S3:K:PC	*ENG	Paper width $148\text{mm} \leq S3 < 210\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] FCU
026	Spd1:2nd:S3:K:PC	*ENG	
027	Spd1:1st:S3:C:PC	*ENG	
028	Spd1:2nd:S3:C:PC	*ENG	
029	Spd1:1st:S4:K:PC	*ENG	Paper width $S4 < 148\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
030	Spd1:2nd:S4:K:PC	*ENG	
031	Spd1:1st:S4:C:PC	*ENG	
032	Spd1:2nd:S4:C:PC	*ENG	
033	Spd2:1st:S1:K:T1	*ENG	Paper width $S1 \geq 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
034	Spd2:2nd:S1:K:T1	*ENG	
035	Spd2:1st:S1:C:T1	*ENG	
036	Spd2:2nd:S1:C:T1	*ENG	
037	Spd2:1st:S2:K:T1	*ENG	Paper width $210\text{mm} \leq S2 < 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
038	Spd2:2nd:S2:K:T1	*ENG	
039	Spd2:1st:S2:C:T1	*ENG	
040	Spd2:2nd:S2:C:T1	*ENG	
041	Spd2:1st:S3:K:T1	*ENG	Paper width $148\text{mm} \leq S3 < 210\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] FCU
042	Spd2:2nd:S3:K:T1	*ENG	
043	Spd2:1st:S3:C:T1	*ENG	
044	Spd2:2nd:S3:C:T1	*ENG	
045	Spd2:1st:S4:K:T1	*ENG	Paper width $S4 < 148\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$] DFU
046	Spd2:2nd:S4:K:T1	*ENG	
047	Spd2:1st:S4:C:T1	*ENG	
048	Spd2:2nd:S4:C:T1	*ENG	
049	Spd3:1st:S1:K:T3	*ENG	Paper width $S1 \geq 279\text{mm}$ [0 to 200 / 0 / 1 $\mu\text{A}/\text{step}$]
050	Spd3:2nd:S1:K:T3	*ENG	

051	Spd3:1st:S1:C:T3	*ENG	DFU
052	Spd3:2nd:S1:C:T3	*ENG	
053	Spd3:1st:S2:K:T3	*ENG	Paper width 210mm ≤ S2 < 279mm [0 to 200 / 0 / 1 μA/step] DFU
054	Spd3:2nd:S2:K:T3	*ENG	
055	Spd3:1st:S2:C:T3	*ENG	
056	Spd3:2nd:S2:C:T3	*ENG	
057	Spd3:1st:S3:K:T3	*ENG	
058	Spd3:2nd:S3:K:T3	*ENG	Paper width 148mm ≤ S3 < 210mm [0 to 200 / 0 / 1 μA/step] FCU
059	Spd3:1st:S3:C:T3	*ENG	
060	Spd3:2nd:S3:C:T3	*ENG	
061	Spd3:1st:S4:K:T3	*ENG	
062	Spd3:2nd:S4:K:T3	*ENG	Paper width S4 < 148mm [0 to 200 / 0 / 1 μA/step] DFU
063	Spd3:1st:S4:C:T3	*ENG	
064	Spd3:2nd:S4:C:T3	*ENG	

2412	[Trans2:Correct] DFU		
	-		
001	PrintRatio:Txt:C1	*ENG	[0 to 100 / 80 / 1 %/step]
	Sets correction coefficient for 2nd transfer bias according to printing ratio. C1: correction value (%) of 2nd transfer image bias setting value.		
002	Time Adj:T1	*ENG	[0 to 100 / 100 / 1 %/step]
	Sets correction coefficient for 2nd transfer bias according to the distance. T1: correction value (%) of 2nd transfer image bias setting value when number of printed pages is less than 15K.		
003	Time Adj:T2	*ENG	[0 to 100 / 80 / 1 %/step]
	Sets correction coefficient for 2nd transfer bias according to the distance. T2: correction value (%) of 2nd transfer image bias setting value when number of printed pages is more than 15K and less than 30K.		

004	Time Adj:T3	*ENG	[0 to 100 / 70 / 1 %/step]
	Sets correction coefficient for 2nd transfer bias according to the distance. T3: correction value (%) of 2nd transfer image bias setting value when number of printed pages is more than 30K and less than 45K.		
005	Time Adj:T4	*ENG	[0 to 100 / 65 / 1 %/step]
	Sets correction coefficient for 2nd transfer bias according to the distance. T4: correction value (%) of 2nd transfer image bias setting value when number of printed pages is more than 45K and less than 60K.		
006	Time Adj:T5	*ENG	[0 to 100 / 60 / 1 %/step]
	Sets correction coefficient for 2nd transfer bias according to the distance. T5: correction value (%) of 2nd transfer image bias setting value when number of printed pages is more than 60K.		
007	Timing:1st	*ENG	[-127 to 127 / 0 / 1 mm/step]
	Sets application timing of 2nd transfer bias according to the number of printed pages		
008	Timing:Other	*ENG	[-127 to 127 / 0 / 1 mm/step]
	Sets application timing of 2nd transfer bias according to the number of pages printed.		
009	Head	*ENG	[-127 to 127 / 0 / 1 mm/step]
	Sets application timing for 2nd transfer bias.		
010	Tail	*ENG	[-127 to 127 / 0 / 1 mm/step]
	Sets application timing for 2nd transfer bias.		
011	High Humid paper	*ENG	[0 or 1 / 0 / 1 /step] 0:Normal, 1:High Humid
	Sets application timing for 2nd transfer bias.		

2500	[Engine Setting]		
001	Mode1	ENG	[- / - / -] [Execute]
002	Mode2	ENG	
003	Mode3	ENG	

004	Mode4	ENG	
005	Mode5	ENG	
006	Mode6	ENG	
007	Mode7	ENG	
008	Mode8	ENG	[- / - / -] [Execute]
009	Mode9	ENG	
010	Mode10	ENG	
011	Data UC1	*ENG	
012	Data UC2	*ENG	
013	Data UC3	*ENG	[0 to 255 / 0 / 1 /step] Not used
014	Data UC4	*ENG	
015	Data UC5	*ENG	
016	Data SC1	*ENG	
017	Data SC2	*ENG	
018	Data SC3	*ENG	[-128 to 127 / 0 / 1 /step] Not used
019	Data SC4	*ENG	
020	Data SC5	*ENG	
021	Data UW1	*ENG	
022	Data UW2	*ENG	
023	Data UW3	*ENG	[0 to 65535 / 0 / 1 /step] Not used
024	Data UW4	*ENG	
025	Data UW5	*ENG	
026	Data SW1	*ENG	
027	Data SW2	*ENG	
028	Data SW3	*ENG	[-32768 to 32767 / 0 / 1 /step] Not used
029	Data SW4	*ENG	

030	Data SW5	*ENG	
031	Data UL1	*ENG	[0 to 0xFFFFFFFF / 0 / 1 /step] Not used
032	Data UL2	*ENG	
033	Data UL3	*ENG	
034	Data UL4	*ENG	
035	Data UL5	*ENG	
036	Data UL6	*ENG	[0 to 0xFFFFFFFF / 0 / 1 /step] Not used
037	Data UL7	*ENG	
038	Data UL8	*ENG	
039	Data UL9	*ENG	
040	Data UL10	*ENG	

2904	[Auto revolutions]		
	Turn auto revolutions on to rotate image transfer belt for paper dust removal.		
001	On	ENG	[- / - / -] [Execute]

2907	[ACS SW: FC Mode]		
	Adjusts the threshold of BW data continuous page to switch FC mode to BW mode when printing color and BW mixed data.		
001	Cont.Mono Sheet	ENG	[0 to 10 / 1 / 1 sheet/step]

Engine SP Tables-3

SP3-XXX (Process)

3

3011	[AdjustManualExe]		
	-		
001	Normal ProCon	ENG	[- / - / -] [Execute]
	Executes the normal process control manually (potential control). Check the result with SP3-325-001 and 3-012-001 after executing this SP.		
004	FullMusic/ProCon	ENG	[- / - / -] [Execute]
	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) twice.		
005	Nor.Music/ProCon	ENG	[- / - / -] [Execute]
	Executes the process control that is normally done at the same time as MUSIC. This SP does the MUSIC (line position adjustment) once.		
3012	[ProCon OK?] Process Control Self-check Result		
	<p>Displays the result of the latest process control self-check.</p> <p>All colors are displayed. The results are displayed in the order "Y M C K"</p> <p>The result displays as below:</p> <p>00: Not executed</p> <p>11: Succeeded</p> <p>Others: Error Codes</p> <p>e.g., 11 (Y) 99 (C) 11 (M) 11 (K): The self-check for Cyan failed but the others were successful.</p>		
001	History:Last	*ENG	[0 to 255 / 0 / 1 /step]
3015	[ManualSply:Exe] DFU		

	Executes the manual toner supply to the development unit. Execution time can be set by SP3016-001 to 004		
001	TnrSplyFc	ENG	[- / - / -] [Execute]
003	TnrSplyK	ENG	
004	TnrSplyY	ENG	
005	TnrSplyM	ENG	
006	TnrSplyC	ENG	

3016	[ManualSply:Set] DFU		
	Specifies the manual toner supply time for each color.		
001	SplyTimeK	*ENG	[0 to 255 / 30 / 1 sec/step]
002	SplyTimeY	*ENG	
003	SplyTimeM	*ENG	
004	SplyTimeC	*ENG	

3017	[ManualRmn:Exe]		
	Executes the manual toner remaining detection. Detection result can be checked by SP3411-002 to 004.		
001	TnrRmnSnsFc	ENG	[- / - / -] [Execute]
002	TnrRmnSnsBk	ENG	

3018	[ManualMix:Exe]		
	Executes the manual toner mixing. Execution time can be set by SP3019-001. Detection result can be checked by SP3411-001.		
001	TnrMixFc	ENG	[- / - / -] [Execute]
002	TnrMixBk	ENG	

3019	[ManualMix:Set] DFU		
	Specifies the manual toner mixing time.		
001	MlxTime	*ENG	[0 to 255 / 30 / 1 sec/step]

3022	[TonerFillMode] DFU			
	-			
	001	FillPhaselD:K	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill
	002	FillPhaselD:Y	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill
	003	FillPhaselD:M	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill
004	FillPhaselD:C	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill	

3097	[TonerFillAmnt] DFU			
	Fill amount of toner cartridge.			
	001	FillAmnt:2.2K:K	*ENG	[0 to 300 / 63 / 1 g/step]
	002	FillAmnt:2K:Y	*ENG	[0 to 300 / 59 / 1 g/step]
	003	FillAmnt:2K:M	*ENG	
	004	FillAmnt:2K:C	*ENG	
	005	FillAmnt:3K:K	*ENG	[0 to 300 / 80 / 1 g/step]
	006	FillAmnt:2.5K:Y	*ENG	[0 to 300 / 68 / 1 g/step]
	007	FillAmnt:2.5K:M	*ENG	
	008	FillAmnt:2.5K:C	*ENG	
	009	FillAmnt:8K:K	*ENG	[0 to 300 / 184 / 1 g/step]
010	FillAmnt:7K:Y	*ENG	[0 to 300 / 161 / 1 g/step]	

011	FillAmnt:7K:M	*ENG	[0 to 300 / 224 / 1 g/step]
012	FillAmnt:7K:C	*ENG	
013	FillAmnt:10K:K	*ENG	
014	FillAmnt:10K:Y	*ENG	
015	FillAmnt:10K:M	*ENG	
016	FillAmnt:10K:C	*ENG	

3098	[TonerNearEnd]		
	DaysBeforeTE	*ENG	[0 to 2 / 1 / 1 g/step]
001	Sets near end timing of the toner. 0: Earlier (7days before) 1: Normal (5days before) 2: Later (3days before)		

3099	[TEConsumption] DFU		
	Consumption amount of toner end.		
001	2.2K:K	*ENG	[0.0 to 300000.0 / 63000.0 / 0.1 g/step]
002	2K:Y	*ENG	[0.0 to 300000.0 / 59000.0 / 0.1 mg/step]
003	2K:M	*ENG	
004	2K:C	*ENG	
005	3K:K	*ENG	[0.0 to 300000.0 / 80000.0 / 0.1 mg/step]
006	2.5K:Y	*ENG	[0.0 to 300000.0 / 68000.0 / 0.1 mg/step]
007	2.5K:M	*ENG	
008	2.5K:C	*ENG	
009	8K:K	*ENG	[0.0 to 300000.0 / 184000.0 / 0.1 mg/step]
010	7K:Y	*ENG	[0.0 to 300000.0 / 161000.0 / 0.1 mg/step]

011	7K:M	*ENG	[0.0 to 300000.0 / 224000.0 / 0.1 mg/step]
012	7K:C	*ENG	
013	10K:K	*ENG	
014	10K:Y	*ENG	
015	10K:M	*ENG	
016	10K:C	*ENG	

3100	[TE-NEConsumption] DFU		
	Consumption amount from toner near end through toner end.		
001	1DayBeforeTE:K	*ENG	[0.0 to 300000.0 / 9900.0 / 0.1 mg/step]
002	1DayBeforeTE:Y	*ENG	[0.0 to 300000.0 / 10100.0 / 0.1 mg/step]
003	1DayBeforeTE:M	*ENG	[0.0 to 300000.0 / 10000.0 / 0.1 mg/step]
004	1DayBeforeTE:C	*ENG	[0.0 to 300000.0 / 10000.0 / 0.1 mg/step]
005	3DaysBeforeTE:K	*ENG	[0.0 to 300000.0 / 14700.0 / 0.1 mg/step]
006	3DaysBeforeTE:Y	*ENG	[0.0 to 300000.0 / 15300.0 / 0.1 mg/step]
007	3DaysBeforeTE:M	*ENG	[0.0 to 300000.0 / 15000.0 / 0.1 mg/step]
008	3DaysBeforeTE:C	*ENG	[0.0 to 300000.0 / 14900.0 / 0.1 mg/step]
009	5DaysBeforeTE:K	*ENG	[0.0 to 300000.0 / 19700.0 / 0.1 mg/step]
010	5DaysBeforeTE:Y	*ENG	[0.0 to 300000.0 / 20000.0 / 0.1 mg/step]
011	5DaysBeforeTE:M	*ENG	[0.0 to 300000.0 / 20200.0 / 0.1 mg/step]

012	5DaysBeforeTE:C	*ENG	[0.0 to 300000.0 / 20600.0 / 0.1 mg/step]
013	7DaysBeforeTE:K	*ENG	[0.0 to 300000.0 / 24900.0 / 0.1 mg/step]
014	7DaysBeforeTE:Y	*ENG	[0.0 to 300000.0 / 26200.0 / 0.1 mg/step]
015	7DaysBeforeTE:M	*ENG	[0.0 to 300000.0 / 25500.0 / 0.1 mg/step]
016	7DaysBeforeTE:C	*ENG	[0.0 to 300000.0 / 25200.0 / 0.1 mg/step]
101	PageThreshAftNE	*ENG	[0 to 100 / 100 / 1 page/step]

3101	[TE-NE]		
	Amount of total toner consumption (accumulation for a toner cartridge).		
005	Total Usage: Bk	*ENG	[0 to 999999999 / 0 / 1 µg/step]
006	Total Usage: C	*ENG	
007	Total Usage: M	*ENG	
008	Total Usage: Y	*ENG	
3101	[TE-NE]		
	Remaining amount of toner cartridge that is set to the machine.		
009	TonerRemainBk	*ENG	[0.0 to 300.0 / 181.0 / 0.1 g/step]
010	TonerRemainC	*ENG	[0.0 to 300.0 / 158.0 / 0.1 g/step]
011	TonerRemainM	*ENG	
012	TonerRemainY	*ENG	
3101	[TE-NE] DFU		
	Printing toner usage for each color (accumulation).		
101	Printing Usage: K	*ENG	[0 to 999999999 / 0 / 1 µg/step]
102	Printing Usage: C	*ENG	
103	Printing Usage: M	*ENG	

104	Printing Usage: Y	*ENG	
3101	[TE-NE]		
	Non-printing toner usage for each color (accumulation).		
105	Covering Usage: K	*ENG	[0 to 999999999 / 0 / 1 µg/step]
106	Covering Usage: C	*ENG	
107	Covering Usage: M	*ENG	
108	Covering Usage: Y	*ENG	
3101	[TE-NE] DFU		
	Adjusts consumption distance for each color.		
111	Consum:AdjDist K	*ENG	[0 to 999999999 / 0 / 1 mm/step] Not used
112	Consum:AdjDist C	*ENG	
113	Consum:AdjDist M	*ENG	
114	Consum:AdjDist: Y	*ENG	

3102	[RcvrySply:Set] DFU		
	Replenishment amount for recovering.		
011	RcvrySplyK	*ENG	[0 to 300 / 15 / 1 g/step]
012	RcvrySplyY	*ENG	[0 to 300 / 15 / 1 g/step]
013	RcvrySplyM	*ENG	[0 to 300 / 15 / 1 g/step]
014	RcvrySplyC	*ENG	[0 to 300 / 15 / 1 g/step]
3102	[RcvrySply:Set] DFU		
	Adjusts time to mix after replenishment for recovering.		
015	MixTime:RcvryK	*ENG	[0 to 300 / 10 / 1 sec/step]
016	MixTime:RcvryY	*ENG	[0 to 300 / 10 / 1 sec/step]
017	MixTime:RcvryM	*ENG	[0 to 300 / 10 / 1 sec/step]
018	MixTime:RcvryC	*ENG	[0 to 300 / 10 / 1 sec/step]

3103	[RcvrySply]		
	Displays the number of replenishment execution for recovering.		
001	RcvrySplyCntK	*ENG	[0 to 10000 / - / 1 times/step]
002	RcvrySplyCntY	*ENG	
003	RcvrySplyCntM	*ENG	
004	RcvrySplyCntC	*ENG	

3131	[TnrSplyErr:Disp]		
	Displays the counter of toner supply error for recovering. Counts the number if recovery is failed continuously more than the number set in SP3131-015. If recovery execution is succeeded, this counter would be reset.		
011	RcvryFailCntK	*ENG	[0 to 20 / 0 / 1 times/step]
012	RcvryFailCntY	*ENG	[0 to 20 / 0 / 1 times/step]
013	RcvryFailCntM	*ENG	[0 to 20 / 0 / 1 times/step]
014	RcvryFailCntC	*ENG	[0 to 20 / 0 / 1 times/step]
015	RcvryFailThresh	*ENG	[0 to 20 / 3 / 1 times/step]

3132	[TonerSplyErr:Set] DFU		
	Displays SC365-xx if threshold is exceeded. SC365-xx: 01 (Bk), 02 (C), 03 (M), 04 (Y)		
001	UpDetectCntErr	*ENG	[0 to 100 / 5 / 1 times/step]

3231	[TonerSply:Set] DFU		
	Threshold to judge toner remaining.		
011	TnrRmnThresh:UP	*ENG	[0 to 300 / 94 / 1 g/step]
012	TnrRmnThresh:Low	*ENG	[0 to 300 / 40 / 1 g/step]

3232	[TonerSplyCoef] DFU		
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	Toner supply coefficient.		
011	InitialSply:K	*ENG	[0 to 5 / 1.5 / 0.1 /step]
012	InitialSply:Y	*ENG	
013	InitialSply:M	*ENG	
014	InitialSply:C	*ENG	
015	PrintTonerSply:K	*ENG	
016	PrintTonerSply:Y	*ENG	
017	PrintTonerSply:M	*ENG	
018	PrintTonerSply:C	*ENG	

3236	[TonerSply]		
011	CnsmFromSplyK	*ENG	Consumption from toner supplied last time. [0.0 to 100000.0 / 0.0 / 0.1 mg/step]
012	CnsmFromSplyY	*ENG	
013	CnsmFromSplyM	*ENG	
014	CnsmFromSplyC	*ENG	
015	TonerSplyCOAmntK	*ENG	[0.0 to 30.0 / 0.0 / 0.1 g/step] DFU
016	TonerSplyCOAmntY	*ENG	
017	TonerSplyCOAmntM	*ENG	
018	TonerSplyCOAmntC	*ENG	

	[TonerMixTime:Set] DFU		
3237	Carry over remaining time that couldn't finish mixing toner during printing. Not use.		
011	MixCOTimeK	*ENG	[0 to 500 / 0 / 1 sec/step]
012	MixCOTimeY	*ENG	[0 to 500 / 0 / 1 sec/step]
013	MixCOTimeM	*ENG	[0 to 500 / 0 / 1 sec/step]
014	MixCOTimeC	*ENG	[0 to 500 / 0 / 1 sec/step]

3244	[TonerRmn:Set] DFU		
	Sets toner remaining detection.		
001	CleanRotTimes	*ENG	[0 to 20 / 5 / 1 rot/step]
002	SensorRdyTime	*ENG	[0.0 to 3.0 / 0.0 / 0.1 sec/step]
	Ready time for the sensor.		
003	Upperncycle	*ENG	[0 to 20 / 1 / 1 /step]
	Parameter to get rid of noises.		
004	Lowerncycle	*ENG	[0 to 20 / 1 / 1 /step]
	Parameter to get rid of noises.		
3244	[TonerRmn:Set] DFU		
	Threshold to judge upper and lower for PCDU toner in each environment.		
005	HHThresh:Up:K	*ENG	[0 to 400 / 13 / 1 times/step]
006	HHThresh:Up:Y	*ENG	[0 to 400 / 25 / 1 times/step]
007	HHThresh:Up:M	*ENG	[0 to 400 / 14 / 1 times/step]
008	HHThresh:Up:C	*ENG	[0 to 400 / 17 / 1 times/step]
009	HHThresh:Low:K	*ENG	[0 to 400 / 41 / 1 times/step]
010	HHThresh:Low:Y	*ENG	[0 to 400 / 41 / 1 times/step]
011	HHThresh:Low:M	*ENG	[0 to 400 / 40 / 1 times/step]
012	HHThresh:Low:C	*ENG	[0 to 400 / 41 / 1 times/step]
013	NNThresh:Up:K	*ENG	[0 to 400 / 15 / 1 times/step]
014	NNThresh:Up:Y	*ENG	[0 to 400 / 23 / 1 times/step]
015	NNThresh:Up:M	*ENG	[0 to 400 / 24 / 1 times/step]
016	NNThresh:Up:C	*ENG	[0 to 400 / 15 / 1 times/step]
017	NNThresh:Low:K	*ENG	[0 to 400 / 37 / 1 times/step]
018	NNThresh:Low:Y	*ENG	[0 to 400 / 43 / 1 times/step]
019	NNThresh:Low:M	*ENG	[0 to 400 / 40 / 1 times/step]

020	NNThresh:Low:C	*ENG	[0 to 400 / 41 / 1 times/step]
021	LLThresh:Up:K	*ENG	[0 to 400 / 14 / 1 times/step]
022	LLThresh:Up:Y	*ENG	[0 to 400 / 26 / 1 times/step]
023	LLThresh:Up:M	*ENG	[0 to 400 / 26 / 1 times/step]
024	LLThresh:Up:C	*ENG	[0 to 400 / 15 / 1 times/step]
025	LLThresh:Low:K	*ENG	[0 to 400 / 41 / 1 times/step]
026	LLThresh:Low:Y	*ENG	[0 to 400 / 40 / 1 times/step]
027	LLThresh:Low:M	*ENG	[0 to 400 / 40 / 1 times/step]
028	LLThresh:Low:C	*ENG	[0 to 400 / 41 / 1 times/step]
029	Elps Time:ChngSpd	*ENG	[0 to 255 / 10 / 1 sec/step]
	Time to be able to detect toner remaining after OPC drum line speed is set to full.		

3310	[ID.Sens :Voffset]		
001	Voffset_reg (R)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays regular reflection output when right ID. sensor is turned off.		
002	Voffset reg (L)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays regular reflection output when left ID. sensor is turned off.		
011	Voffset dif (R)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays diffuse reflection output when right ID. sensor is turned off.		
012	Voffset dif (L)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]
	Displays diffuse reflection output when left ID. sensor is turned off.		

3311	[ID.Sens :Vmin]		
Displays black Vmin output of gradation pattern of ID. sensors			
001	Vmin_K (R)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]
002	Vmin_K (L)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]

3312	[ID.Sens :Vct]		
001	Vct_reg(R)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]
	Displays stroke voltage of regular reflection for right ID. sensor.		
002	Vct_reg(L)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]
	Displays stroke voltage of regular reflection for left ID. sensor.		
011	Vct_dif(R)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]
	Displays stroke voltage of diffuse reflection for right ID. sensor.		
012	Vct_dif(L)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]
	Displays stroke voltage of diffuse reflection for left ID. sensor.		

3320	[Vsg Adj Excute] DFU		
	-		
001	P Sensor	ENG	[- / - / -] [Execute]
	Executes Vsg adjustments.		
031	Vsg Err Count (R)	*ENG	[0 to 99 / 0 / 1 time/step]
	Displays number of vsg adjustment execution error if execution is failed consecutively for a right ID. sensor. If vsg adjustment execution is succeeded, this counter would be reset.		
032	Vsg Err Count (L)	*ENG	[0 to 99 / 0 / 1 time/step]
	Displays number of vsg adjustment execution error if execution is failed consecutively for a left ID. sensor. If vsg adjustment execution is succeeded, this counter would be reset.		

3321	[Adjusted Vsg]		
001	Vsg reg (R)	*ENG	[0.00 to 5.50 / 0.00 / 0.01 V/step]
	Displays regular reflection output for bare part of the belt of the right ID. sensor when vsg adjustment execution was succeeded last time.		

002	Vsg reg (L)	*ENG	[0.00 to 5.50 / 0.00 / 0.01 V/step]
	Displays regular reflection output for bare part of the belt of the left ID. sensor when vsg adjustment execution was succeeded last time.		
011	Vsg dif (R)	*ENG	[0.00 to 5.50 / 0.00 / 0.01 V/step]
	Displays diffuse reflection output for bare part of the belt of the right ID. sensor when vsg adjustment execution was succeeded last time.		
012	Vsg dif (L)	*ENG	[0.00 to 5.50 / 0.00 / 0.01 V/step]
	Displays diffuse reflection output for bare part of the belt of the left ID. sensor when vsg adjustment execution was succeeded last time.		

3322	[Adjusted Ifsg]		
001	Ifsg (R)	*ENG	[0 to 1500 / 544 / 1 /step]
	Displays current value of the emission for right ID. sensor when vsg adjustment execution was succeeded last time.		
002	Ifsg (L)	*ENG	[0 to 1500 / 544 / 1 /step]
	Displays current value of the emission for left ID. sensor when vsg adjustment execution was succeeded last time.		
011	Ifsg LowThresh(R)	*ENG	[0.0 to 50.0 / 10 / 0.1 mA/step]
	Displays minimum current value of the emission for right ID. sensor from previous vsg adjustment executions.		
012	Ifsg LowThresh(L)	*ENG	[0.0 to 50.0 / 10 / 0.1 mA/step]
	Displays minimum current value of the emission for left ID. sensor from previous vsg adjustment executions.		

3323	[Vsg Adj OK?]		
	Displays latest vsg result codes. Readings <ul style="list-style-type: none"> • Left digit: right ID. sensor • Right digit: left ID. sensor 0: Has not executed 1: Succeeded		

	Others: other error code		
001	Latest	*ENG	[0 to 99 / - / 1 /step]

3330	[ID. Sens Coef]		
	Displays latest correction coefficient of the sensitivity of the ID. sensor.		
001	K2(Latest) (C)	*ENG	[0.0000 to 5.0000 / 0.0000 / 0.0001 / step]
002	K2(Latest) (M)	*ENG	[0.0000 to 5.0000 / 0.0000 / 0.0001 / step]
003	K2(Latest) (Y)	*ENG	[0.0000 to 5.0000 / 0.0000 / 0.0001 / step]
011	K5(Latest) (C)	*ENG	[0.0000 to 5.0000 / 1.2000 / 0.0001 / step]
012	K5(Latest) (M)	*ENG	[0.0000 to 5.0000 / 1.2000 / 0.0001 / step]
013	K5(Latest) (Y)	*ENG	[0.0000 to 5.0000 / 0.0000 / 0.0001 / step]

3331	[ID. Sens Coef:Set] DFU		
008	K5: Target Point	*ENG	[0.00 to 1.00 / 0.15 / 0.01 /step]
	Adjusts calibration point (kn) of correction coefficient of sensitivity.		
009	K5: TargetVoltage	*ENG	[0.00 to 5.00 / 0.75 / 0.01 /step]
	Adjusts the reference voltage of correction coefficient of sensitivity.		

3333	[ID. Sens TestVal:F] DFU		
	Test values of the shipping inspection for right ID. sensor.		
001	K2: Check	*ENG	[0.000 to 1.000 / 0.450 / 0.001 /step]
002	Diffuse Corr	*ENG	[0.75 to 1.35 / 1.00 / 0.01 /step]
003	Vct_reg Chk:Slope	*ENG	[0.0 to 99.0 / 0.0 / 0.1 mV/mA/step]
004	Vct_reg Chk:Xint	*ENG	[0.0 to 25.50 / 0.0 / 0.1 mA/step]

005	Vct_dif Chk:Slope	*ENG	[0.0 to 99.0 / 0.0 / 0.1 mV/mA/step]
006	Vct_dif Chk:Xint	*ENG	[0.0 to 25.50 / 0.0 / 0.1 mA/step]

3334	[ID. Sens TestVal:F] DFU		
	Test values of the shipping inspection for left ID. sensor.		
001	K2: Check	*ENG	[0.000 to 1.000 / 0.450 / 0.001 /step]
002	Diffuse Corr	*ENG	[0.75 to 1.35 / 1.00 / 0.01 /step]
003	Vct_reg Chk:Slope	*ENG	[0.0 to 99.0 / 0.0 / 0.1 mV/mA/step]
004	Vct_reg Chk:Xint	*ENG	[0.0 to 25.50 / 0.0 / 0.1 mA/step]
005	Vct_dif Chk:Slope	*ENG	[0.0 to 99.0 / 0.0 / 0.1 mV/mA/step]
006	Vct_dif Chk_Xint	*ENG	[0.0 to 25.50 / 0.0 / 0.1 mA/step]

3340	[IBACC result] DFU		
001	Action Counter	*ENG	[0 to 65535 / 0 / 1 /step]
	Number of IBACC execution times.		
002	Error Counter	*ENG	[0 to 65535 / 0 / 1 /step]
	Failures counter for IBACC.		
003	ProCon Error Cnt	*ENG	[0 to 65535 / 0 / 1 /step]
	Process control failure counter for IBACC.		
004	Dens Error Cnt	*ENG	[0 to 65535 / 0 / 1 /step]
	Failures counter of the density detection for IBACC.		
005	Photo dithering	*ENG	[0 to 15 / 0 / 1 /step]
	Displays the result of photo dithering for IBACC.		
006	Text dithering	*ENG	[0 to 15 / 0 / 1 /step]
	Displays the result of text dithering for IBACC.		

3341	[Target Dens:K] DFU		
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Target density of 1st to 16th gradation for Black.			
001	T_K_(P1)	*ENG	[0.00 to 2.55 / 0.11 / 0.01 D /step]
002	T_K_(P2)	*ENG	[0.00 to 2.55 / 0.18 / 0.01 D /step]
003	T_K_(P3)	*ENG	[0.00 to 2.55 / 0.26 / 0.01 D /step]
004	T_K_(P4)	*ENG	[0.00 to 2.55 / 0.33 / 0.01 D /step]
005	T_K_(P5)	*ENG	[0.00 to 2.55 / 0.41 / 0.01 D /step]
006	T_K_(P6)	*ENG	[0.00 to 2.55 / 0.55 / 0.01 D /step]
007	T_K_(P7)	*ENG	[0.00 to 2.55 / 0.71 / 0.01 D /step]
008	T_K_(P8)	*ENG	[0.00 to 2.55 / 0.85 / 0.01 D /step]
009	T_K_(P9)	*ENG	[0.00 to 2.55 / 1.09 / 0.01 D /step]
010	T_K_(P10)	*ENG	[0.00 to 2.55 / 1.15 / 0.01 D /step]
011	T_K_(P11)	*ENG	[0.00 to 2.55 / 1.33 / 0.01 D /step]
012	T_K_(P12)	*ENG	[0.00 to 2.55 / 1.46 / 0.01 D /step]
013	T_K_(P13)	*ENG	[0.00 to 2.55 / 1.47 / 0.01 D /step]
014	T_K_(P14)	*ENG	[0.00 to 2.55 / 1.51 / 0.01 D /step]
015	T_K_(P15)	*ENG	[0.00 to 2.55 / 1.56 / 0.01 D /step]
016	T_K_(P16)	*ENG	[0.00 to 2.55 / 1.55 / 0.01 D /step]

3342	[Target Dens:C] DFU		
	Target density of 1st to 16th gradation for Cyan.		
001	T_C_(P1)	*ENG	[0.00 to 2.55 / 0.11 / 0.01 D /step]
002	T_C_(P2)	*ENG	[0.00 to 2.55 / 0.16 / 0.01 D /step]
003	T_C_(P3)	*ENG	[0.00 to 2.55 / 0.23 / 0.01 D /step]
004	T_C_(P4)	*ENG	[0.00 to 2.55 / 0.31 / 0.01 D /step]
005	T_C_(P5)	*ENG	[0.00 to 2.55 / 0.38 / 0.01 D /step]
006	T_C_(P6)	*ENG	[0.00 to 2.55 / 0.50 / 0.01 D /step]

007	T_C_(P7)	*ENG	[0.00 to 2.55 / 0.64 / 0.01 D /step]
008	T_C_(P8)	*ENG	[0.00 to 2.55 / 0.85 / 0.01 D /step]
009	T_C_(P9)	*ENG	[0.00 to 2.55 / 1.04 / 0.01 D /step]
010	T_C_(P10)	*ENG	[0.00 to 2.55 / 1.23 / 0.01 D /step]
011	T_C_(P11)	*ENG	[0.00 to 2.55 / 1.41 / 0.01 D /step]
012	T_C_(P12)	*ENG	[0.00 to 2.55 / 1.57 / 0.01 D /step]
013	T_C_(P13)	*ENG	[0.00 to 2.55 / 1.59 / 0.01 D /step]
014	T_C_(P14)	*ENG	[0.00 to 2.55 / 1.58 / 0.01 D /step]
015	T_C_(P15)	*ENG	[0.00 to 2.55 / 1.63 / 0.01 D /step]
016	T_C_(P16)	*ENG	[0.00 to 2.55 / 1.64 / 0.01 D /step]

3343	[Target Dens:M] DFU		
	Target density of 1st to 16th gradation for Magenta.		
001	T_M_(P1)	*ENG	[0.00 to 2.55 / 0.06 / 0.01 D /step]
002	T_M_(P2)	*ENG	[0.00 to 2.55 / 0.07 / 0.01 D /step]
003	T_M_(P3)	*ENG	[0.00 to 2.55 / 0.09 / 0.01 D /step]
004	T_M_(P4)	*ENG	[0.00 to 2.55 / 0.13 / 0.01 D /step]
005	T_M_(P5)	*ENG	[0.00 to 2.55 / 0.17 / 0.01 D /step]
006	T_M_(P6)	*ENG	[0.00 to 2.55 / 0.22 / 0.01 D /step]
007	T_M_(P7)	*ENG	[0.00 to 2.55 / 0.29 / 0.01 D /step]
008	T_M_(P8)	*ENG	[0.00 to 2.55 / 0.37 / 0.01 D /step]
009	T_M_(P9)	*ENG	[0.00 to 2.55 / 0.51 / 0.01 D /step]
010	T_M_(P10)	*ENG	[0.00 to 2.55 / 0.68 / 0.01 D /step]
011	T_M_(P11)	*ENG	[0.00 to 2.55 / 0.84 / 0.01 D /step]
012	T_M_(P12)	*ENG	[0.00 to 2.55 / 0.97 / 0.01 D /step]
013	T_M_(P13)	*ENG	[0.00 to 2.55 / 1.17 / 0.01 D /step]

014	T_M_(P14)	*ENG	[0.00 to 2.55 / 1.34 / 0.01 D /step]
015	T_M_(P15)	*ENG	[0.00 to 2.55 / 1.47 / 0.01 D /step]
016	T_M_(P16)	*ENG	[0.00 to 2.55 / 1.52 / 0.01 D /step]

3344	[Target Dens:Y] DFU		
	Target density of 1st to 16th gradation for Yellow.		
001	T_Y_(P1)	*ENG	[0.00 to 2.55 / 0.04 / 0.01 D /step]
002	T_Y_(P2)	*ENG	[0.00 to 2.55 / 0.07 / 0.01 D /step]
003	T_Y_(P3)	*ENG	[0.00 to 2.55 / 0.11 / 0.01 D /step]
004	T_Y_(P4)	*ENG	[0.00 to 2.55 / 0.16 / 0.01 D /step]
005	T_Y_(P5)	*ENG	[0.00 to 2.55 / 0.27 / 0.01 D /step]
006	T_Y_(P6)	*ENG	[0.00 to 2.55 / 0.30 / 0.01 D /step]
007	T_Y_(P7)	*ENG	[0.00 to 2.55 / 0.44 / 0.01 D /step]
008	T_Y_(P8)	*ENG	[0.00 to 2.55 / 0.54 / 0.01 D /step]
009	T_Y_(P9)	*ENG	[0.00 to 2.55 / 0.71 / 0.01 D /step]
010	T_Y_(P10)	*ENG	[0.00 to 2.55 / 0.93 / 0.01 D /step]
011	T_Y_(P11)	*ENG	[0.00 to 2.55 / 1.22 / 0.01 D /step]
012	T_Y_(P12)	*ENG	[0.00 to 2.55 / 1.36 / 0.01 D /step]
013	T_Y_(P13)	*ENG	[0.00 to 2.55 / 1.40 / 0.01 D /step]
014	T_Y_(P14)	*ENG	[0.00 to 2.55 / 1.57 / 0.01 D /step]
015	T_Y_(P15)	*ENG	[0.00 to 2.55 / 1.62 / 0.01 D /step]
016	T_Y_(P16)	*ENG	[0.00 to 2.55 / 1.63 / 0.01 D /step]

3345	[Density Range] DFU		
	Adjusts upper limit and lower limit of acceptable range of density detection.		
001	Up Param:a:K	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]
002	Up Param:a:C	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]

003	Up Param:a:M	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]
004	Up Param:a:Y	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]
005	Low Param:a:K	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]
006	Low Param:a:C	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]
007	Low Param:a:M	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]
008	Low Param:a:Y	*ENG	[0.00 to 2.55 / 1.00 / 0.01 D /step]

3346	[Reverse Point] DFU		
	Sets allowable number of density is reversed for density measurement value of gradation patters. Used for error judgement.		
001	Count	*ENG	[0 to 16 / 8 / 1 /step]

3348	[IBACC Print] DFU		
	Sets whether or not to print IBACC pattern on a paper.		
001	Prnt:1 NotPrnt:0	ENG	[0 or 1 / 0 / 1 /step] <ul style="list-style-type: none"> • 0: Not print • 1: Print

3349	[IBACC Setting]		
	A flag to recognize if IBACC is executing.		
001	Exec Mode	ENG	[0 or 1 / 0 / 1 /step] <ul style="list-style-type: none"> • 0: Not executing • 1: Executing

3394	[IBACC debug] DFU		
001	degug mode	ENG	[0 to 255 / 0 / 1 /step]
	Command for IBACC debug. 0: OFF 1: Force success 2: Process control failed before IBACC		

	3: Density detection failed 4: Vsg failed
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3401	[TonerFixSply:Set] DFU		
011	FixedSplyAmntK	*ENG	Fixed supply amount. [0 to 100 / 15 / 1 g/step]
012	FixedSplyAmntY	*ENG	
013	FixedSplyAmntM	*ENG	
014	FixedSplyAmntC	*ENG	
015	MixTime:FixSplyK	*ENG	Mixed time when fixed amount of tonner supplied. [0 to 500 / 60 / 1 sec/step]
016	MixTime:FixSplyY	*ENG	
017	MixTime:FixSplyM	*ENG	
018	MixTime:FixSplyC	*ENG	

3411	[TonerFixSply:Disp]		
001	TonerRmnK	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of toner remaining for Bk. 0: Upper limit 1: Mid 2: Lower limit		
002	TonerRmnY	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of toner remaining for Ye. 0: Upper limit 1: Mid 2: Lower limit		
003	TonerRmnM	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of toner remaining for Ma. 0: Upper limit 1: Mid 2: Lower limit		

004	TonerRmnC	*ENG	[0 to 2 / - / 1 /step]
	Displays the detection result of toner remaining for Cy. 0: Upper limit 1: Mid 2: Lower limit		
005	SnsOutCntAvK	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmission for the toner remaining detection sensor for Bk.		
006	SnsOutCntAvY	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmission for the toner remaining detection sensor for Ye		
007	SnsOutCntAvM	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmission for the toner remaining detection sensor for Ma		
008	SnsOutCntAvC	*ENG	[0 to 255 / - / 1 time/step]
	Average number of transmission for the toner remaining detection sensor for Cy		
011	CnsmRate:SplyK	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		
012	CnsmRate:SplyY	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		
013	CnsmRate:SplyM	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		
014	CnsmRate:SplyC	*ENG	[0 to 100 / - / 1 %/step]
	Toner consumption rate until next toner supply.		
015	T/HThresh:LL	*ENG	[0.00 to 70.00 / 4.00 / 0.01 g/m ² /step]
	Temperature and humidity threshold to judge LL environment.		
016	T/HThresh:HH	*ENG	[0.00 to 70.00 / 16.00 / 0.01 g/m ² /step]
	Temperature and humidity threshold to judge HH environment.		

3453	[TonerSply:Set] DFU		
011	Thresh:CnsmK	*ENG	[0.0 to 100000.0 / 5000.0 / 0.1 mg/step]
012	Thresh:CnsmY	*ENG	[0.0 to 100000.0 / 5000.0 / 0.1 mg/step]
013	Thresh:CnsmM	*ENG	[0.0 to 100000.0 / 5000.0 / 0.1 mg/step]
014	Thresh:CnsmC	*ENG	[0.0 to 100000.0 / 5000.0 / 0.1 mg/step]

3500	[ImgQtyAdj:ON/OFF] DFU		
001	ALL	*ENG	[0 or 1 / 1 / 1 /step]
	Switches execution decision of all image quality adjustment on / off. <ul style="list-style-type: none"> • 0: OFF • 1: ON 		
002	ProCon	*ENG	[0 or 1 / 1 / 1 /step]
	Switches execution decision of potential control on / off. <ul style="list-style-type: none"> • 0: OFF • 1: ON 		

3510	[ImgQtyAdj: ExeFlag] DFU		
	Lower bits: full color High order bits: black and white <ul style="list-style-type: none"> • 0: Not execute • 1: Execute 		
021	Process Control	*ENG	[0 to 3 / 0 / 1 /step]
025	Vsg Adj.	*ENG	[0 or 1 / 0 / 1 /step]

3516	[Refresh Mode]		
001	Print Area K	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judge to execute last toner refreshment for Bk.		
002	Print Area C	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judge to execute last toner refreshment for Cy.		

003	Print Area M	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judge to execute last toner refreshment for Ma.		
004	Print Area Y	*ENG	[0 to 0xFFFFFFFF / 0 / 1 mm ² /step]
	Print area from judge to execute last toner refreshment for Ye.		
005	Run Distance K	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	Run distance of OPC drum from judge to execute last toner refreshment for Bk.		
006	Run Distance C	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	Run distance of OPC drum from judge to execute last toner refreshment for Cy.		
007	Run Distance M	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	Run distance of OPC drum from judge to execute last toner refreshment for Ma.		
008	Run Distance Y	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	Run distance of OPC drum from judge to execute last toner refreshment for Ye.		
017	Pint RateThresh K	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Bk.		
018	Pint RateThresh C	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Cy.		
019	Pint RateThresh M	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Ma.		
020	Pint RateThresh Y	*ENG	[0.1 to 100.0 / 1.5 / 0.1 %/step] DFU
	Print rate threshold of last toner refreshment criterion for Ye.		
021	Enable Flag BW	*ENG	[0 or 1 / 1 / 1 /step] DFU
	Enables or disables toner refreshment for black and white.		

	<ul style="list-style-type: none"> • 0: Disables • 1: Enable 		
022	Enable Flag FC	*ENG	[0 or 1 / 1 / 1 /step] DFU
	Enables or disables toner refreshment for full color. <ul style="list-style-type: none"> • 0: Disables • 1: Enable 		
023	Wait Page Max	*ENG	[0 to 500 / 50 / 1 page/step] DFU
	Maximum output pages from the execution condition is satisfied.		
024	Wait Page Bk	*ENG	[0 to 500 / 0 / 1 page/step]
	Black output pages from the execution condition is satisfied.		
025	Exec Count K	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Bk.		
026	Exec Count C	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Cy.		
027	Exec Count M	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Ma.		
028	Exec Count Y	*ENG	[0 to 1000 / 0 / 1 times/step]
	Counts toner refreshment execution time for Ye.		
037	Wait Page Fc	*ENG	[0 to 500 / 0 / 1 page/step]
	Full color output pages from the execution condition is satisfied.		
3517	[Toner Input]		
	-		
001	Enable Flag K	*ENG	[0 or 1 / 1 / 1 /step] DFU
	Enables or disables toner input for Bk.		

	<ul style="list-style-type: none"> • 0: Disables • 1: Enable 		
002	Enable Flag C	*ENG	[0 or 1 / 0 / 1 /step] DFU
	Enables or disables toner input for Cy. <ul style="list-style-type: none"> • 0: Disables • 1: Enable 		
003	Enable Flag M	*ENG	[0 or 1 / 0 / 1 /step] DFU
	Enables or disables toner input for Ma. <ul style="list-style-type: none"> • 0: Disables • 1: Enable 		
004	Enable Flag Y	*ENG	[0 or 1 / 0 / 1 /step] DFU
	Enables or disables toner input for Ye. <ul style="list-style-type: none"> • 0: Disables • 1: Enable 		
005	Run Distance K	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	OPC drum running distance after previous executing for toner input to the cleaning blade.		
006	Run Distance C	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	OPC drum running distance after previous executing for toner input to the cleaning blade.		
007	Run Distance M	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	OPC drum running distance after previous executing for toner input to the cleaning blade.		
008	Run Distance Y	*ENG	[0 to 999999999 / 0 / 1 mm/step]
	OPC drum running distance after previous executing for toner input to the cleaning blade.		
3520	[ImgQtyAdj:Intval] DFU		
	Interval to execute the adjusting judgment.		

001	During Job	*ENG	[0 to 100 / 1 / 1 page/step]
002	During Stand-by	*ENG	[0 to 100 / 5 / 1 min/step]

3521	[Drum Stop Time]		
	Displays the time of drum stopped.		
001	Year	*ENG	[0 to 99 / - / 1 year/step]
002	Month	*ENG	[1 to 12 / - / 1 month/step]
003	Day	*ENG	[1 to 31 / - / 1 day/step]
004	Hour	*ENG	[0 to 23 / - / 1 hour/step]
005	Minute	*ENG	[0 to 59 / - / 1 minute/step]

3522	[Procon Environ]		
001	Temperature	*ENG	[-1280 to 1270 / 0 / 0.1 deg/step]
	Displays latest temperature when process control is executed.		
002	Rel Humidity	*ENG	[0 to 1000 / 0 / 0.1 %RH/step]
	Displays latest relative humidity when process control is executed.		
003	Abs Humidity	*ENG	[0 to 1000 / 0 / 0.1 g/m ³ /step]
	Displays latest absolute humidity when process control is executed.		

3523	[Procon Time]		
	Displays latest date and time when process control is executed.		
001	Year	*ENG	[0 to 99 / 0 / 1 year/step]
002	Month	*ENG	[0 to 12 / 1 / 1 month/step]
003	Day	*ENG	[0 to 31 / 1 / 1 day/step]
004	Hour	*ENG	[0 to 23 / 0 / 1 day/step]
005	Minute	*ENG	[0 to 59 / 0 / 1 minute/step]

3524	[Unit Change]		
	Displays request to execute process control when unit is changed. 0: OFF, 1: ON		
001	Trans Belt	*ENG	[0 or 1 / 0 / 1 /step]
002	PCDU:K	*ENG	[0 or 1 / 0 / 1 /step]
003	PCDU:YMC	*ENG	[0 or 1 / 0 / 1 /step]

3529	[Procon Interval]		
006	Page Cnt:BW	*ENG	[0 to 5000 / - / 1 sheets/step]
	Displays the page counter since last process control has been executed.		
007	Page Cnt:FC	*ENG	[0 to 5000 / - / 1 sheets/step]
	Displays the page counter since last process control has been executed.		
011	CnsmRate_Upper	*ENG	[0 to 100 / 100 / 1 %/step]
	Controls process control execution when consumption rate is higher than upper limit.		
012	CnsmRate_Lower	*ENG	[100 to 0 / 0 / 1 %/step]
	Controls process control execution when consumption rate is lower than lower limit.		

3530	[PowerON Procon] DFU		
Sets threshold of execution judgment for process control.			
001	Non-use Time	*ENG	[0 to 5000 / 2880 / 1 minute/step]
002	Temperature Range	*ENG	[0 to 99 / 10 / 1 deg/step]
003	Relat Hum Range	*ENG	[0 to 99 / 50 / 1 %RH/step]
004	Absol Hum Range	*ENG	[0 to 99 / 6 / 1 g/m ³ /step]
005	Interval:BW	*ENG	[0 to 5000 / 0 / 1 sheets/step]
006	Interval:FC	*ENG	[0 to 5000 / 0 / 1 sheets/step]

3540	[High Quality Mode] DFU		
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	Saves "1" into NV once in high quality mode. Default saves "0".		
001	-	*ENG	[0 or 1 / 0 / 1 /step]

3599	[JAM Recovery Flg] DFU		
	Saves "1" into NV when OPC drum motor starts rotating.		
001	-	*ENG	[0 or 1 / 0 / 1 /step]

3600	[Select ProCon] DFU		
005	IBACC	*ENG	[0 or 1 / 1 / 1 /step]
	Selects process control before IBACC On / Off. 0: OFF, 1: ON		
006	Charge Control	*ENG	[0 or 1 / 1 / 1 /step]
	Selects charge control ON / OFF. 0: OFF, 1: ON		
010	TMG Correct	*ENG	[0 or 1 / 1 / 1 /step]
	Selects detection timing correction ON / OFF.		

3611	[Chrg DC Control]		
	Displays charging DC bias when printing.		
001	Std Speed: K	*ENG	[300 to 1350 / 1100 / 1 -V/step]
002	Std Speed: C	*ENG	[300 to 1350 / 1100 / 1 -V/step]
003	Std Speed: M	*ENG	[300 to 1350 / 1100 / 1 -V/step]
004	Std Speed: Y	*ENG	[300 to 1350 / 1100 / 1 -V/step]
021	Low Speed: K	*ENG	[300 to 1350 / 1100 / 1 -V/step]
022	Low Speed: C	*ENG	[300 to 1350 / 1100 / 1 -V/step]
023	Low Speed: M	*ENG	[300 to 1350 / 1100 / 1 -V/step]
024	Low Speed: Y	*ENG	[300 to 1350 / 1100 / 1 -V/step]

031	UpperLimit	*ENG	[900 to 1300 / 1300 / 1 -V/step]
	Displays upper limit of charging DC bias to set.		
032	LowerLimit	*ENG	[900 to 1300 / 900 / 1 -V/step]
	Displays lower limit of charging DC bias to set.		

3612	[Dev DC Control] DFU		
001	Std Speed: K	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Bk when printing.		
002	Std Speed: C	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Cy when printing.		
003	Std Speed: M	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Ma when printing.		
004	Std Speed: Y	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Ye when printing.		
021	Low Speed: K	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Bk when printing in mid / low speed.		
022	Low Speed: C	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Cy when printing in mid / low speed.		
023	Low Speed M	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Ma when printing in mid / low speed.		
024	Low Speed Y	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Ye when printing in mid / low speed.		
031	MUSIC Std: K	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Bk when MUSIC is executed.		
032	MUSIC Std: C	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Cy when MUSIC is executed.		

033	MUSIC Std: M	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Ma when MUSIC is executed.		
034	MUSIC Std: Y	*ENG	[100 to 350 / 200 / 1 -V/step]
	Displays development bias for Ye when MUSIC is executed.		
120	Vb Limit	*ENG	[0 to 500 / 30 / 1 V/step] DFU
	Vb changing range when process control is cutting in.		
201	Plus DC LL Dist1	ENG	[0 to 250 / 250 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
202	Plus DC ML Dist1	ENG	[0 to 250 / 250 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
203	Plus DC MM Dist1	ENG	[0 to 250 / 250 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
204	Plus DC MH Dist1	ENG	[0 to 250 / 250 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
205	Plus DC HH Dist1	ENG	[0 to 250 / 200 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
206	Plus DC LL Dis2	ENG	[0 to 250 / 250 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
207	Plus DC ML Dis2	ENG	[0 to 250 / 250 / 1 V/step] DFU

	Sets development bias (+) in accordance with environment or distance.		
208	Plus DC MM Dis2	ENG	[0 to 250 / 250 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
209	Plus DC MM Dis2	ENG	[0 to 250 / 250 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
210	Plus DC HH Dist2	ENG	[0 to 250 / 200 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
211	Plus DC LL Dist3	ENG	[0 to 250 / 200 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
212	Plus DC ML Dist3	ENG	[0 to 250 / 200 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
213	Plus DC MM Dist3	ENG	[0 to 250 / 200 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
214	Plus DC MH Dist3	ENG	[0 to 250 / 200 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
215	Plus DC HH Dist3	ENG	[0 to 250 / 150 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
216	Plus DC LL Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		

217	Plus DC ML Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
218	Plus DC MM Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
219	Plus DC MH Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
220	Plus DC HH Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU
	Sets development bias (+) in accordance with environment or distance.		
221	Distance 1	ENG	[0 to 250 / 3 / 1 x100m/step] DFU
	Sets threshold of development bias (+) distance (L1).		
222	Distance2	ENG	[0 to 250 / 5 / 1 V/step] DFU
	Sets threshold of development bias (+) distance (L2).		
223	Distance3	ENG	[0 to 250 / 10 / 1 V/step] DFU
	Sets threshold of development bias (+) distance (L3).		

3613	[LED Strob Time Op]		
001	Std Speed: K	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Bk when printing.		
002	Std Speed: C	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Cy when printing.		
003	Std Speed: M	*ENG	[0 to 200 / 100 / 1 %/step]

	Displays exposure amount for Ma when printing.		
004	Std Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Ye when printing.		
021	Low Speed: K	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Bk when printing in low speed.		
022	Low Speed: C	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Cy when printing in low speed.		
023	Low Speed: M	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Ma when printing in low speed.		
024	Low Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Ye when printing in low speed.		
031	Ppattern: K	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Bk when pattern is drawn on the OPC drum.		
032	Ppattern: C	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Cy when pattern is drawn on the OPC drum.		
033	Ppattern: M	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Ma when pattern is drawn on the OPC drum.		
034	Ppattern: Y	*ENG	[0 to 200 / 100 / 1 %/step]
	Displays exposure amount for Ye when pattern is drawn on the OPC drum.		
051	MUSIC	*ENG	[0 to 200 / 100 / 1 %/step]
	Strobe time coefficient when MUSIC patter is created. Indicating the correction percentage for the time set by SP3613-001 to 004. Do not change this SP because there is possibility to fail MUSIC if the value is changed.		
3620	[TrgtAdhnsAmt:Set]		
001	Maximum:K	*ENG	[0.10 to 7.50 / 4.67 / 0.01 g/m ² /step]
	Sets solid adhesion amount for Bk.		

002	Maximum:C	*ENG	[0.10 to 7.50 / 4.67 / 0.01 g/m ² /step]
	Sets solid adhesion amount for Cy.		
003	Maximum:M	*ENG	[0.10 to 7.50 / 4.67 / 0.01 g/m ² /step]
	Sets solid adhesion amount for Ma.		
004	Maximum:Y	*ENG	[0.10 to 7.50 / 4.67 / 0.01 g/m ² /step]
	Sets solid adhesion amount for Ye.		
011	Half-tone:K	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m ² /step]
	Sets half-tone adhesion amount for Bk.		
012	Half-tone:C	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m ² /step]
	Sets half-tone adhesion amount for Cy.		
013	Half-tone:M	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m ² /step]
	Sets half-tone adhesion amount for Ma.		
014	Half-tone:Y	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m ² /step]
	Sets half-tone adhesion amount for Ye.		

3622	[Dev Pot :Set]		
	Displays development potential. Development potential is a potential difference between electrostatic latent image potential and development bias.		
001	K	*ENG	[0 to 800 / - / 1 V/step]
002	C	*ENG	[0 to 800 / - / 1 V/step]
003	M	*ENG	[0 to 800 / - / 1 V/step]
004	Y	*ENG	[0 to 800 / - / 1 V/step]

3628	[Ppattern:Set]		
	Displays difference between pattern scanning time when MUSIC is executed and standard time.		
001	OffsetTime K	*ENG	[-100 to 100 / - / 1 ms/step]

002	OffsetTime:C	*ENG	[-100 to 100 / - / 1 ms/step]
003	OffsetTime:M	*ENG	[-100 to 100 / - / 1 ms/step]
004	OffsetTime:Y	*ENG	[-100 to 100 / - / 1 ms/step]
005	OffsetTime:BW	*ENG	[-100 to 100 / - / 1 ms/step]

3630	[Dev gamma :Disp]		
	Displays latest development gamma.		
001	Current:K	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]
002	Current:C	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]
003	Current:M	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]
004	Current:Y	*ENG	[0.10 to 6.00 / - / 0.01 g/m ² /-100V/step]

3631	[Dev Start Vol Vk]		
	Displays latest development starting voltage.		
001	K	*ENG	[-300 to 300 / - / 1 -V/step]
002	C	*ENG	[-300 to 300 / - / 1 -V/step]
003	M	*ENG	[-300 to 300 / - / 1 -V/step]
004	Y	*ENG	[-300 to 300 / - / 1 -V/step]

3632	[Hlftn:Slope alpha]		
	Displays current halftone slope.		
001	Current:K	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/m ² /-100V/step]
002	Current:C	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/m ² /-100V/step]

003	Current:M	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/ m ² /-100V/step]
004	Current:Y	*ENG	[-6.00 to 0.00 / 0.00 / 0.01 g/ m ² /-100V/step]

3633	[Hlfn:Intcpt beta]		
	Displays halfone intercept slope.		
001	Current:K	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² / step]
002	Current:C	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² / step]
003	Current:M	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² / step]
004	Current:Y	*ENG	[0.00 to 50.00 / 0.00 / 0.01 g/m ² / step]

3700	[New Unit Detect] DFU		
	Selects to execute process control or not when new imaging unit is detected. 0: Not execute 1: Execute		
001	ON/OFF Setting	*ENG	[0 or 1 / 1 / 1 /step]

3800	[TN Collec. Bottle]		
	-		
001	Full Record	*ENG	[0 to 2 / 0 / 1 /step]
	Full history of tonner collection bottle. 0: toner correction near full detection sensor is not ON. (Not near full) 1: toner correction near full detection sensor is ON. (near full) 2: after "1" was detected, toner correction became full.		
002	After NF:M/A	*ENG	[0 to 1000000000 / 0 / 1 ug/step] DFU

	Displays toner accumulation counter after toner near / full sensor turned ON.		
004	Mt_full	*ENG	[0 to 1000000000 / 36500 / 1 mg/step] DFU
	Toner collection bottle end, accumulation toner amount.		
005	Mt_near_full	*ENG	[0 to 1000000 / 22200 / 1 mg/step] DFU
	Toner collection bottle near end, accumulation toner amount.		
009	MC	*ENG	[0 to 1000000000 / 0 / 1 ug/step] DFU
	Adhesion amount on the paper.		
010	T2	*ENG	[0 to 100 / 92 / 1 /step] DFU
	2nd transfer efficiency of printing area.		
011	T3	*ENG	[0 to 100 / 15 / 1 %/step] DFU
	1st transfer efficiency.		
012	T4	*ENG	[0 to 100 / 15 / 1 %/step] DFU
	2nd transfer efficiency.		
013	Change Chk:M/A	*ENG	[0 to 1000000000 / 0 / 1 ug/step] DFU
	Accumulation toner amount counter after tonner correction near full sensor turned off.		
014	M_rap_full	*ENG	[0 to 100 / 0 / 1 /step] DFU
	Number of early full detected.		
015	Mt_new	*ENG	[0 to 2 / 70000 / 1 /step] DFU
	Toner correction bottle new detection, accumulation toner amount.		

016	Rapid Full TrehThresh	*ENG	[0 to 100 / 0 / 1 /step] DFU
	Threshold of early full detection number.		
017	Days bfr End	*ENG	[1 to 5 / 5 / 2 days/step] DFU
	Sets toner correction near end. 0: Notify Sooner 1: Normal 2: Notify Later		

Engine SP Tables-4

SP4-XXX (Scanner)


There are no Group 4 SP modes for this machine.

Engine SP Tables-5

SP5-XXX (Mode)

5001	[All Indicators On]		
001	-	*CTL	[0 or 1 / - / 1 /step] 0: OFF, 1: ON

5024	[mm / inch Display Selecion]		
001	0:mm 1:inch	*CTL	Sets units (mm or inch) for custom paper sizes. [0 or 1 / 0(EU,ASIA),1(NA) / 1/step]

5045	[Accounting counter]		
	Selects the counting method.  Note <ul style="list-style-type: none"> The counting method can be changed only once, regardless of whether the counter value is negative or positive. 		
001	Counter Method	*CTL	[0 or 1 / 0 / 1 /step] 0: Developments 1: Prints *Factory setting 1

5051	[Refill Toner Disp]		
	Enable or disable the warning display when you install a toner bottle that was refilled by third party venders.		
001	-	*CTL	[0 or 1 / 0 / 1/step] 0: Enable, 1: Disable

5055	[Display IP address]		
	Display or does not display the IP address on the LCD.		

001	-	*CTL	[0 or 1 / 0 / 1/step] 0: Not display, 1: Display
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5074	[Home Key Custom]		
	Sets the application that appears when the home key is pressed.		
002	Login Setting	*CTL	[FFh / 0x0 / 1hex /step]
091	Function Setting	*CTL	[0 to 2 / 0 / 1/step] 0: Function disable 1: SDK application 2: Legacy application (reserved)
092	Product ID	*CTL	[0x00 to 0xffff / 0 / 1/step]
093	Appli.Screen ID	*CTL	[0 to 255 / 0 / 1/step]
	Sets the display category of the application that is specified in the SP5075-001,002		

5075	[USB Keyboard]		
	Sets the function of the external keyboard.		
001	Function Setting	*CTL	[0 or 1 / 0 / 1/step] 0: Disable, 1: Enable

5083	[LED Light Switch]		
	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.)		
001	-	*CTL	[0 or 1 / 0 / 1 /step] 0:LED Off 1:LED On *The Default setting is 0 but the Factory setting is 1

5104	[Counter Size Setting]		
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	Specifies whether the counter is doubled for A3/DLT. "Yes" counts except from the bypass tray. When "Yes" is selected, A3 or DLT paper are counted twice, that is A4 x2 or LT x2 respectively.		
001	A3/DLT Double Count	*CTL	[0 to 1 / 0 / 1/step] *The Default setting is 0 but the Factory setting is 1
002	Bypass Paper Size	*CTL	[0 or 1 / 0 / 1/step] 0:A4 (LT) 1:A3 (DLT)
	When 5104-001 is set to 1, specifies the paper size recognition when the custom size paper is fed from the Bypass Tray.		

5110	[PowerON LowPower]		
	Non-use Time	*ENG	[1 to 60 / 12 / 1 minute/step]
001	Threshold whether or not to set BW text mode when the printer is turned on. Bk text mode is to print Bk only and when printing a predetermined ratio. it suppresses the TEC when BW text mode is on.		

5112	[Non-Std. Paper Sel.] DFU		
001	0:OFF 1:ON	*CTL	[0 or 1 / 1 / -/step] 0: Off, 1: On

5131	[Paper Size Type] DFU		
	-	*ENG	[0 or 1 / 1 / 1/step]
001	Sets paper size type. 0: Japan 1: EXP		

5165	[Z-fold Position] DFU		
001	A3 SEF	*CTL	[2.5(NA), 2.0(Other) to 25.4(NA), 25.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]

002	B4 SEF	*CTL	[2.5(NA), 2.0(Other) to 40.6(NA), 40.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]
003	A4 SEF	*CTL	[2.5(NA), 2.0(Other) to 10.2(NA), 10.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]
004	DLT SEF	*CTL	[2.5(NA), 2.0(Other) to 20.3(NA), 20.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]
005	LG SEF	*CTL	[2.5(NA), 2.0(Other) to 35.6(NA), 35.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]
006	LT SEF	*CTL	[2.5(NA), 2.0(Other) to 2.5(NA), 2.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]
007	12x18	*CTL	[2.5(NA), 2.0(Other) to 5.1(NA), 5.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]
008	Other	*CTL	[2.5(NA), 2.0(Other) to 2.5(NA), 2.0(Other) / 2.5(NA), 2.0(Other) / 1 mm/step]

5166	[Lump Delete Form Set]		
021	Last Deleted Time	*CTL	[- / - / -] [Excute]

5169	[CE Login]		
001	-	*CTL	[0 or 1 / 0 / 1/step] 0: Disabled 1: Enabled

5191	[Power Setting] DFU		
001	Power Str	*CTL	[0 or 1 / 0 / 1 /step]

5195	[Limitless SW]		
001	Limitless SW	*CTL	[0 or 1 / 0 / 1 /step] Tray Switching 0:OFF 1:ON

5302	[Set Time]		
	<p>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)</p>		
002	Time difference	*CTL	[-1440 to 1440 / 60 / 1 minute/step]

5307	[Daylight ST]		
001	ON/OFF	*CTL	[0 or 1 / NA, EU, ASIA / 1 /step] 0: Disabled 1: Enabled NA and EUR: 1, ASIA: 0
	<p>Enables or disables the summer time mode.</p> <p>Note</p> <ul style="list-style-type: none"> Make sure that both SP5-307-3 and -4 are correctly set. Otherwise, this SP is not activated even if this SP is set to "1". 		
003	Start	*CTL	-
	<p>Specifies the start setting for the summer time mode.</p> <p>There are 8 digits in this SP. For months 1 to 9, the "0" cannot be input in the first digit, so the eight-digit setting for -2 or -3 becomes a seven-digit setting.</p> <p>1st and 2nd digits: The month. [1 to 12]</p>		

	<p>3rd digit: The week of the month. [1 to 5]</p> <p>4th digit: The day of the week. [0 to 6 = Sunday to Saturday]</p> <p>5th and 6th digits: The hour. [00 to 23]</p> <p>7th digit: The length of the advanced time. [0 to 9 / 1 hour /step]</p> <p>8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step]</p> <ul style="list-style-type: none"> • The digits are counted from the left. • Make sure that SP5-307-1 is set to "1".
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	<p>For example: 3500010 (EU default)</p> <p>The timer is advanced by 1 hour at am 0:00 on the 5th Sunday in March</p>
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	End	*CTL	-
004	<p>Specifies the end setting for the summer time mode.</p> <p>There are 8 digits in this SP.</p> <p>1st and 2nd digits: The month. [1 to 12]</p> <p>3rd digit: The week of the month. [0 to 5]</p> <p>4th digit: The day of the week. [0 to 7 = Sunday to Saturday]</p> <p>5th and 6th digits: The hour. [00 to 23]</p> <p>The 7th and 8 digits must be set to "00".</p> <ul style="list-style-type: none"> • The digits are counted from the left. • Make sure that SP5-307-1 is set to "1". 		

5401	[Access Control]		
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	Detail Option	*CTL	-
240	<p>Enables or disables the log out confirmation option.</p> <ul style="list-style-type: none"> • Bit 0: Log out confirmation option 0: Enable (default), 1: Disable Selects the automatic log out time. • Bit 1 and 2: Automatic log out timer reduction. 00: 60 seconds (default), 01: 10 seconds, 10: 20 seconds, 11: 30 seconds 		

5402	[Access Control]		
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	Detail Option	*CTL	-
240			

	<p>Enables or disables the log out confirmation option.</p> <ul style="list-style-type: none"> • Bit 0: Log out confirmation option 0: Enable (default), 1: Disable <p>Selects the automatic log out time.</p> <ul style="list-style-type: none"> • Bit 1 and 2: Automatic log out timer reduction. 00: 60 seconds (default), 01: 10 seconds, 10: 20 seconds, 11: 30 seconds
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5404	[User Code Clear]		
001	-	CTL	Clears all counters for users.

5411	[LDAP-Certification]		
004	Simplified Authe	*CTL	[0 or 1/ 1 / 1/step] 1: On, 0: Off
005	Password Null Not Permit	*CTL	[0 or 1/ 1 / 1/step] 0: Password NULL not permitted. 1: Password NULL permitted.
	This SP is referenced only when SP5411-4 is set to "1" (On).		
006	Detail Option	*CTL	0: OFF, 1: ON

5412	[Krb-Certification]		
100	Encrypt	*CTL	[- / 0x1F / 1bit/step] 0x01:AES256-CTS-HMAC-SHA1-96 0x02:AES128-CTS-HMAC-SHA1-96 0x04:DES3-CBC-SHA1 0x08:RC4-HMAC 0x10:DES-CBC-MD5 0xFF(0x1F):ALL

5413	[Lockout Setting]		
001	Lockout On/Off	*CTL	[0 or 1/ 0 / -/step] 0: Off, 1: On

002	Lockout Threshold	*CTL	[1 to 10 / 5 / 1/step]
003	Cancel On/Off	*CTL	[0 or 1 / 0 / -/step] 0: Off, 1: On
004	Cancel Time	*CTL	[1 to 999 / 60 / 1 min/step]

5414	[Access Mitigation]		
001	Mitigation On/Off	*CTL	[0 or 1 / 0 / -/step] 0: Off, 1: On
002	Mitigation Time	*CTL	[0 to 60 / 15 / 1/min/step]

5415	[Password Attack]		
001	Permission Number	*CTL	[0 to 100 / 30 / 1/step]
002	Detect Time	*CTL	[1 to 10 / 5 / 1/sec/step]

5416	[Access Info]		
001	User Max Num	*CTL	[50 to 200 / 200 / 1/step]
002	Password Max Num	*CTL	[50 to 200 / 200 / 1/step]
003	Monitor Interval	*CTL	[1 to 10 / 3 / 1 sec/step]

5417	[Access Attack]		
001	Permission Num	*CTL	[0 to 500 / 100 / 1/step]
002	Attack Detect Time	*CTL	[10 to 30 / 10 / 1 sec/step]
003	Cert Waite	*CTL	[0 to 9 / 3 / 1 sec/step]
004	Attack Max Num	*CTL	[50 to 200 / 200 / 1/step]

5420	[User Auth]		
041	Printer	*CTL	[0 or 1 / 0 / 1/step] 0: Off, 1: On
051	SDK1	*CTL	[0 or 1 / 0 / 1/step]

			0: Off, 1: On
061	SDK2	*CTL	[0 or 1 / 0 / 1/step] 0: Off, 1: On
071	SDK3	*CTL	[0 or 1 / 0 / 1/step] 0: Off, 1: On

5481	[Auth Error Code]		
001	System Log Disp	*CTL	[0 or 1 / 0 / 1/step] 0: Off, 1: On

5501	[PM Alarm Interval]		
001	Printout	*CTL	[0 to 9999 / 0 / 1 /step] 0: Alarm off 1 to 9999: Alarm goes off when Value (1 to 9999) x 1000 > PM counter

5504	[Jam Alarm]		
	Sets the alarm to sound for the specified jam level (document miss feeds are not included).		
001	Jam Alarm	*CTL	[0 to 3 / 3 / 1 /step] 0: Zero (Off) 1: Low (2.5K jams) 2: Medium (3K jams) 3: High (6K jams)

5505	[Error Alarm]		
	Sets the error alarm level.		
	The error alarm counter counts "1" when any SC is detected. However, the error alarm counter decreases by "1" when an SC is not detected during a set number of copied sheets (for example, default 1500 sheets).		
	The error alarm occurs when the SC error alarm counter reaches "5".		
001	Error Alarm	*CTL	[0 to 255 / 10 / 1/step]

			0: Disables the PM alarm
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5507	[Supply Alarm]		
	Enables or disables notifying a supply call via @Remote.		
001	Paper Size	*CTL	[0 or 1 / 0 / 1/step] 0: Off, 1: On
003	Toner	*CTL	[0 or 1 / 1 / 1 /step] 0: Off 1: On
005	Drum	*CTL	[0 or 1 / 1 / 1 /step] 0: Off 1: On
006	WasteTonerBottle	*CTL	[0 or 1 / 1 / 1 /step] 0: Off 1: On
007	Transfer Belt	*CTL	[0 or 1 / 1 / 1 /step] 0: Off 1: On
008	Fusing Unit	*CTL	[0 or 1 / 1 / 1 /step] 0: Off 1: On
080	Toner Call Timing	*CTL	Changes the timing of the "Toner Supply Call" via @Remote, when the following conditions occur. [0 or 1 / 0 / 1 /step] 0: At replacement 1: At near end
081	Tonner Call Thresh	*CTL	[10 to 90 / 10 / 10 /step]
128	Interval: Others	*CTL	Sets the paper supply alarm level. A paper supply alarm counter increases by +1 when a sheet of the related size is used. The paper supply alarm occurs when one of the paper supply alarm counters gets to the set value. [250 to 10000 / 1000 / 1/step]
132	Interval :A3	*CTL	
133	Interval: A4	*CTL	
134	Interval: A5	*CTL	
141	Interval: B4	*CTL	
142	Interval: B5	*CTL	

160	Interval: DLT	*CTL	
164	Interval: LG	*CTL	
166	Interval: LT	*CTL	
172	Interval: HLT	*CTL	

5508	[Auto Call Setting]		
001	Jam Remains	*CTL	[0 or 1 / 0 / 1/step] 0: Disable, 1: Enable
	Enables/disables initiating a call for an unattended paper jam.		
002	Frequent Jams	*CTL	[0 or 1 / 0 / -/step] 0: Disable, 1: Enable
	Enables/disables initiating a call for consecutive paper jams.		
003	Door Open	*CTL	[0 or 1 / 0 / -/step] 0: Disable, 1: Enable
	Enables/disables initiating a call when the front door remains open.		
011	Jam Remains: Time	*CTL	[3 to 30 / 10 / 1 minute/step]
	Sets the time a jam must remain before it becomes an "unattended paper jam". This setting is enabled only when SP5508-004 is set to "1".		
012	Freq Jam: # Of Time	*CTL	[2 to 10 / 5 / 1 time/step]
	Sets the number of consecutive paper jams required to initiate a call. This setting is enabled only when SP5508-004 is set to "1".		
013	Door Open: Time	*CTL	[3 to 30 / 10 / 1 minute/step]
	Sets the length of time the door remains open before the machine initiates a call. This setting is enabled only when SP5-508-004 is set to "1".		

5515	[SC/Alarm Setting]		
	With NRS (New Remote Service) in use, these SP codes can be set to issue an SC call when an SC error occurs. If this SP is switched off, the SC call is not issued when an SC error occurs.		

001	SC Call	*CTL	
002	Service Parts Near End Call	*CTL	[0 or 1 / 1 / -/step]
003	Service Parts End Call	*CTL	0: Off
004	User Call	*CTL	1: On
006	Communication Test Call	*CTL	[0 or 1 / 1 / -/step]
007	Machine Information Notice	*CTL	0: Off
			1: On
008	Alarm Notice	*CTL	[0 or 1 / 0 / -/step]
			0: Off
			1: On
009	Non Genuine Tonner Alarm	*CTL	[0 or 1 / 1 / -/step]
010	Supply Automatic Ordering Call	*CTL	0: Off
011	Supply Management Report Call	*CTL	1: On
012	Jam/Door Open Call	*CTL	[0 or 1 / 0 / -/step]
			0: Off
			1: On

5516	[Individual PM Part Alarm Call]		
	With @Remote in use, these SP codes can be set to issue an PM alarm call when one of SP parts reaches its yield.		
001	Disable/Enable Setting (0: Not send, 1: Send)	*CTL	[0 or 1 / 1 / -/step] 0: Not send, 1: Send
004	% PM yield	*CTL	[1 to 255 / 75 / 1 %/step]

5517	[Get Machine Info]		
	-		
031	-	*CTL	[0 to 255 / 10 / 1 min/step]

5730	[Extended Function Setting]		
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010	Expiration Prior Alarm Set	*CTL	[0 to 999 / 20 / 1 days/step]
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5731	[Counter Effect] DFU		
001	MK1 Paper > Combine	*CTL	[0 or 1 / 0 / 1/step]

5743	[] DFU		
101		*CTL	[- / 0 / 1/step]
201		*CTL	[- / 0 / 1/step]

5745	[Deemed Power Consumption]		
	Displays the status of each mode.		
005	EcoCountTime	*CLT	[0 to 9999 / 0 / 1 /step]
211	Controller Standby	*CTL	[0 to 9999 / 0 / 1 /step]
212	STR	*CTL	[0 to 9999 / 0 / 1 /step]
213	Main Power Off	*CTL	[0 to 9999 / 0 / 1 /step]
214	Scanning and Printing	*CTL	[0 to 9999 / 0 / 1 /step]
215	Printing	*CTL	[0 to 9999 / 0 / 1 /step]
216	Scanning	*CTL	[0 to 9999 / 0 / 1 /step]
217	Engine Standby	*CTL	[0 to 9999 / 0 / 1 /step]
218	Low Power Consumption	*CTL	[0 to 9999 / 0 / 1 /step]
219	Silent Consumption	*CTL	[0 to 9999 / 0 / 1 /step]
220	Heater Off	*CTL	[0 to 9999 / 0 / 1 /step]

5746	[BMLinkS] DFU		
	-		
001	available	*CTL	[0 or 1 / 1 / 1 /step]
002	Interval: mon	*CTL	[10 to 3600 / 60 / 1/step]

004	Available: log	*CTL	[0 or 1 / 1 / 1 /step]
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5749	[Import/Export] DFU		
	-		
001	Export	*CTL	[- / - / -] [Excute]
002	Import	CTL	[- / - / -] [Excute]
251	Export Result Print	CTL	[- / - / -] [Excute]
252	Import Result Print	CTL	[- / - / -] [Excute]

5751	[] DFU		
	-		
001	-	-	[- / - / -] [String In]

5792	[MCS Debug SW] DFU		
	-		
001	1	*CTL	[0 to 255 / 0 / 1 /step]
002	2	*CTL	[0 to 255 / 0 / 1 /step]
003	3	*CTL	[0 to 255 / 0 / 1 /step]
004	4	*CTL	[0 to 255 / 0 / 1 /step]

5793	[ESG Debug SW] DFU		
001	1	CTL	[0 to 255 / 0 / 1 /step]

5795	[SRM Debug SW] DFU		
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001	1	CTL	[0 to 255 / - / 1 /step]
5796	[PLN] DFU		
001	1	CTL	[0 to 255 / 0 / 1 /step]
5801	[Memory Clear]		
001	All Clear	CTL	[- / - / -] [Execute]
	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values.		
002	Engine	ENG	[- / - / -] [Execute]
	Clears the engine settings.		
003	SCS	CTL	[- / - / -] [Execute]
	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.		
004	IMH Memory Clr	CTL	[- / - / -] [Execute]
005	MCS	CTL	[- / - / -] [Execute]
	Initializes the MCS settings.		
008	Printer	CTL	[- / - / -] [Execute]
	<p>The following service settings:</p> <ul style="list-style-type: none"> • Bit switches • Gamma settings (User & Service) • Toner Limit <p>The following user settings:</p> <ul style="list-style-type: none"> • Tray Priority 		

	<ul style="list-style-type: none"> • Menu Protect • System Setting except for setting of Energy Saver • I/F Setup (I/O Buffer and I/O Timeout) <p>PCL Menu</p>		
010	GWWS	CTL	[- / - / -] [Execute]
	Deletes the network file application management files and thumbnails, and initializes the job login ID.		
011	NCS	CTL	[- / - / -] [Execute]
	All setting of Network Setup (User Menu) (NCS: Network Control Service)		
014	Clear DCS Setting	CTL	[- / - / -] [Execute]
	Initializes the DCS (Delivery Control Service) settings.		
015	Clear UCS Setting	CTL	[- / - / -] [Execute]
	Initializes the UCS (User Information Control Service) settings.		
016	MIRS Memory Clr	CTL	Resets or deletes the MIRS-related data.
	Initializes the MIRS (Machine Information Report Service) settings.		
017	CCS	CTL	[- / - / -] [Execute]
	Initializes the CCS (Certification and Chargecontrol Service) settings.		
018	SRM Memory Clr	CTL	[- / - / -] [Execute]
	Initializes the SRM (System Resource Manager) settings.		
019	LCS Memory Clr	CTL	[- / - / -] [Execute]

	Resets or deletes the LCS-related data.		
021	ECS	CTL	[- / - / -] [Execute]
	Initializes the ECS settings.		
025	websys	CTL	[- / - / -] [Execute]
	-		
026	PLN	CTL	[- / - / -] [Execute]

3

5803	[INPUT CHECK]		
001	PSIZE&TRYSET	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: A4 SEF 2: A4 LEF 3: A5 SEF 4: A5 LEF 5: A6 SEF 6: DLT SEF 7: LG SEF 8: LT SEF 9: LT LEF 10: Custom 11: Folio 12:Executive 13:16K 14:8K 15:Tray not set		
004	PAPEND_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the by-pass paper end sensor.		

	0: paper remaining 1: paper end		
005	HANDBP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Base plate goes down 1: Base plate goes up		
006	HAND_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
008	PAPOUT_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
009	PEFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper not full 1: Paper full		
010	PAPERON_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
013	DUP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
015	REG_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
018	TE_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
019	TE_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining		

	1: Toner end		
020	TE_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
021	TE_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
024	INTERLOCK_+24VS1	ENG	[0 or 1 / 0 / 1/step]
	0: +24VS1 On 1: +24VS1 Off		
025	INTERLOCK_+24VS2	ENG	[0 or 1 / 0 / 1/step]
	0: +24VS2 On 1: +24VS2 Off		
026	INTERLOCK_+5VS	ENG	[0 or 1 / 0 / 1/step]
	0: +5VS On 1: +5VS Off		
032	TONERBTLSET_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the waste toner bottle set sensor. 0: Set 1: Not set		
033	TONERFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the waste toner overflow sensor. 0: Not full 1: Full		
034	ITBNEW_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
035	MINFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]

	0: Normal 1: Error		
036	FUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
037	PSUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
048	ITB_TCSP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Abutting 1: Spaced		
049	FEEDMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
050	BWMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
051	FUMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
052	COLMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
053	TRANSMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
054	HVP_ERR_D	ENG	[0 or 1 / 0 / 1/step]

	Indicates the state of the error signal from high voltage output of separation part. If the error is detected, it returns SC460-00. 0: Error 1: Normal		
055	HVP_ERR_1	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output of charging and development. If the error is detected, it returns SC490-00. 0: Error 1: Normal		
056	HVP_ERR_2	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output of 1st and 2nd transfer. If the error is detected, it returns SC490-01. 0: Abutting 1: Spaced		
058	FUNEW_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
060	FUSET_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
062	FUCOMP	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: High temp. detected		
072	EGB_VER	ENG	[0 to 15 / 0 / 1/step]
	Increases 1 if version is increased.		
077	BANK_PE_SNS1	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
078	BANK_PE_SNS2	ENG	[0 or 1 / 0 / 1/step]

	0: paper end 1: paper remaining		
079	BANK_PE_SNS3	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
080	BANK_FEED_SNS1	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected 1: Paper detected		
081	BANK_FEED_SNS2	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected 1: Paper detected		
082	BANK_FEED_SNS3	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected 1: Paper detected		
083	BANK_500/250_1	ENG	[0 or 1 / 0 / 1/step]
	Indicates first stage (tray 2) is 500 sheets tray. 0: 500 1: Not used		
084	BANK_500/250_2	ENG	[0 or 1 / 0 / 1/step]
	Indicates second stage (tray 3) is 500 sheets tray. 0: 500 1: Not used		
085	BANK_500/250_3	ENG	[0 or 1 / 0 / 1/step]
	Indicates third stage (tray 4) is 500 sheets tray. 0: 500 1: Not used		
086	BANK_PSIZE_1	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF		

	1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set		
087	BANK_PSIZE_2	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set		
088	BANK_PSIZE_3	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF		

	5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set		
089	BANK_SET	ENG	[0 to 3 / 0 / 1/step]
	Number of bank set		
090	BANK_MT_LOCK_1	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
091	BANK_MT_LOCK_2	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
092	BANK_MT_LOCK_3	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
100	PCDUNEW_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
101	PCDUNEW_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
102	PCDUNEW_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
103	PCDUNEW_SNS_Y	ENG	[0 or 1 / 0 / 1/step]

	0: Used 1: New		
104	PCDUSET_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
105	PCDUSET_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
106	PCDUSET_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
107	PCDUSET_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
115	Door Open Detect	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the interlock switches. 0: Door closed 1: Door opened		
116	Temperature	ENG	[0 to 999 / 0 / 1 deg/step]
	Displays current temperature.		
117	Relative Humidity	ENG	[0 to 999 / 0 / 1 %RH/step]
	Displays current relative humidity.		
118	Absolute Humidity	ENG	[0.00 to 99.99 / 0.00 / 0.01 %RH/step]
	Displays current absolute humidity.		
5804	[OUTPUT CHECK]		
003	BWMT_144mm/s	ENG	[0 or 1 / 0 / 1/step] 0: OFF, 1: ON

	When using this SP, remove Bk toner cartridge / Bk PCDU. Toner may contaminate inside of the machine.		
004	BWMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove Bk toner cartridge / Bk PCDU. Toner may contaminate inside of the machine.		
005	BWMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove Bk toner cartridge / Bk PCDU. Toner may contaminate inside of the machine.		
010	FUMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
011	FUMT_mt_90mm/s	ENG	[0 or 1 / 0 / 1/step]
012	FUMT_t_90m/s	ENG	[0 or 1 / 0 / 1/step]
013	FUMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
017	COLMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.		
018	COLMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.		
019	COLMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.		
024	TRANSMT_144m/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.		
025	TRANSMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.		
026	TRANSMT_60m/s	ENG	[0 or 1 / 0 / 1/step]

	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.		
031	FEEDMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
032	FEEDMT_mt_90mm/s	ENG	[0 or 1 / 0 / 1/step]
033	FEEDMT_t_90mm/s	ENG	[0 or 1 / 0 / 1/step]
034	FEEDMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
035	FEEDMT_1TCSP	ENG	[0 or 1 / 0 / 1/step]
	Revolve using transected motor speed of the 1st transfer		
036	FEEDMT_HANDBP	ENG	[0 or 1 / 0 / 1/step]
	To lift manual feed base plate, reverse drive paper transfer motor, and rotate at a speed for lifting.		
039	REG_CL	ENG	[0 or 1 / 0 / 1/step]
040	MID_CL	ENG	[0 or 1 / 0 / 1/step]
041	PAP_CL	ENG	[0 or 1 / 0 / 1/step]
042	HAND_CL	ENG	[0 or 1 / 0 / 1/step]
043	DUP_MID_CL	ENG	[0 or 1 / 0 / 1/step]
044	DUP_OUT_CL	ENG	[0 or 1 / 0 / 1/step]
045	DUP_SOL	ENG	[0 or 1 / 0 / 1/step]
	<p>Drives the switching solenoid to transfer the paper to the duplex unit.</p> <p>0: Off – moves solenoid towards to output bin direction.</p> <p>1: On – moves solenoid towards to duplex unit direction.</p> <p>Do not turn on more than a minute, this might damage the machine because of the high heat.</p>		
046	PAPOUT_SOL	ENG	[0 or 1 / 0 / 1/step]
	<p>Drives solenoid for the idler gear to reverse drive paper exit roller.</p> <p>0: Off</p> <p>1: On – idler gear works to transfer the paper to the duplex unit.</p> <p>Do not turn on more than a minute, this might damage the machine because of the high heat.</p>		

083	1TCSP_CL	ENG	[0 or 1 / 0 / 1/step]
091	TN_CL_K	ENG	[0 or 1 / 0 / 1/step]
092	TN_CL_C	ENG	[0 or 1 / 0 / 1/step]
093	TN_CL_M	ENG	[0 or 1 / 0 / 1/step]
094	TN_CL_Y	ENG	[0 or 1 / 0 / 1/step]
100	MIN_FAN_H	ENG	[0 or 1 / 0 / 1/step]
101	MIN_FAN_L	ENG	[0 or 1 / 0 / 1/step]
102	FU_FAN_H	ENG	[0 or 1 / 0 / 1/step]
103	FU_FAN_L	ENG	[0 or 1 / 0 / 1/step]
107	PSU_FAN_H	ENG	[0 or 1 / 0 / 1/step]
108	PSU_FAN_L	ENG	[0 or 1 / 0 / 1/step]
130	HVP_C_K	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -1100V There is no SP to change output voltage. When turning this ON, make sure to remove Bk toner cartridge and Bk PCDU. OPC Drum might be scratched by the discharge. SP5804-147 must be ON to output voltage.</p>		
131	HVP_C_C	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -1100V There is no SP to change output voltage. When turning this ON, make sure to remove Cy toner cartridge and Cy PCDU. OPC Drum might be scratched by the discharge. SP5804-148 must be ON to output voltage.</p>		
132	HVP_C_M	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -1100V There is no SP to change output voltage.</p>		

	When turning this ON, make sure to remove Ma toner cartridge and Ma PCDU. OPC Drum might be scratched by the discharge. SP5804-148 must be ON to output voltage.		
133	HVP_C_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -1100V There is no SP to change output voltage. When turning this ON, make sure to remove Ye toner cartridge and Ye PCDU. OPC Drum might be scratched by the discharge. SP5804-148 must be ON to output voltage.		
134	HVP_DV_K	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.		
135	HVP_DV_C	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.		
136	HVP_DV_M	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.		
137	HVP_DV_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.		

139	HVP_T1_K	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
140	HVP_T1_C	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
141	HVP_T1_M	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
142	HVP_T1_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
143	HVP_T2_+	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +30uA There is no SP to change output value.		
144	HVP_T2_-	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -800V There is no SP to change output voltage.		
145	HVP_D	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +2000V There is no SP to change output voltage.		
147	HVP_BION_BK	ENG	[0 or 1 / 0 / 1/step]

	SP to output charging and development for Bk. This SP must be "ON" to enable SP5804-130 / SP5804-134 to output voltage.		
148	HVP_BION_COL	ENG	[0 or 1 / 0 / 1/step]
	SP to output charging and development for Bk. This SP must be "ON" to enable SP5804-135 to SP5804-137 to output voltage.		
185	TM_0	ENG	[0 or 1 / 0 / 1/step]
186	TM_1	ENG	[0 or 1 / 0 / 1/step]
224	BANK_MT1:144mm/s	ENG	[0 or 1 / 0 / 1/step]
225	BANK_MT1:90mm/s	ENG	[0 or 1 / 0 / 1/step]
226	BANK_MT1:60mm/s	ENG	[0 or 1 / 0 / 1/step]
227	BANK_MT2:144mm/s	ENG	[0 or 1 / 0 / 1/step]
228	BANK_MT2:90mm/s	ENG	[0 or 1 / 0 / 1/step]
229	BANK_MT2:60mm/s	ENG	[0 or 1 / 0 / 1/step]
230	BANK_MT3:144mm/s	ENG	[0 or 1 / 0 / 1/step]
231	BANK_MT3:90mm/s	ENG	[0 or 1 / 0 / 1/step]
232	BANK_MT3:60mm/s	ENG	[0 or 1 / 0 / 1/step]
239	BANK_PAP_CL1	ENG	[0 or 1 / 0 / 1/step]
240	BANK_PAP_CL2	ENG	[0 or 1 / 0 / 1/step]
241	BANK_PAP_CL3	ENG	[0 or 1 / 0 / 1/step]
242	BANK_FEED_CL1	ENG	[0 or 1 / 0 / 1/step]
243	BANK_FEED_CL2	ENG	[0 or 1 / 0 / 1/step]
244	BANK_FEED_CL3	ENG	[0 or 1 / 0 / 1/step]
248	ON_DEMAND_2	ENG	[0 or 1 / 0 / 1/step]
	Do not execute.		
249	ITBFU_NEWON	ENG	[0 or 1 / 0 / 1/step]
	0: Off		

	1: On – flows current to cut the new detection fuse of the Fusing unit. This SP only flows current, no new detection control is working.		
250	PCDU_NEWON	ENG	[0 or 1 / 0 / 1/step]
251	TEON_BK	ENG	[0 or 1 / 0 / 1/step]
252	TEON_COL	ENG	[0 or 1 / 0 / 1/step]
253	UPCOVER_SOL	ENG	[0 or 1 / 0 / 1/step]
	This SP controls shutter to supply toner to PCDU from toner cartridge. If top cover is opened, it is a spec not to open shutter. Must to hear the sound to check if this solenoid is working. When using this SP, remove all toner cartridge / PCDU. Toner may contaminate inside of the machine.		
254	5V_TMP_ON	ENG	[0 or 1 / 0 / 1/step]
	This SP supplies power to the thermopile to check the surface temperature of fusing belt. Design analysis use only. Controlling this SP might damage the thermopile.		
255	BankSerialComm	ENG	[0 or 1 / 0 / 1/step]
	Uses this to check bank substrate connection.		

5807	[Machine Type] FSP		
001	Area Selection	ENG*	[1 to 7 / * / 1/step]
	Sets the area for the printer. *Differs according to model. 1:DOM, 2:NA, 3:EU, 4:Asia, 5:CHN, 6:TWN, 7:KOR		
002	Model Selection	ENG*	[1 to 3 / 0 / 1/step]
	Sets the model for the printer. 1:Type a, 2:Type b, 3:Type L		
003	Paper Type Notify	ENG	[0 or 1 / 1 / 1/step]
	Sets how to notify paper type from the controller. 0: SP notify 1: command notify		

5810	[Fusing SC Clear]		
001	Clear	ENG	[- / - / -] [Excute]
	Clears the error when the fusing SC occurred.		

5811	[Machine Info]		
002	Display:Serial	*ENG	[0 to 255 / 0 / 1/step]
004	Set:BICU	*ENG	[0 to 255 / 0 / 1/step] DFU
005	Display:FRAM	ENG	[0 to 255 / 0 / 1/step] DFU

5812	[Service Tel. No. Setting]		
001	Telephone	*CTL	-
	Sets the telephone number for a service representative. This number is printed on the Counter List, which can be printed with the user's "Counter" menu. This can be up to 16 characters (both numbers and alphabetic characters can be input).		
002	Facsimile	*CTL	-
	Sets the fax or telephone number for a service representative. This number is printed on the Counter List. This can be up to 16 characters (both numbers and alphabetic characters can be input).		

5816	[NRS Function] These settings are used for NRS.		
001	I/F Setting	*CTL	[0 to 2 / 2 / 1 /step] 0: Remote service off 1: CSS remote service on 2: NRS remote service on
	Selects the remote service setting.		
002	CE Call	*CTL	[0 or 1 / 1 / 1 /step] 0: Start of the service

			1: End of the service
	Performs the CE Call at the start or end of the service.		
	<p>Note</p> <ul style="list-style-type: none"> This SP is activated only when SP 5816-001 is set to "2". 		
003	Function Flag	*CTL	[0 or 1 / 0 / 1 /step] 0: Disabled 1: Enabled
	Enables or disables the remote service function.		
004	Communication Test	CTL	[- / - / -] [Excute]
005	Device Info	CTL	[- / - / -] [Excute]
007	SSL Disable	*CTL	[0 or 1 / 0 / 1 /step] 0: Yes. SSL not used. 1: No. SSL used.
	Controls if RCG (Remote Communication Gate) confirmation is done by SSL during an RCG send for the @Remote over a network interface.		
008	RCG Connect T/O	*CTL	[1 to 90 / 30 / 30 second /step]
	Sets the length of time (seconds) for the time-out when the RCG (Remote Communication Gate) connects during a call via the @Remote network.		
009	RCG Write Timeout	*CTL	[1 to 100 / 60 / 1 second /step]
	Sets the length of time (seconds) for the time-out when sent data is written to the RCG during a call over the @Remote network.		
010	RCG Read Timeout	*CTL	[0 to 100 / 60 / 1 second/step]
	Sets the timeout counter for reading processing.		
011	Port 80	*CTL	[0 or 1 / 0 / 1 /step] 0: No. Access denied 1: Yes. Access granted.

	Controls if permission is given to get access to the SOAP method over Port 80 on the @Remote network.		
012	@Remote Service	*CTL	[0 or 1 / 1 / 1 /step]
013	RFU Timing	*CTL	[0 or 1 / 1 / 1 /step] 0: Any status of a target machine 1: Sleep or panel off mode only
	Selects the timing for the remote firmware updating.		
014	RCG Error Cause	CTL	[0 or 1 / 0 / 1 /step]
	0: Normal 1: Fails to reflect the client/server certificate settings by network failure to reboot. Transitions to 0 on restarting the machine.		
021	Function Flag	*CTL	[0 or 1 / 0 / 1/step] 0: Not registered, 1: Registered
023	Connect Mode (N/M)	*CTL	[0 or 1 / 0 / 1/step] 0: Internet connection 1: Dial-up connection
	This SP displays and selects the RCG-N connection method.		
061	NotiTime ExpTime	*CTL	[0 to 0xffffffff / 0 / 1/step]
	Proximity of the expiration of the certification.		
062	HTTP Proxy Use	*CTL	[0 or 1 / 0 / 1/step] 0: Not use 1: Use
	This SP setting determines if the proxy server is used when the machine communicates with the service center.		
063	HTTP Proxy Host	*CTL	-
	This SP sets the address of the proxy server used for communication between the RCG device and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up the embedded RCG-N.		

	<p>Note</p> <ul style="list-style-type: none"> The address display is limited to 128 characters. Characters beyond the 128 character are ignored. This address is customer information and is not printed in the SMC report. 		
064	HTTP Proxy Port	*CTL	[0 to 0xffff / 0 / 1/step]
	<p>This SP sets the port number of the proxy server used for communication between the embedded RCG-N and the gateway. This setting is necessary to set up the embedded RC Gate-N.</p> <p>Note</p> <ul style="list-style-type: none"> This port number is customer information and is not printed in the SMC report. 		
065	HTTP Prox AutUsr	*CTL	-
	<p>This SP sets the HTTP proxy certification user name.</p> <p>Note</p> <ul style="list-style-type: none"> The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored. This name is customer information and is not printed in the SMC report. 		
066	HTTP Prox AutPass	*CTL	-
	<p>This SP sets the HTTP proxy certification password.</p> <p>Note</p> <ul style="list-style-type: none"> 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. 		
067	Cer Updt Cond	*CTL	[0 to 255 / 0 / 1/step]
	Displays the status of the certification update.		
	0	The certification used by RCG-N is set correctly.	
	1	The certification request (setAuthKey) for update has been received from the GW URL and certification is presently being updated.	
	2	The certification update is completed and the GW URL is being notified of the successful update.	
3	The certification update failed, and the GW URL is being notified of the failed update.		

	4	The period of the certification has expired and new request for an update is being sent to the GW URL.	
	11	A rescue update for certification has been issued and a rescue certification setting is in progress for the rescue GW connection.	
	12	The rescue certification setting is completed and the GW URL is being notified of the certification update request.	
	13	The notification of the request for certification update has completed successfully, and the system is waiting for the certification update request from the rescue GW URL.	
	14	The notification of the certification request has been received from the rescue GW controller, and the certification is being stored.	
	15	The certification has been stored, and the GW URL is being notified of the successful completion of this event.	
	16	The storing of the certification has failed, and the GW URL is being notified of the failure of this event.	
	17	The certification update request has been received from the GW URL, the GW URL was notified of the results of the update after it was completed, but an certification error has been received, and the rescue certification is being recorded.	
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.	
068	Cer Abnml Cause		*CTL [0 to 255 / 0 / 1/step]
	Displays a number code that describes the reason for the request for update of the certification.		
	0	Normal. There is no request for certification update in progress.	
	1	Request for certification update in progress. The current certification has expired.	
	2	An SSL error notification has been issued. Issued after the certification has expired.	
	3	Notification of shift from a common authentication to an individual certification.	
	4	Notification of a common certification without ID2.	
	5	Notification that no certification was issued.	
6	Notification that GW URL does not exist.		

069	Cer Updt ReqID	*CTL	-
	The ID of the request for certification.		
083	Firm Updating	*CTL	[0 to 5 / 0 / 1/step]
	Displays the status of the firmware update.		
085	Firm UpUsr Conf	*CTL	-
	This SP setting determines if the operator can confirm the previous version of the firmware before the firmware update execution. If the option to confirm the previous version is selected, a notification is sent to the system manager and the firmware update is done with the firmware files from the URL.		
086	Firmware Size	*CTL	-
	Allows the service technician to confirm the size of the firmware data files during the firmware update execution.		
087	CERT: MacroVsn	CTL	-
	Displays the macro version of the @Remote certification.		
088	CERT: PAC Vsn	CTL	-
	Displays the macro version of the @Remote certification.		
089	CERT: ID2 Code	CTL	-
	Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_). Asterisks (***) indicate that no @Remote certification exists.		
090	CERT: Subject	CTL	-
	Displays the common name of the @Remote certification subject. CN = the following 17 bytes. Spaces are displayed as underscores (_). Asterisks (***) indicate that no DESS exists.		
091	CERT: SeriNum	CTL	-
	Displays serial number for the NRS certification. Asterisks (***) indicate that no DESS exists.		
092	CERT: Issuer	CTL	-
	Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asterisks (***) indicate that no DESS exists.		

093	CERT: St ExpTime	CTL	-
	Displays the start time of the period for which the current @Remote certification is enabled.		
094	CERT: End ExpTime	CTL	-
	Displays the end time of the period for which the current @Remote certification is enabled.		
095	Svr CNCheck	*CTL	[0 or 1 / 1 / 1/step]
096	GTWay Host	CTL	-
097	GTWay URLPath	*CTL	-
099	DebugRescueGWURL	CTL	[- / - / -]
			[Execute]
102	CERT: Encrypt Lv	*CTL	[1 or 2 / 1 / 1/step] 1: 512 bit 2: 2048 bit
	<p>Displays cryptic strength of the NRS certification. Press [Execute].</p> <p>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.</p> <ul style="list-style-type: none"> The current progress, success, or failure of this execution can be displayed with SP5816-152. If the execution succeeded, SP5816-153 will display the result for confirmation and SP5816-154 will display the telephone number for the connection to the outside line. 		
200	Polling Man Exc	CTL	[- / - / -] [Execute]
	Executes the manual polling.		
201	Instl: Condition	CTL	[0 to 4 / 0 / 1/step]
	<p>Displays a number that indicates the status of the @Remote service device.</p> <p>0: Neither the registered device by the external nor embedded RCG device is set.</p> <p>1: The embedded RCG device is being set. Only Box registration is completed. In this status, this unit cannot answer a polling request from the external RCG.</p> <p>2: The embedded RCG device is set. In this status, the external RCG unit cannot answer a polling request.</p>		

	<p>3. The registered device by the external RCG is being set. In this status the embedded RCG device cannot be set.</p> <p>4 The registered module by the external RCG has not started.</p>		
202	Instl: ID #	*CTL	-
	Allows entry of the number of the request needed for the RCG-N device.		
203	Instl: Reference	CTL	[- / - / -] [Execute]
	Executes the inquiry request to the @Remote GW URL.		
204	Instl: Ref Rslt	CTL	[0 to 255 / 0 / 1/step]
	Displays a number that indicates the result of the inquiry executed with SP5816-203.		
	<p>0: Succeeded</p> <p>1: Inquiry number error</p> <p>2: Registration in progress</p> <p>3: Proxy error (proxy enabled)</p> <p>4: Proxy error (proxy disabled)</p> <p>5: Proxy error (Illegal user name or password)</p> <p>6: Communication error</p> <p>7: Certification update error</p> <p>8: Other error</p> <p>9: Inquiry executing</p>		
205	Instl: Ref Section	CTL	-
	Displays the result of the notification sent to the device from the GW URL in answer to the inquiry request. Displayed only when the result is registered at the GW URL.		
206	Instl: Rgsltln	CTL	[- / - / -] [Execute]
	Executes "Embedded RCG Registration".		
207	Instl: Rgsltln Rst	CTL	[0 to 255 / 0 / 1/step]
	<p>Displays a number that indicates the registration result.</p> <p>0: Succeeded</p> <p>2: Registration in progress</p>		

	3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Registration executing		
208	Instl: ErrorCode	CTL	[-2147483647 to 2147483647 / 0 / 1/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
		-11004	
		-11005	
	Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring device status.
		-12003	Attempted registration without execution of an inquiry and no previous registration.
		-12004	Attempted setting with illegal entries for certification and ID2.
		-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.
	Operation Error, Incorrect Setting	-12006	A confirmation request was made after the confirmation had been already completed.
		-12007	The request number used at registration was different from the one used at confirmation.
		-12008	Update certification failed because mainframe was in use.

		-12009	ID2 mismatch between an individual certification and NVRAM
		-12010	Certification area is not initialized.
	Error Caused by Response from GW URL	-2385	Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387	Not supported at the Service Center
		-2389	Database out of service
		-2390	Program out of service
		-2391	Two registrations for same device
		-2392	Parameter error
		-2393	Basil not managed
		-2394	Device not managed
		-2395	Box ID for Basil is illegal
		-2396	Device ID for Basil is illegal
		-2397	Incorrect ID2 format
-2398	Incorrect request number format		
209	Instl Clear	CTL	[- / - / -] [Excute]
	Releases a machine from its Cumin setup.		
250	Print Com Log	CTL	[- / - / -] [Excute]
	Prints the communication log.		
5821	[NRS Address]		
002	RCG IP Address	*CTL	[00000000h to FFFFFFFFh / 00000000h / 1 /step]
	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		

003	RCG Port	*CTL	[0 to 65535 / 443 / 1 /step]
	Sets the port number of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		
004	RCG URL Path	*CTL	[0 to 16 characters / /RCG/services/ / - /step]
	Sets the URL path of the RCG (Remote Communication Gate) destination for call processing at the remote service center.		

5824	[NVRAM Upload]		
	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card. For details, see "NVRAM Data Upload/Download" in the "Main chapters: 5. System Maintenance".		
001	NVRAM Upload	CTL	-

5825	[NVRAM Download]		
	Downloads the UP and SP mode data from an SD card to the NVRAM. For details, see "NVRAM Data Upload/Download" in the "Main chapters: 5. System Maintenance".		
001	NVRAM Download	CTL	[- / - / -] [Execute]

5828	[Network Setting]		
	Job spool settings/ Interface selection for Ethernet and wireless LAN		
001	IPv4 Address (Ethernet/IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 address for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
002	IPv4 Subnet Mask (Ethernet/IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 subnet mask for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd
003	IPv4 Default Gateway (Ethernet/IEEE 802.11)	*CTL	This SP allows you to check and reset the IPv4 default gateway used by the network for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd

006	DHCP	*CTL	[0 or 1 / 1 / 1 /step] 0: Not used (manual setting) 1: Used
	This SP code allows you check and change the setting that determines whether the IP address is used with DHCP on an Ethernet or wireless (802.11) LAN network.		
021	Active IPv4 Address	CTL	This SP allows you to check the IPv4 address that was used when the machine started up with DHCP.
022	Active IPv4 Subnet Mask	CTL	This SP allows you to check the IPv4 subnet mask setting that was used when the machine started up with DHCP.
023	Active IPv4 Gateway Address	CTL	This SP allows you to check the IPv4 default gateway setting that was used when the machine started up with DHCP.
050	1284 Compatibility (Centro)	*CTL	Enables or disables 1284 Compatibility. [0 or 1 / 1 / 1 /step] 0: Disabled, 1: Enabled
052	ECP (Centro)	*CTL	[0 or 1 / 1 / 1 /step] 0: Disabled, 1: Enabled
	Enables or disables ECP Compatibility. Note <ul style="list-style-type: none"> This SP is activated only when SP5-828-50 is set to "1". 		
065	Job Spooling	*CTL	Switches the job spooling on and off. [0 or 1 / 0 / 1 /step] 0: No spooling 1: Spooling enabled
066	Job Spooling Clear: Start Time	*CTL	[0 or 1 / 1 / 1 /step] 1: OFF Resumes printing spooled job. 0: ON Clears spooled job.
	This SP determines whether the job interrupted at power off is resumed at the next power on. This SP operates only when SP5828-065 is set to "1".		

069	Job Spooling (Protocol)		*CTL	[0 or 1 / 1 / 1 /step] 0: No spooling 1: Spooling enabled
	This SP 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)
087	Protocol Usage		*CTL	[0 or 1 / 0x00000000 / 1/step]
	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			
090	TELNET (0: OFF 1: ON)		*CTL	Enables or disables the Telnet protocol. [0 or 1 / 1 / 1/step] 0: Disable, 1: Enable
091	Web (0: OFF 1: ON)		*CTL	Enables or disables the Web operation. [0 or 1 / 1 / 1/step] 0: Disable, 1: Enable

145	Active IPv6 Link Local Address	CTL	<p>This is the IPv6 local address link referenced on the Ethernet or wireless LAN (802.11b) in the format: "Link Local Address" + "Prefix Length"</p> <p>The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.</p>
147	Active IPv6 Stateless Address 1	CTL	<p>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"</p> <p>The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.</p>
149	Active IPv6 Stateless Address 2	CTL	
151	Active IPv6 Stateless Address 3	CTL	
153	Active IPv6 Stateless Address 4	CTL	
155	Active IPv6 Stateless Address 5	CTL	
156	IPv6 Manual Address	*CTL	<p>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"</p> <p>The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.</p>
158	IPv6 Gateway Address	*CTL	<p>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.</p>
161	IPv6 Stateless Auto Setting	*CTL	<p>Enables or disables the automatic setting for IPv6 stateless. [0 or 1 / 1 / 1 /step] 0: Disable, 1: Enable</p>
236	Web Item visible	*CTL	<p>[0 x 0000 to 0 x ffff / 0 x ffff / - /step] 0: Not displayed 1: Displayed</p>
	<p>Displays or does not display the Web system items. bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)</p>		

237	Web shop link	*CTL	[0 or 1 / 1 / 1 /step] 0: Not display 1:Display
	Displays or does not display the link to Net RICOH on the top page and link page of the web system.		
238	Web supplies Link	*CTL	[0 or 1 / 1 / 1 /step] 0: Not display 1:Display
	Displays or does not display the link to Consumable Supplier on the top page and link page of the web system.		
239	Web Link1 Name	*CTL	-
	This SP confirms or changes the URL1 name on the link page of the web system. The maximum characters for the URL name are 31 characters.		
240	Web Link1 URL	*CTL	-
	This SP confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.		
241	Web Link1 visible	*CTL	[0 or 1 / 1 / - /step] 0: Not display 1:Display
	Displays or does not display the link to URL1 on the top page of the web system.		
242	Web Link2 Name	*CTL	-
	Same as "-239"		
243	Web Link2 URL	*CTL	-
	Same as "-240"		
244	Web Link2 visible	*CTL	-
	Same as "-241"		
249	DHCPv6 DUID	CTL	[00000000000000000000000000000000 00000h to FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFh / 00000000000000000000000000000000

			00h (0000:0000:0000:0000:0000:0000:0000:0000 / 0) / - /step]
Sets DHCPv6 DUID.			

5832	[HDD] HDD Initialization		
	Initializes the hard disk. Use this SP mode only if there is a hard disk error.		
001	Formatting (ALL)	CTL	[- / - / -] [Execute]

5840	[IEEE 802.11]		
006	Channel MAX	*CTL	[0 to 11 / 14 / 1/step]
007	Channel MIN	*CTL	[0 to 11 / 1 / 1/step]
	Sets the minimum number of channels available for data transmission via the wireless LAN. The number of channels available varies according to location. The default settings are set for the minimum end of the range for each area. Adjust the lower 4 bits to set the minimum number of channels.		
011	WEP Key Select	*CTL	-
045	WPA Debug Lvl	*CTL	[1 to 3 / 3 / 1/step] 1: Info 2: warning 3: error
	Selects the debug level for WPA authentication application. This SP is displayed only when the IEEE802.11 card is installed.		
046	11w	*CTL	[0 to 2 / 0 / 1/step]
047	PSK SetType	*CTL	[0 or 1 / 0 / 1/step]

5842	[GWWS Analysis] Net File Application Analysis		
001	Setting 1	*CTL	Prints or does not print the module log for each bit. [0 or 1 / 0 / 1/step]

			<p>0: Prints, 1: Not print</p> <p>Bit switches:</p> <ul style="list-style-type: none"> • Bit 0: System or other related application. • Bit 1: Captured related application • Bit 2: Certification related application • Bit 3: Address related application • Bit 4: Control devices or transmission logs related application • Bit 5: Output (print, fax or transmission) related application • Bit 6: Documents related application in bit 7, 0: Not printed, 1: Printed • Bit 7: MSB related application
002	Setting 2	*CTL	<p>Selects the stamp type for the log of Net File Application Analysis.</p> <p>Bit switches:</p> <ul style="list-style-type: none"> • Bit 0 to 6: Not used. • Bit 7 <p>0: Minute/second/micro second 1: Date/hour/minute/second</p>

5844	[USB]		
001	Transfer Rate	*CTL	<p>0x01: Full speed 0x04: Auto Change</p>
002	Vender ID	*CTL	Displays the vendor ID. DFU
003	Product ID	*CTL	Displays the product ID. DFU
004	Device Release N	*CTL	Displays the development release version number. DFU

005	Fixed USB Port	*CTL	[0 to 2 / 0 / 1/step] 0: OFF 1: Level 1 2: Level 2
006	PnP Model Name	*CTL	Default: Laser Printer (up to 20 characters allowed).
007	PnP Serial Number	*CTL	Default: None (up to 12 characters allowed for entry).
008	Mac Supply Level	*CTL	[0 or 1 / 1 / -]
100	Notify Unspport	*CTL	[0 or 1 / 1 / -] 0: Disable, 1: Enable

5845	[Delivery Srv] Delivery Server Setting		
003	Retry Interval	*CTL	Specifies the retry interval. [60 to 900 / 300 / 1 second/step]
004	No. of Retries	*CTL	Specifies the maximum number of retries. [0 to 99 / 3 / 1/step]
022	InstantTrans Off	*CTL	Switches instant transmission off/on. [0 or 1 / 1 / 1/step] 1: Off. Instant transmission not possible with network setting errors. 0: On. Instant transmission possible with network setting errors.
<p>Note</p> <ul style="list-style-type: none"> The machine will continue to transmit over the network, even if the network settings are incorrect. (This causes multiple errors, of course.) With this SP off, the machine will stop communicating with the network if the settings are wrong. This reduces the amount of spurious network traffic caused by errors due to incorrect settings. 			

5846	[UCS Setting]		
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010	LDAP Search TOut	*CTL	[1 to 255 / 60 / 1 /step] Sets the length of the timeout for the search of the LDAP server.
022	Upper LimitCount	*CTL	[1 to 500 / 500 / 1/step]
041	AddrB Acl Info	CTL	- This SP must be executed immediately after installation of an HDD unit in a basic machine that previously had no HDD. The first time the machine is powered on with the new HDD installed, the system automatically takes the address book from the NVRAM and writes it onto the new HDD. However, the new address book on the HDD can be accessed only by the system administrator at this stage. Executing this SP by the service technician immediately after power on grants full address book access to all users. Procedure 1. Turn the machine off. 2. Install the new HDD. 3. Turn the machine on. 4. The address book and its initial data are created on the HDD automatically. 5. However, at this point the address book can be accessed by only the system administrator or key operator. 6. Enter the SP mode and do SP5846-041. After this SP executes successfully, any user can access the address book.
043	AddrB Media	*CTL	[0 to 30 / 0 / 1 /step] 0: Unconfirmed 1: SD Slot 1 2: SD Slot 2 4: USB Flash ROM 20: HDD 30: Nothing Displays the slot number where an address book data is in.
046	IniSet/All AddrB	CTL	[- / - / -] [Execute]
047	Ini Local AddrB	CTL	[- / - / -] [Execute] Clears the local address book information, including the user code.

049	Ini LDAP Addr	CTL	[- / - / -] [Execute]
	Clears the LDAP address book information, except the user code.		
050	Ini All AddrB	CTL	[- / - / -] [Execute]
	Clears all directory information managed by UCS, including all user codes. Turn off and on the main power switch after executing this SP.		
051	Bkup All AddrB	CTL	[- / - / -] [Execute]
	Uploads all directory information to the SD card.		
052	Restr All AddrB	CTL	[- / - / -] [Execute]
	Downloads all directory information from the SD card.		
053	Clear Backup Info	CTL	[- / - / -] [Execute]
	<p>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.</p> <p>Note</p> <ul style="list-style-type: none"> • After you do this SP, go out of the SP mode, and then turn the power off. • Do not remove the SD card until the Power LED stops flashing. 		
060	Search option	*CTL	[0x00 to 0xff / 0x0f / 1 /step]
	<p>This SP uses bit switches to set up the fuzzy search options for the UCS local address book. [0: Off or 1: On]</p> <p>Bit: Meaning</p> <p>Bit0: Checks both upper/lower case characters</p> <p>Bit1 to 3: Japan Only</p> <p>Bit4 to 7: Not used</p>		
062	Compl opti 1	*CTL	[0 to 32 / 0 / 1 /step]

	Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to upper case and sets the length of the password.		
	<p>Note</p> <ul style="list-style-type: none"> This SP does not normally require adjustment. This SP is enabled only after the system administrator has set up a group password policy to control access to the address book. 		
063	Compl Opt 2	*CTL	[0 to 32 / 0 / 1 /step]
	<p>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.</p> <p>Note</p> <ul style="list-style-type: none"> 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. 		
064	Compl Opt 3	*CTL	[0 to 32 / 0 / 1 /step]
	<p>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.</p> <p>Note</p> <ul style="list-style-type: none"> 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. 		
065	Compl Opt 4	*CTL	[0 to 32 / 0 / 1 /step]
	<p>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.</p> <p>Note</p> <ul style="list-style-type: none"> 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. 		
094	Encryption Stat	*CTL	[0 to 255 / - / 1 /step]
	Shows the status of the encryption function of the address book on the LDAP server.		

	<p>0: No encryption</p> <p>1: Encryption</p> <p>2: Decrypting from encrypted data to plain data</p> <p>3: Encrypting from plain data to encrypted data</p> <p>4: Decrypted from encrypted data to plain data</p> <p>5: Encrypted from plain data to encrypted data</p> <p>6: Changing the encryption setting</p> <p>7: Changing the encryption key is done.</p> <p>8: Deleting the encryption key is done before changing the setting.</p> <p>9: Changing the encryption setting is done.</p>
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5848	[Web Service]		
	<p>5848 2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router.</p> <p>5848 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.</p>		
004	ac: UD	*CTL	<p>Switches access control on and off.</p> <p>[0000 or 0001 / 0000 / 1/step]</p> <p>0000: No access control</p> <p>0001: Access control</p>
009	ac: Job Ctrl	*CTL	
011	ac: Dev Mng	*CTL	
022	acl: Uadmin	*CTL	
024	Ac: Log	*CTL	
217	Timing	*CTL	NIA

5849	[Installation Date]		
001	Display	*CTL	[- / - / -]
002	Switch to Print	*CTL	<p>[0 or 1 / 1 / 1 /step]</p> <p>0: OFF (No Print)</p> <p>1: ON (Print)</p>
003	Total Counter	*CTL	[0 to 99999999 / 0 / 1/Step]

5851	[Bluetooth]		
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001	Mode	*CTL	[0 or 1 / 0 / 1/step] *Japan Only 0: Public 1: Private
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5856	[Remote ROM Update]		
	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.		
002	Local Port	*CTL	[0 or 1 / 0 / 1/step] 0: Disable 1: Enable

5857	[Debug Log Save]		
001	ON/ OFF	*CTL	[0 to 2 / 0 / 1/Step]
	<p>Enables log trace function or debug log saving function. The debug log cannot be captured until this feature is switched on.</p> <ul style="list-style-type: none"> 0: Enables log trace function 1: Enables debug log saving function 2: OFF <p>Note</p> <ul style="list-style-type: none"> If "0" is selected, it disables the settings of SP5857-002 to 013 and gives executing failure. If "1" is selected, it disables ordinarily saving function; however, SP5857-101 to 112 are able to execute. 		
002	Target 2:HDD 3:SD	*CTL	[1 to 3 / 2 / 1 /step] 1:IC Card 2: HDD 3: SD Card
	Sets the storage location for the debug log.		
005	Save to HDD	*CTL	[-999999 to 9999999 / - / 1 /step]
	Saves the debug log of the input SC number in memory to the HDD.		

	A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.		
006	Save to SD Card	*CTL	[-999999 to 9999999 / - / 1/step]
	Saves the debug log of the input SC number in memory to the SD card.		
009	HDD to SD Latest	*CTL	[- / - / -] [Execute]
	<p>Takes the most recent 4 MB of the log written to the hard disk and copies them to the SD Card.</p> <p>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.</p>		
010	HDD to SD Any	*CTL	[- / - / -] [Execute]
	<p>Takes the log of the specified key from the log on the hard disk and copies it to the SD Card.</p> <p>A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4 MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card. This SP does not execute if there is no log on the HDD with no key specified.</p>		
011	Erase HDD Debug	*CTL	[- / - / -] [Execute]
	Erases all debug logs on the HDD		
012	Erase SD Debug Data	*CTL	[- / - / -] [Execute]
	<p>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.</p> <p>To enable this SP, the machine must be cycled off and on.</p>		
013	Dsply-SD Space	*CTL	[- / - / -] [Excute]
	Displays the amount of space available on the SD card.		
014	SD to SD Latest	*CTL	[- / - / -]

			[Execute]
	Copies the most recent 4 MB of the debug log from an SD card to a different SD card.		
015	Copy SD to SD Any	*CTL	[- / - / -] [Execute]
	This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number.		
016	Make HDD Debug	*CTL	[- / - / -] [Execute]
	This SP creates a 32 MB file to store a log on the HDD.		
017	Make SD Debug	*CTL	[- / - / -] [Execute]
	This SP creates a 4 MB file to store a log on an SD card.		
101	Start Date	*CTL	[- / 20120101 / 1/step]
	Sets start date of the debug log output.		
102	End Date	*CTL	[- / 20371212 / 1/step]
	Sets end date of the debug log output.		
103	All Logs	*CTL	[- / - / -] [Execute]
	Obtains all debug logs.		
104	Controllerlogs	*CTL	[- / - / -] [Execute]
	Obtains controller debug log only.		
105	EngineDebugLogs	*CTL	[- / - / -] [Execute]
	Obtains engine debug log only.		
106	SnapshotDebugLogs	*CTL	[- / - / -] [Execute]
	Obtains snapshot debug log only.		

107	OpepanelDebugLogs	*CTL	[- / - / -] [Execute]
	Outputs the controller debug log to the media inserted front I/F.		

5858	[Debug Log Save: SC]		
	These SPs select the content of the debugging information to be saved to the destination selected by SP5857-002. SP5858-3 stores one SC specified by number. Refer to Section 4 for a list of SC error codes.		
001	Engine SC (0: OFF, 1: ON)	*CTL	[0 or 1 / 0 / 1/ step] 0: OFF, 1: ON
	Turns on/off the debug save for SC codes generated by copier engine errors.		
002	Controller SC (0: OFF, 1: ON)	*CTL	[0 or 1 / 0 / 1/ step] 0: OFF, 1: ON
	Turns on/off the debug save for SC codes generated by GW controller errors.		
003	Any SC	*CTL	[0 to 65535 / 0 / 1 /step]
	Sets the SC code whose logs are collected.		
004	Jam	*CTL	[0 or 1 / 0 / 1/ step] 0: OFF, 1: ON
	Turns on/off the debug save for jam errors.		

5859	[Debug Log SaveKey]		
	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller board.		
001	Key 1	*CTL	[-9999999 to 9999999 / 0 / 1 / step]
002	Key 2	*CTL	
003	Key 3	*CTL	
004	Key 4	*CTL	
005	Key 5	*CTL	

006	Key 6	*CTL	
007	Key 7	*CTL	
008	Key 8	*CTL	
009	Key 9	*CTL	
010	Key 10	*CTL	

5860	[SMTP/POP3/IMAP4]		
002	SMTP Srvr Port No	*CTL	[1 to 65535 / 25 / 1/step]
003	SMTP Authentication	*CTL	[0 or 1 / 0 / 1/step]
006	SMTP Auth. Encry	*CTL	[0 to 2 / 0 / 1/step]
007	POP before SMTP	*CTL	[0 or 1 / 0 / 1/step]
008	POPtoSMTP Waitin	*CTL	[0 to 10000 / 300 / 1/step]
009	Mail Receive Pro	*CTL	[1 to 3 / 1 / 1/step]
013	POP3/IMAP4 Auth.	*CTL	[0 to 2 / 0 / 1/step]
014	POP Srvr Port No	*CTL	[0 to 65535 / 110 / 1/step]
015	IMAP4 Srvr Port	*CTL	[0 to 65535 / 143 / 1/step]
016	SMTP Rx Port No	*CTL	[0 to 65535 / 25 / 1/step]
017	Mail Rx Interval	*CTL	[2 to 1440 / 3 / 1/step]
019	Mail KeepSetting	*CTL	[0 to 2 / 0 / 1/step]
020	ParMail RecTOut	*CTL	[1 to 168 / 72 / 1/step]
021	MDN Response RFC2298 Compliance	*CTL	[0 or 1 / 1 / 1/step] 0: No 1: Yes
	Determines whether RFC2.5298 compliance is switched on for MDN reply mail.		
022	SMTPAut FieldRep	*CTL	[0 or 1 / 0 / 1/step]
025	SMTP Auth. Direct Setting	*CTL	[0 to 255 / 0 / - /step]
	Selects the authentication method for SMPT.		

	Bit switch: Bit 0: LOGIN Bit 1: PLAIN Bit 2: CRAM MD5 Bit 3: DIGEST MD5 Bit 4 to 7: Not used Note <ul style="list-style-type: none"> This SP is activated only when SMTP authorization is enabled by UP mode. 		
026	S/MIME: MIME Header	*CTL	[0 to 2 / 0 / 1 /step] 0: Microsoft Outlook Express standard 1: Internet Draft standard 2: RFC standard
Selects the MIME header type of an E-mail sent by S/MIME.			
5866	[E-Mail Report]		
001	Report Validity	CTL	[0 or 1 / 0 / 1 /step] 0: Enable, 1: Disable
Disables and re-enables the email notification feature.			
005	Add Date Field	*CTL	[0 or 1 / 0 / 1 /step]
5869	[RAM Disk Setting]		
001	Mail Function	*CTL	[0 or 1 / 0 / 1 /step] 0: On, 1: Off
Enables or disables the e-mail transfer function. This SP sets the RAM disk size for the e-mail transfer function.			
5870	[Common Key Info Writing]		
001	Writing	CTL	[- / - / -] [Execute]
Writes the authentication data (used for NRS) in the memory.			

003	Initialize	CTL	[- / - / -] [Execute]
	Initializes the authentication data in the memory.		
004	Writing: 2048bit	CTL	[- / - / -] [Execute]
	Writes the authentication data 2048bit (used for NRS) in the memory.		

5873	[SD Card Appli Move]		
001	Move Exec	CTL	[- / - / -] [Execute]
	This SP copies the application programs from the original SD card in SD card slot 2 to an SD card in SD card slot 1.		
002	Undo Exec	CTL	[- / - / -] [Execute]
	This SP copies back the application programs from an SD card in SD Card Slot 2 to the original SD card in SD card slot 1. Use this menu when you have mistakenly copied some programs by using "Move Exec" (SP5873-1).		

5876	[Security Clear]		
001	All Clear	CTL	[- / - / -] [Execute]
011	Clear NCS Security	CTL	[- / - / -] [Execute]
015	Clr UCS Security	CTL	[- / - / -] [Execute]

5878	[Option Setup]		
001	Data Overwrite Security	CTL	[- / - / -] [Execute]

	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.		
002	HDD Encryption	CTL	[- / - / -] [Execute]

5887	[SD GerCounter] DFU		
001	Data Overwrite Security	CTL	[- / - / -] [Execute]

5888	[Person. InfoProt.] DFU		
001	Person. InfoProt.	*CTL	[0 or 1 / 0 / 1/step]

5893	[SDK Apli Cnt Name]		
001	SDK-1	CTL	-
002	SDK-2	CTL	-
003	SDK-3	CTL	-
004	SDK-4	CTL	-
005	SDK-5	CTL	-
006	SDK-6	CTL	-

5902	[AdjustControl]		
001	B/W Priority Mode	*ENG	[0 or 1 / 0 / 1/step]
	Turn on or off the monochrome printing priority mode. This SP can reduce color toner in the BW printing mode if this SP is set to "1: ON". 0: OFF (default), 1: ON		

5903	[Test Print]		
001	Feed Tray	ENG	[0 to 4 / 0 / 1/step]
	Sets the feed tray to print test printing executed by SP5-903-009.		

	0	Bypass	3	Tray3
	1	Tray1	4	Tray4
	2	Tray2	-	-
002	Duplex Setting		ENG	[0 or 1 / 0 / 1/step] 0: Single 1: Duplex
	Sets the duplex / single-sided setting to print test printing executed by SP5-903-009.			
003	Paper Size		ENG	[0 to 5 / 0 / 1/step] 0: A3 1: DLT 2: A4 SEF 3: A4 LEF 4: B5 SEF
	Sets the paper size to print test printing executed by SP5-903-009.			
004	Color Mode		ENG	[0 to 6 / 0 / 1/step]
	Sets the color mode to print test printing executed by SP5-903-009. Red (Magenta + Yellow) Blue (Cyan + Magenta) Green (Yellow + Cyan)			
	0	Bk	4	Red
	1	Cyan	5	Blue
	2	Magenta	6	Green
	3	Yellow	-	-
005	Test Pattern		ENG	[0 to 16 / 0 / 1/step]
	Sets the test pattern to print test printing executed by SP5-903-009.			
	0	None	9	20mm SGrid
	1	V 1Line	10	1by1
	2	H 1Line	11	2by2

	3	V 2Line	12	4by4
	4	H 2Line	13	Full Dot
	5	V Grid	14	Belt
	6	H Grid	15	10mm Gray
	7	20mm Grid	16	20mm Gray
	8	SGrid	-	-
006	Paper Kind		ENG	[0 to 2 / 0 / 1/step]
	Sets the paper weight and paper type to print test printing executed by SP5-903-009.			
	0	Plain Paper	Normal Speed (144mm/s)	
	1	Thick1-2	Mid Speed (90mm/s)	
	2	Thick3	Low Speed (60mm/s)	
007	Print Page		ENG	[0 to 255 / 1 / 1/step]
	Sets the print page to print test printing executed by SP5-903-009. If this SP is set to "0", it prints unlimited number of copies. To exit the test printing, open the cover of the machine.			
008	Freerun Setting		ENG	[0 or 1 / 0 / 1/step] 0: Normal 1: FreeRun
	Sets the free-run on / off to print test printing executed by SP5-903-009. If this SP is set to "on", it creates test pattern image on the image transfer belt but doesn't print on the paper. It doesn't control paper feeding clutch but it still detects paper remaining, so paper must be set to the tray.			
009	Print Start		ENG	[- / - / -] [Execute]
	Executes the test print with parameter set by SP5-903-001 to 008.			
5907	[Plug & Play]			
001	-		*CTL	-

	<p>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.</p> <p>After selecting, press the "Original Type" key and "#" key at the same time. When the setting is completed, the beeper sounds five times.</p>
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5919	[HDD Encryption]		
001	Display Operation	*CTL	<p>[0 or 1 / 0 / 1 /step]</p> <p>0: Not Activated</p> <p>1: Activated</p>

5930	[Meter Click Ch.]		
001	Meter Click Ch.	*ENG	<p>Enables or disables the Meter Charge mode. When enabling the Meter Charge mode, the "Counter" menu is added to the user menu.</p> <p>[0 or 1 / 0 / 1 /step]</p> <p>0: OFF, 1: ON</p>
010	PCDU	*ENG	[0 or 1 / 1 / 1/step]
	<ul style="list-style-type: none"> 0: OFF (End notification on) 1: ON (End notification off) <p>Displays or does not display the Supply End Option. This SP is activated only when the SP5930-001 is "1 (ON)".</p>		
014	Trans Unit	*ENG	[0 or 1 / 1 / 1/step]
	<ul style="list-style-type: none"> 0: OFF (End notification on) 1: ON (End notification off) <p>Displays or does not display the Supply End Option. This SP is activated only when the SP5930-001 is "1 (ON)".</p>		
016	Fusing Unit	*ENG	[0 or 1 / 1 / 1/step]
	<ul style="list-style-type: none"> 0: OFF (End notification on) 1: ON (End notification off) <p>Displays or does not display the Supply End Option. This SP is activated only when the SP5930-001 is "1 (ON)".</p>		

5988	[ID Setting]		
001	Maintenance ID	*ENG	[0 to 255 / 0 / 1/step]
002	Brand ID	*ENG	[0 to 255 / 0 / 1/step] DFU

5990	[SP print mode]		
	Prints out the SMC sheets.		
001	All	CTL	[- / - / -] [Excute]
002	SP	CTL	
004	Logging Data	CTL	
005	Diagnostic Report	CTL	
006	Non-Default	CTL	
007	NIB Summary	CTL	
024	SDK/J Summary	CTL	
025	SDK/J Appli. Info	CTL	
026	Printer SP	CTL	

5992	[SP Text mode]		
	Saves the SMC list data to the SD card in csv format.		
001	All	CTL	[- / - / -] [Excute]
002	SP	CTL	
004	Logging Data	CTL	
005	Diagnostic Report	CTL	
006	Non-Default	CTL	
007	NIB Summary	CTL	
026	Printer SP	CTL	

5997	[PSC] DFU		
	Sets the PSC debug log output.		
001	COMMAND	ENG	[0 to 3 / 2 / 1/step]
002	DOMAIN_IF	ENG	[0 or 3 / 0 / 1/step]
003	RAPI	ENG	
004	PRINT	ENG	
005	ENGINE	ENG	
006	THREAD	ENG	
007	THREAD_OBJ	ENG	
008	STS_TREE	ENG	[0 or 3 / 0 / 1/step]
009	TREE_INIT	ENG	
010	EVENT	ENG	
011	SP	ENG	
012	OTHER	ENG	
013	MEMORY	ENG	

5998	[Fusing Cont mode] DFU		
001	Fast/silent	*ENG	[0 or 1 / 0 / 1/step]
	Fusing behavior when silent start-up- <ul style="list-style-type: none"> • 0: Off • 1: On - Launch in advance 		
002	Wu Fuser Timing	*ENG	[0 or 1 / 1 / 1/step]
	Switches timing engine to turn fuser ON. <ul style="list-style-type: none"> • 0: After the controller directs • 1: Before the controller directs 		

Engine SP Tables-6

SP6-XXX (Peripherals)

There are no Group 6 SP modes for this machine.

Engine SP Tables-7

SP7-XXX (Data Log)

7401	[Total SC Counter]		
	Displays the number of SC codes detected.		
001	SC Counter	*CTL	[0 to 65535 / - / 1/step]
002	Total SC Counter	*CTL	[0 to 65535 / - / 1/step]

7403	[SC History]			
	Logs and displays the SC codes detected.			
	The 10 most recently detected SC Codes are displayed on the screen, and also can be seen on the SMC (logging) outputs.			
	<div style="border: 1px solid blue; border-radius: 15px; padding: 2px; display: inline-block;"> ↓ Note </div> <ul style="list-style-type: none"> If the same SC codes are detected continuously and total counter is not increasing, it only logs once in case of deleting other SC code logs. 			
	001	Latest	*CTL	[- / - / -]
	002	Latest 1	*CTL	
	003	Latest 2	*CTL	
	004	Latest 3	*CTL	
	005	Latest 4	*CTL	
	006	Latest 5	*CTL	
007	Latest 6	*CTL		
008	Latest 7	*CTL		
009	Latest 8	*CTL		
010	Latest 9	*CTL		

7404	[SC990 / SC991 History]		
	Logs and displays the SC990 / SC991 detected.		

The 10 most recently detected SC.			
<div style="border: 1px solid blue; border-radius: 10px; padding: 2px; display: inline-block;"> Note </div> <ul style="list-style-type: none"> If the same SC codes are detected continuously and total counter is not increasing, it only logs once in case of deleting other SC code logs. 			
001	Latest	*CTL	[- / - / -]
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7502	[Total Paper Jam]		
	Displays the total number of jams detected.		
001	Jam Counter	*CTL	[00000 to 65535 / - / 1 sheet/step]
002	Total Jam Counter	*CTL	

7504	[Paper Jam Loc] Paper Jam Location		
	Displays the number of jams according to the location where jams were detected.		
001	At Power On	*CTL	Paper is not fed at power on. [0000 to 9999 / - / 1/step]
003	Tray1: On	*CTL	[0000 to 9999 / - / 1/step]
004	Tray2: On	*CTL	[0000 to 9999 / - / 1/step]
005	Tray3: On	*CTL	[0000 to 9999 / - / 1/step]
006	Tray4: On	*CTL	[0000 to 9999 / - / 1/step]

008	Bypass: On	*CTL	[0000 to 9999 / - / 1/step]
009	Duplex: On	*CTL	[0000 to 9999 / - / 1/step]
018	PFU1: On	*CTL	[0000 to 9999 / - / 1/step]
019	PFU2: On	*CTL	[0000 to 9999 / - / 1/step]
020	PFU3: On	*CTL	[0000 to 9999 / - / 1/step]
024	Fusing Entrance: On	*CTL	[0000 to 9999 / - / 1/step]
032	Paper Exit On	*CTL	[0000 to 9999 / - / 1/step]
038	Duplex On	*CTL	Paper stays on the duplex sensor. [0000 to 9999 / - / 1/step]
087	Resistration: Off	*CTL	[0000 to 9999 / - / 1/step]
096	Paper Exit: Off	*CTL	[0000 to 9999 / - / 1/step]
102	Duplex Off	*CTL	Paper does not reach the duplex sensor. [0000 to 9999 / - / 1/step]

7506	[Paper Jam/Size]		
005	A4 LEF	*CTL	Displays the number of jams according to the paper size. [0 to 9999 / 0 / 1 sheet/step]
006	A5 LEF	*CTL	
014	B5 LEF	*CTL	
038	LT LEF	*CTL	
044	HLT LEF	*CTL	
132	A3 SEF	*CTL	
133	A4 SEF	*CTL	
134	A5 SEF	*CTL	
141	B4 SEF	*CTL	
142	B5 SEF	*CTL	
160	DLT SEF	*CTL	

164	LG SEF	*CTL	
166	LT SEF	*CTL	
172	HLT SEF	*CTL	
255	Others	*CTL	

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7507	[Dspl-P Jam Hist] Paper Jam History Display		
	Logs and displays the 10 most recently detected paper jams. (CODE, SIZE, TOTAL, DATE)		
001	Latest	*CTL	[- / - / -]
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	
006	Latest 5	*CTL	
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7514	[Paper Jam Cnt Loc] Paper jam location total counter		
	Displays the total number of jams according to the location where jams were detected.		
001	At Power On	*CTL	Paper is not fed at power on. [0000 to 9999 / - / 1/step]
003	Tray1: On	*CTL	[0000 to 9999 / - / 1/step]
004	Tray2: On	*CTL	[0000 to 9999 / - / 1/step]
005	Tray3: On	*CTL	[0000 to 9999 / - / 1/step]
006	Tray4: On	*CTL	[0000 to 9999 / - / 1/step]

008	Bypass: On	*CTL	[0000 to 9999 / - / 1/step]
009	Duplex On	*CTL	[0000 to 9999 / - / 1/step]
018	PFU1: On	*CTL	[0000 to 9999 / - / 1/step]
019	PFU2: On	*CTL	[0000 to 9999 / - / 1/step]
020	PFU3: On	*CTL	[0000 to 9999 / - / 1/step]
024	FusingEntrance: On	*CTL	[0000 to 9999 / - / 1/step]
032	Paper Exit: On	*CTL	[0000 to 9999 / - / 1/step]
038	Duplex On	*CTL	[0000 to 9999 / - / 1/step]
087	Resistration: Off	*CTL	[0000 to 9999 / - / 1/step]
096	Paper Exit: Off	*CTL	[0000 to 9999 / - / 1/step]
102	Duplex: Off	*CTL	[0000 to 9999 / - / 1/step]

7516	[-]		
005	A4 LEF	*CTL	Displays the number of jams according to the paper size. [0 to 9999 / 0 / 1 sheet/step]
006	A5 LEF	*CTL	
014	B5 LEF	*CTL	
038	LT LEF	*CTL	
044	HLT LEF	*CTL	
132	A3 SEF	*CTL	
133	A4 SEF	*CTL	
134	A5 SEF	*CTL	
141	B4 SEF	*CTL	
142	B5 SEF	*CTL	
160	DLT SEF	*CTL	
164	LG SEF	*CTL	
166	LT SEF	*CTL	

172	HLT SEF	*CTL	
255	Others	*CTL	

7520	[Update Log]		
001	Record1	*CTL	[1 to 255 / 0 / 1/step]
002	Record2	*CTL	
003	Record3	*CTL	
004	Record4	*CTL	
005	Record5	*CTL	
006	Record6	*CTL	
007	Record7	*CTL	
008	Record8	*CTL	
009	Record9	*CTL	
010	Record10	*CTL	

7801	[ROM Info]		
	Displays ROM numbers in the machine.		
002	ROM No.	ENG	[- / - / -]
102	Firmware Version	ENG	[- / - / -]
255	Rom_Version	CTL	Displays the part number and version of all ROMs in the machine.


7803	[PM Counter]		
	Displays the PM counter for each unit.		
001	Paper	*ENG	Displays the number of pages printed. [0 to 999999 / 0 / 1 page/step]
002	Page: PDCU: Bk	*ENG	
003	Page: PDCU: C	*ENG	

004	Page: PDCU: M	*ENG	
005	Page: PDCU: Y	*ENG	
014	Page: ITB Unit	*ENG	
016	Page: Fusing Unit	*ENG	
019	Page: PTR Unit	*ENG	
031	Dist: PDCU: Bk	*ENG	Displays the rotation distance. [0 to 999999999 / 0 / 1 mm/step]
032	Dist: PDCU: C	*ENG	
033	Dist: PDCU: M	*ENG	
034	Dist: PDCU: Y	*ENG	
043	Dist: ITB Unit	*ENG	
044	Dist: ITBUnit: FC	*ENG	Displays the rotation distance. Counts rotation distance when full color printing and the PCDU of YMC is touching the image transfer belt unit. It is used to count only, not to control. [0 to 999999999 / 0 / 1 mm/step]
045	Dist: Fusing Unit	*ENG	Displays the rotation distance. [0 to 999999999 / 0 / 1 mm/step]
048	Dist: PTR	*ENG	
110	Pass Dist: PTR	*ENG	Distance is used to determine lifecycle, and pass distance is used to control image stabilization. PTR distance is used to determine lifecycle, and PTR pass distance is used to control image stabilization. Fusing distance is used to determine lifecycle, and fusing pass distance is NOT used to control image stabilization, only used to count. [0 to 999999999 / 0 / 1 mm/step]
112	Pass Dist: Fusing	*ENG	

7804	[PM Counter.Reset]
	Clears the PM counter.

	Press the Enter key after the machine asks "Execute?", which will store the PM counter value in SP7-906 (PM Counter - Previous) and reset the value of the current PM counter (SP7-803) to "0".		
001	Paper	CTL	[- / - / -] [Execute]
002	PCU: Bk	ENG	Clears the unit counter for each unit. [- / - / -] [Execute]
003	PCU: C	ENG	
004	PCU: M	ENG	
005	PCU: Y	ENG	
017	ITB Unit	ENG	
019	Fusing Unit	ENG	
022	PTR Unit	ENG	
030	Consump	ENG	DFU *Executing this SP does not work after mass production. [- / - / -] [Execute]
050	Life:PCU: Bk	ENG	Clears the unit counter for each unit. [- / - / -] [Execute]
051	Life:PCU: C	ENG	
052	Life:PCU: M	ENG	
053	Life:PCU: Y	ENG	
060	Life:ITB Unit	ENG	
061	Life:PTR Unit	ENG	
070	Life:Fusing Unit	ENG	
100	All	ENG	Clears the unit counter for all units. DFU *This SP is used to clear the counter before shipment from the factory. It is recommended not to use this SP in the market.

			[- / - / -] [Execute]
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7807	[Reset-SC/Jam]		
	Clears the all counters related to SC codes and paper jams.		
<div style="border: 1px solid blue; border-radius: 10px; padding: 2px; display: inline-block;">  Note </div> <ul style="list-style-type: none"> This SP doesn't reset either jam histories or SC code histories. 			
001	Reset-SC/Jam	CTL	[- / - / -] [Execute]

7832	[Display-Self-Diag]		
001	Display-Self-Diag	CTL	Displays the result of the diagnostics. To scroll the return codes, press the up-arrow key or the down-arrow key.

7836	[Resident Memory]		
001	Resident Memory	CTL	Displays the memory capacity of the controller system.

7850	[MachineCounter]		
	Parameter to calculate ID log saving data.		
001	Total Counter	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Total sheets printed by this machine. A3 counts as 1 sheet.		
002	Total Counter FC	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Total number of sheets printed in full color by this machine. A3 counts as 1 sheet.		
003	Duplex	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Total number of sheets printed in duplex mode. A3 counts as 1 sheet.		
004	Size:DL/A3	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that DL / A3 have been through the machine. (%)		
005	Size:LT/A4	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]

	Displays ratio of total counter that LT / A4 have been through the machine. (%)		
006	Pkind:Normal	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that plain paper has been through the machine. (%)		
007	Pkind:Recycle	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that recycle paper has been through the machine. (%)		
008	Pkind:MidThick	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that mid-thick paper has been through the machine. (%)		
009	Pkind:Glossy	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that glossy paper has been through the machine. (%)		
010	Pkind:Post	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that postcards have been through the machine. (%)		
011	Feed:Tray1	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed by tray 1. (%)		
012	Feed:Tray2	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed by tray 2. (%)		
013	Feed:Tray3	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed by tray 3. (%)		
014	Feed:Tray4	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed by tray 4. (%)		
015	Env:HH	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed in HH environment defined by SP2302-001. (%)		
016	Env:HL	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]
	Displays ratio of total counter that are printed in HL environment defined by SP2302-001. (%)		
017	Env:LH	*ENG	[0 to 0xFFFFFFFF / 0 / 1 page/step]

	Displays ratio of total counter that are printed in LH environment defined by SP2302-001. (%)		
018	Env:LL	*ENG	[0 to 0xFFFFFFFF / 0 / 1page/step]
	Displays ratio of total counter that are printed in LL environment defined by SP2302-001. (%)		
019	Coverage:Bk	*ENG	Calculate dot coverage as A4 conversion for each colors and counted cumulative value. [0 to 0xFFFFFFFF / 0 / 1page/step]
020	Coverage:C	*ENG	
021	Coverage:M	*ENG	
022	Coverage:Y	*ENG	

7853	[Replacement Cnt]		
001	PCDU: Bk	*ENG	Displays the replacement counter. [0 to 999 / - / 1time/step]
002	PCDU: C	*ENG	
003	PCDU: M	*ENG	
004	PCDU: Y	*ENG	
009	Cartridge: Bk	*ENG	Displays the replacement counter. [0 to 999 / - / 1time/step]
010	Cartridge: C	*ENG	
011	Cartridge: M	*ENG	
012	Cartridge: Y	*ENG	
013	ITB Unit	*ENG	Displays the replacement counter. [0 to 999 / - / 1time/step]
015	Fusing Unit	*ENG	
018	PTR Unit	*ENG	

7854	[CCW Rotate Cnt]		
001	ITB Unit	*ENG	Displays the number of reverse rotation image transfer belt to clean paper dust. [0 to 9999 / - / 1time/step]

7855	[Coverage Range]		
001	Coverage Range1	*ENG	[0 to 9999 / 5 / 1 time/step]
002	Coverage Range2	*ENG	[0 to 9999 / 5 / 1 time/step]

7901	[Assert Info.]		
001	File Name	*CTL	Records the location where a problem is detected in the program. The data stored in this SP is used for problem analysis.
002	Number of Lines	*CTL	
003	Location	*CTL	

7905	[Life Counter]		
001	Page: PCDU: Bk	*ENG	Displays the number of pages printed to make a life decision. [0 to 999999 / - / 1 page/step]
002	Page: PCDU: C	*ENG	
003	Page: PCDU: M	*ENG	
004	Page: PCDU: Y	*ENG	
013	Page: ITB Unit	*ENG	
015	Page: Fusing Unit	*ENG	
018	Page: PTR Unit	*ENG	
031	Dist: PCDU: Bk	*ENG	Displays the rotation distance to make a life decision. [0 to 999999999 / - / 1 mm/step]
032	Dist: PCDU: C	*ENG	
033	Dist: PCDU: M	*ENG	
034	Dist: PCDU: Y	*ENG	
043	Dist: ITB Unit	*ENG	
045	Dist: Fusing Unit	*ENG	
048	Dist: PTR	*ENG	
061	Dist(%): PCDU:Bk	ENG	Displays the threshold of rotation distance to make a life decision. [0.0 to 250.0 / 0.0 / 0.1%/step] 0: New
062	Dist(%): PCDU:C	ENG	
063	Dist(%): PCDU:M	ENG	

064	Dist(%): PCDU:Y	ENG	100: reached life end It counts up to 250% and stays until new unit is installed.
073	Dist(%): ITB Unit	ENG	
075	Dist(%): Fusing	ENG	
078	Dist(%): PTR	ENG	
091	Page(%): PCDU: Bk	ENG	Displays the threshold of page count to make a life decision. [0.0 to 250.0 / 0.0 / 0.1%/step] 0: New 100: reached life end It counts up to 250% and stays until new unit is installed.
092	Page(%): PCDU: C	ENG	
093	Page(%): PCDU: M	ENG	
094	Page(%): PCDU: Y	ENG	
103	Page(%): ITB Unit	ENG	
105	Page(%): Fuser	ENG	
108	Page(%): PTR Unit	ENG	

7906	[Prev. Counter] Previous Unit Counter Display		
	Copies the life counter to this sp as a previous counter when the life counter is cleared.		
001	Page: PCDU: Bk	*ENG	Displays the number of pages printed with the previous unit counter. [0 to 999999 / - / 1 page/step]
002	Page: PCDU: C	*ENG	
003	Page: PCDU: M	*ENG	
004	Page: PCDU: Y	*ENG	
013	Page: ITB Unit	*ENG	
015	Page: Fusing Unit	*ENG	
018	Page: PTR Unit	*ENG	
031	Dist: PCDU: Bk	*ENG	
032	Dist: PCDU: C	*ENG	
033	Dist: PCDU: M	*ENG	
034	Dist: PCDU: Y	*ENG	
043	Dist: ITB Unit	*ENG	

045	Dist: Fusing Unit	*ENG	
048	Dist: PTR	*ENG	

7907	[Life(%) Counter]		
001	PCDU: Bk	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step]
002	PCDU: C	ENG	
003	PCDU: M	ENG	
004	PCDU: Y	ENG	
005	PDCU: FC	ENG	
013	ITB Unit	ENG	
014	ITB&PTR Unit	ENG	
015	Fusing Unit	ENG	
018	PTR Unit	ENG	

7931	[Toner Bottle Bk]		
001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product Type ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Info	*ENG	
009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]
010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.

012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1 /step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7932	[Toner Bottle C]		
001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product Type ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Info	*ENG	

009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]
010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.
012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1/step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7933	[Toner Bottle M]		
001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	

005	Product Type ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Info	*ENG	
009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]
010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.
012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1 /step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.
7934	[Toner Bottle Y]		

001	Machine Serial ID	*ENG	Displays the information number for each category.
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	
005	Product ID	*ENG	
006	Color ID	*ENG	
007	Maintenance ID	*ENG	
008	New Info	*ENG	
009	Recycle Counter	*ENG	Displays the recycle counter. [0 to 255 / - / 1/step]
010	Date	*ENG	Displays the date of manufacturing ID.
011	Serial No.	*ENG	Displays the serial number.
012	Toner Remaining	*ENG	Displays the remaining toner rate. [0 to 100 / 100 / 1%/step]
013	EDP Code	*ENG	Displays the EDP code.
014	End History	*ENG	Displays the toner end status.
015	Refill Info	*ENG	Displays the refill information [0 to 99 / - / 1 /step]
016	Set: Total Cnt	*ENG	Displays the total counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [0 to 0xFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [0 to 0xFFFFFFFF / - / 1 sheet/step]

020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7935	[Toner Log: Bk]		
	Displays the toner bottle information log for Bk		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]
002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]
003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]
005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]
006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7936	[Toner Log: C]		
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	Displays the toner bottle information log for Cy		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]
002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]
003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]
005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]
006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7937	[Toner Log: M]		
	Displays the toner bottle information log for Ma		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]
002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]

003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]
005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]
006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7938	[Toner Log: Y]		
	Displays the toner bottle information log for Ye		
001	Log1:Serial No.	*ENG	[0 to 255 / - / 1/step]
002	Log1:Set Date	*ENG	[0 to 255 / - / 1/step]
003	Log1:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
004	Log1:Refill Info	*ENG	[0 to 99 / - / 1/step]
005	Log2:Serial No.	*ENG	[0 to 255 / - / 1/step]

006	Log2:Set Date	*ENG	[0 to 255 / - / 1/step]
007	Log2:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
008	Log2:Refill Info	*ENG	[0 to 99 / - / 1/step]
009	Log3:Serial No.	*ENG	[0 to 255 / - / 1/step]
010	Log3:Set Date	*ENG	[0 to 255 / - / 1/step]
011	Log3:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
012	Log3:Refill Info	*ENG	[0 to 99 / - / 1/step]
013	Log4:Serial No.	*ENG	[0 to 255 / - / 1/step]
014	Log4:Set Date	*ENG	[0 to 255 / - / 1/step]
015	Log4:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
016	Log4:Refill Info	*ENG	[0 to 99 / - / 1/step]
017	Log5:Serial No.	*ENG	[0 to 255 / - / 1/step]
018	Log5:Set Date	*ENG	[0 to 255 / - / 1/step]
019	Log5:Set: Total Cnt	*ENG	[0 to 0xFFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7952	[PM Yield Setting]		
021	Days Thres:PCDU: K	*ENG	<p>Sets the near end timing for Bk. Recommend to set by UP. [0 to 2 / 1 / 1/step] 0: Notify Sooner 1: Normal 2: Notify Later</p>
022	Days Thres:PCDU: FC	*ENG	<p>Sets the near end timing for color. Recommend to set by UP. [0 to 2 / 1 / 1/step] 0: Notify Sooner 1: Normal</p>

			2: Notify Later
033	Days Thres:Trans	*ENG	<p>Sets the near end timing for the image transfer unit.</p> <p>Recommend to set by UP.</p> <p>[0 to 2 / 1 / 1/step]</p> <p>0: Notify Sooner</p> <p>1: Normal</p> <p>2: Notify Later</p>
035	Days Thres:Fuser	*ENG	<p>Sets the near end timing for the fusing unit.</p> <p>Recommend to set by UP.</p> <p>[0 to 2 / 1 / 1/step]</p> <p>0: Notify Sooner</p> <p>1: Normal</p> <p>2: Notify Later</p>
071	Day Rate:Trans	*ENG	<p>Sets the daily life cycle rate for the image transfer unit. DFU</p> <p>[0.1 to 25.5 / 0.1 / 0.1 %/step]</p>
073	Day Rate:Fuser	*ENG	<p>Sets the daily life cycle rate for the fusing unit. DFU</p> <p>[0.1 to 25.5 / 0.1 / 0.1 %/step]</p>
076	Day Rate:PTR	*ENG	<p>Sets the daily life cycle rate for the PTR. DFU</p> <p>[0.1 to 25.5 / 0.1 / 0.1 %/step]</p>
080	Day Rate:PCDU: K	*ENG	<p>Sets the daily life cycle rate for Bk. DFU</p> <p>[0.1 to 25.5 / 0.1 / 0.1 %/step]</p>
081	Day Rate:PCDU: C	*ENG	<p>Sets the daily life cycle rate for Cy. DFU</p> <p>[0.1 to 25.5 / 0.1 / 0.1 %/step]</p>
082	Day Rate:PCDU: M	*ENG	<p>Sets the daily life cycle rate for Ma. DFU</p> <p>[0.1 to 25.5 / 0.1 / 0.1 %/step]</p>
083	Day Rate:PCDU: Y	*ENG	<p>Sets the daily life cycle rate for Ye. DFU</p> <p>[0.1 to 25.5 / 0.1 / 0.1 %/step]</p>

Engine 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.

3

SP Numbers	What They Do
SP8211 to SP8216	The number of pages scanned to the document server.
SP8401 to SP8406	The number of pages printed from the document server
SP8691 to SP8696	The number of pages sent from the document server

Specifically, the following questions can be answered:

- How is the document server actually being used?
- What application is using the document server most frequently?
- What data in the document server is being reused?

Most of the SPs in this group are prefixed with a letter that indicates the mode of operation (the mode of operation is referred to as an "application"). Before reading the Group 8 Service Table, make sure that you understand what these prefixes mean.

Prefixes	What it means	
T:	Total: (Grand Total).	Grand total of the items counted for all applications (C, F, P, etc.).
P:	Print application.	
O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.

The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

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
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 $11-10=1$)

Abbreviation	What it means
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
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 be moved around, combined, and converted to different formats.
PC	Personal Computer
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.
PJob	Print Jobs
Ppr	Paper
PrtJam	Printer (plotter) Jam
PrtPGS	Print Pages
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.
Rez	Resolution
SC	Service Code (Error SC code displayed)

Abbreviation	What it means
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	*CTL	These SPs count the number of times each application is used to do a job. [0 to 99999999 / - / 1]
8004	P:Total Jobs	*CTL	

- These SPs reveal the number of times an application is used, not the number of pages processed.
- When an application is opened for image input or output, this counts as one job.
- Interrupted jobs (paper jams, etc.) are counted, even though they do not finish.
- Only jobs executed by the customer are counted. Jobs executed by the customer engineer using the SP modes are not counted.
- When using secure printing (when a password is required to start the print job), the job is counted at the time when either "Delete Data" or "Specify Output" is specified.
- When the customer prints a report (user code list, for example), the O: counter increments.

8061	T:FIN Jobs	*CTL	[0 to 99999999 / 0 / 1]
	These SPs total the finishing methods. The finishing method is specified by the application.		

8064	P:FIN Jobs	*CTL	[0 to 99999999 / 0 / 1]
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.		
8067	O:FIN Jobs	*CTL	[0 to 99999999 / 0 / 1]
	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.		
001	Sort	Number of jobs started in Sort mode.	
002	Stack	Number of jobs started out of Sort mode.	
003	Staple	Number of jobs started in Staple mode.	
004	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.	
005	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).	
006	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8-064-6.)	
007	Other	(Reserved)	
008	Inside-Flod	Not used	
009	Three-In-Fold	Not used	
010	Three-OUT-Fold	Not used	
011	Four-Fold	Not used	
012	KANNON-Fold	Not used	
013	Perfect-Bind	Not used	
014	Ring-Bind	Not used	
8071	T:Jobs/PGS	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.		
8074	P:Jobs/PGS	*CTL	[0 to 99999999 / 0 / 1]

	These SPs count and calculate the number of print jobs by size based on the number of pages in the job.		
8077	O:Jobs/PGS	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.		
001	1 Page	008	21 to 50 Pages
002	2 Pages	009	51 to 100 Pages
003	3 Pages	010	101 to 300 Pages
004	4 Pages	011	301 to 500 Pages
005	5 Pages	012	501 to 700 Pages
006	6 to 10 Pages	013	701 to 1000 Pages
007	11 to 20 Pages	014	1001 to Pages

Interrupted jobs (paper jam, etc.) are counted, even though they do not finish.

If a job is paused and re-started, it counts as one job.

If the finisher runs out of staples during a print and staple job, then the job is counted at the time the error occurs.

When printing the first page of a job from within the document server screen, the page is counted.

8381	T:Total PrtPGS	*CTL	These SPs count the number of pages printed by the customer. The counter for the application used for storing the pages increments. [0 to 99999999 / 0 / 1]
8384	P:Total PrtPGS	*CTL	
8387	O:Total PrtPGS	*CTL	

When the A3/DLT double count function is switched on with SP5104, 1 A3/DLT page is counted as 2.

When several documents are merged for a print job, the number of pages stored are counted for the application that stored them.

These counters are used primarily to calculate charges on use of the machine, so the following pages are not counted as printed pages:

- Blank pages in a duplex printing job.
- Blank pages inserted as document covers, chapter title sheets, and slip sheets.
- Reports printed to confirm counts.

- All reports done in the service mode (service summaries, engine maintenance reports, etc.)
- Test prints for machine image adjustment.
- Error notification reports.
- Partially printed pages as the result of a copier jam.

8391	LSize PrtPGS	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count pages printed on paper sizes A3/DLT and larger. Note: In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.		

8411	Prints/Duplex	*CTL	This SP counts the amount of paper (front/back counted as 1 page) used for duplex printing. Last pages printed only on one side are not counted. [0 to 99999999 / 0 / 1]
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8421	T:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.		

8424	P:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.		

8427	O:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by Other applications		

001	Simplex> Duplex	
004	Simplex Combine	
005	Duplex Combine	
006	2in1	2 pages on 1 side (2-Up)
007	4 in1	4 pages on 1 side (4-Up)
008	6 in1	6 pages on 1 side (6-Up)

009	8 in 1	8 pages on 1 side (8-Up)
010	9 in 1	9 pages on 1 side (9-Up)
011	16 in 1	16 pages on 1 side (16-Up)
012	Booklet	
013	Magazine	
014	2-in-1 + Booklet	
015	4-in-1 + Booklet	
016	6-in-1 + Booklet	
017	8-in-1 + Booklet	
018	9-in-1 + Booklet	
019	2-in-1 + Magazine	
020	4-in-1 + Magazine	
021	6-in-1 + Magazine	
022	8-in-1 + Magazine	
023	9-in-1 + Magazine	
024	16-in-1 + Magazine	

These counts (SP8 421 to SP8 427) are especially useful for customers who need to improve their compliance with ISO standards for the reduction of paper consumption.

Pages that are only partially printed with the n-Up functions are counted as 1 page.

Here is a summary of how the counters work for Booklet and Magazine modes:

Booklet		Magazine	
Original Pages	Count	Original Pages	Count
1	1	1	1
2	2	2	2
3	2	3	2
4	2	4	2

Booklet		Magazine	
Original Pages	Count	Original Pages	Count
5	3	5	4
6	4	6	4
7	4	7	4
8	4	8	4

8431	T:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count the total number of pages output with the three features below, regardless of which application was used.		
8434	P:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count the total number of pages output with the three features below with the print application.		
8437	O:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count the total number of pages output with the three features below with Other applications.		
001	Cover/Slip Sheet	Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.	
002	Series/Book	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.	
003	User Stamp	The number of pages printed where stamps were applied, including page numbering and date stamping.	

8441	T:PrtPGS/Ppr Size	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by print paper size the number of pages printed by all applications.		
8444	P:PrtPGS/Ppr Size	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by print paper size the number of pages printed by the printer application.		
8447	O:PrtPGS/Ppr Size	*CTL	[0 to 99999999 / 0 / 1]

	These SPs count by print paper size the number of pages printed by Other applications.	
001	A3	
002	A4	
003	A5	
004	B4	
005	B5	
006	DLT	
007	LG	
008	LT	
009	HLT	
010	Full Bleed	
254	Other (Standard)	
255	Other (Custom)	

These counters do not distinguish between LEF and SEF.

8451	[PrtPGS/Ppr Tray]		
	These SPs count the number of sheets fed from each paper feed station.		
001	Bypass Tray	*CTL	Bypass Tray [0 to 99999999 / 0 / 1]
002	Tray 1	*CTL	Copier [0 to 99999999 / 0 / 1]
003	Tray 2	*CTL	
004	Tray 3	*CTL	Paper Tray Unit (Option) [0 to 99999999 / 0 / 1]
005	Tray 4	*CTL	
006	Tray 5	*CTL	LCT (Option) [0 to 99999999 / 0 / 1]
007	Tray 6	*CTL	Currently not used.
008	Tray 7	*CTL	Currently not used.

009	Tray 8	*CTL	Currently not used.
010	Tray 9	*CTL	Currently not used.
011	Tray 10	*CTL	Currently not used.
012	Tray 11	*CTL	Currently not used.
013	Tray 12	*CTL	Currently not used.
014	Tray 13	*CTL	Currently not used.
015	Tray 14	*CTL	Currently not used.
016	Tray 15	*CTL	Currently not used.

8461	T:PrtPGS/Ppr Type	*CTL	[0 to 99999999 / 0 / 1]
	<p>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.</p> <p>Blank sheets (covers, chapter covers, slip sheets) are also counted.</p> <p>During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1.</p>		
8464	P:PrtPGS/Ppr Type	*CTL	[0 to 99999999 / 0 / 1]
	<p>These SPs count by paper type the number pages printed by the printer application.</p>		
001	Normal		
002	Recycled		
003	Special		
004	Thick		
005	Normal (Back)		
006	Thick (Back)		
007	OHP		
008	Other		

8471	[PrtPGS/Mag]		
	These SPs count by magnification rate the number of pages printed.		
001	< 49%	*CTL	[0 to 99999999 / 0 / 1]
002	50% to 99%	*CTL	
003	100%	*CTL	
004	101% to 200%	*CTL	
005	201% <	*CTL	

Counts are done for magnification adjusted for pages, not only on the operation panel but performed remotely with an external network application capable of performing magnification adjustment as well.

Magnification adjustments done with printer drivers with PC applications such as Excel are also counted.

Magnification adjustments done for adjustments after they have been stored on the document server are not counted.

Magnification adjustments performed automatically during Auto Reduce/Enlarge copying are counted.

The magnification rates of blank cover sheets, slip sheets, etc. are automatically assigned a rate of 100%.

8481	T:PrtPGS/TonSave	*CTL	[0 to 99999999 / 0 / 1]
8484	P:PrtPGS/TonSave	*CTL	
These SPs count the number of pages printed with the Toner Save feature switched on. Note: These SPs return the same results as this SP is limited to the Print application.			

8501	T:PrtPGS/Col Mode	*CTL	These SPs count the number of pages printed in the Color Mode by the print application.
8504	P:PrtPGS/Col Mode	*CTL	
8507	O:PrtPGS/Col Mode	*CTL	
001	B/W		
002	Mono Color		
003	Full Color		
004	Single Color		
005	Two Color		

8511	T:PrtPGS/Emul	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by printer emulation mode the total number of pages printed.		
8514	P:PrtPGS/Emul	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by printer emulation mode the total number of pages printed.		
001	RPCS		
002	RPDL		
003	PS3		
004	R98		
005	R16		
006	GL/GL2		
007	R55		
008	RTIFF		
009	PDF		
010	PCL5e/5c		
011	PCL XL		
012	IPDL-C		
013	BM-Links	Japan Only	
014	Other		
015	IPDS		

SP8 511 and SP8 514 return the same results as they are both limited to the Print application.

Print jobs output to the document server are not counted.

8521	T:PrtPGS/FIN	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by finishing mode the total number of pages printed by all applications.		
8524	P:PrtPGS/FIN	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count by finishing mode the total number of pages printed by the Print application.		

001	Sort	
002	Stack	
003	Staple	
004	Booklet	
005	Z-Fold	
006	Punch	
007	Other	
008	Inside Fold	Half-Fold (FM2) (Multi Fold Unit)
009	Three-IN-Fold	Letter Fold-in (FM4) (Multi Fold Unit)
010	Three-OUT-Fold	Letter Fold-out (FM3) (Multi Fold Unit)
011	Four Fold	Double Parallel Fold (FM5) (Multi Fold Unit)
012	KANNON-Fold	Gate Fold (FM6) (Multi Fold Unit)
013	Perfect-Bind	Perfect Binder
014	Ring-Bind	Ring Binder

Note

- If stapling is selected for finishing and the stack is too large for stapling, the unstapled pages are still counted.
- The counts for staple finishing are based on output to the staple tray, so jam recoveries are counted.

8531	Staples	*CTL	This SP counts the amount of staples used by the machine. [0 to 9999999 / 0 / 1]
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8551	[T:FIN Books]		
001	Perfect-Bind	*CTL	Booklet finishing
002	Ring-Bind	*CTL	Not used

8554	T:FIN Books
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001	Perfect-Bind	*CTL	Booklet finishing
002	Ring-Bind	*CTL	Not used

8561	[T:A Sheet Of Paper]		
001	Total: Over A3/DLT	*CTL	[0 to 99999999 / 0 / 1]
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	
004	Duplex: Under A3/DLT	*CTL	

8564	[P:A Sheet Of Paper]		
001	Total: Over A3/DLT	*CTL	[0 to 99999999 / 0 / 1]
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	
004	Duplex: Under A3/DLT	*CTL	

8567	[O:A Sheet Of Paper]		
001	Total: Over A3/DLT	*CTL	[0 to 99999999 / 0 / 1]
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	
004	Duplex: Under A3/DLT	*CTL	

	[T:Counter]		
8581	These SPs count the total output broken down by color output, regardless of the application used. In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.		
001	Total	*CTL	[0 to 99999999 / 0 / 1]
002	Total: Full Color	*CTL	
003	B&W/Single Color	*CTL	

004	Development: CMY	*CTL	
005	Development: K	*CTL	
008	Print: Color	*CTL	
009	Print: B/W	*CTL	
010	Total: Color	*CTL	
011	Total: B/W	*CTL	[0 to 99999999 / 0 / 1]
012	Full Color: A3	*CTL	
013	Full Color: -B4	*CTL	
014	Full Color Print	*CTL	
015	Mono Color Print	*CTL	
017	Twin Color Mode Print	*CTL	
018	Full Color Print (Twin)	*CTL	
019	Mono Color Print (Twin)	*CTL	
020	Full Color Total (CV)	*CTL	
021	Mono Color Total (CV)	*CTL	
022	Full Color Print (CV)	*CTL	
023	Eco Color Print (FC)	*CTL	
024	Eco Color Print (Bk)	*CTL	
025	Total: Color (Eco Bk)	*CTL	
026	Total: B/W (Eco Bk)	*CTL	
027	Total: Color (Eco FC)	*CTL	[0 to 99999999 / 0 / 1]
028	Development: CMY (A3)	*CTL	
029	Development: K (A3)	*CTL	
030	Total: Color (A3)	*CTL	
031	Total: B/W (A3)	*CTL	

8584	[P:Counter]		
	These SPs count the total output of the print application broken down by color output.		
001	B/W	*CTL	[0 to 99999999 / 0 / 1]
002	Mono Color	*CTL	
003	Full Color	*CTL	
004	Single Color	*CTL	
005	Two Color	*CTL	

8591	[O:Counter]		
	These SPs count the totals for A3/DLT paper use, number of duplex pages printed, and the number of staples used. These totals are for Other (O:) applications only.		
001	A3/DLT	*CTL	[0 to 99999999 / 0 / 1]
002	Duplex	*CTL	

8601	[T:CvgCounter]		
	These SPs count the total coverage for each color and the total printout pages for each printing mode.		
001	Cvg: BW %	*CTL	[0 to 2147483647 / 0 / 1% /step]
002	Cvg: FC %	*CTL	
011	Cvg: BW Pages	*CTL	[0 to 9999999 / 0 / 1/step]
012	Cvg: FC Pages	*CTL	[0 to 9999999 / 0 / 1/step]
021	CvgCounter 1	*CTL	[0 to 9999999 / 0 / 1/step]
022	CvgCounter 2	*CTL	
023	CvgCounter 3	*CTL	
031	CvgCounter 1(YMC)	*CTL	[0 to 9999999 / 0 / 1/step]
032	CvgCounter 2(YMC)	*CTL	
033	CvgCounter 3(YMC)	*CTL	

8604	[P:CvgCounter]		
	-		
001	Cvg: B/W %	*CTL	[0 to 2147483647 / 0 / 1% /step]
002	Cvg: Single Color %	*CTL	
003	Cvg: Two Color %	*CTL	
004	Cvg: Full Color %	*CTL	

8617	[SDK Apli Counter]		
	These SPs count the total printout pages for each SDK application.		
001	SDK-1	*CTL	[0 to 99999999 / 0 / 1]
002	SDK-2	*CTL	
003	SDK-3	*CTL	
004	SDK-4	*CTL	
005	SDK-5	*CTL	
006	SDK-6	*CTL	

8621	Func Use Counter		
	-		
001	Function-001	*CTL	[0 to 99999999 / 0 / 1]
002	Function-002	*CTL	
003	Function-003	*CTL	
004	Function-004	*CTL	
005	Function-005	*CTL	
006	Function-006	*CTL	[0 to 99999999 / 0 / 1]
007	Function-007	*CTL	
008	Function-008	*CTL	
009	Function-009	*CTL	

010	Function-010	*CTL	
011	Function-011	*CTL	[0 to 99999999 / 0 / 1]
012	Function-012	*CTL	
013	Function-013	*CTL	
014	Function-014	*CTL	
015	Function-015	*CTL	
016	Function-016	*CTL	[0 to 99999999 / 0 / 1]
017	Function-017	*CTL	
018	Function-018	*CTL	
019	Function-019	*CTL	
020	Function-020	*CTL	
021	Function-021	*CTL	[0 to 99999999 / 0 / 1]
022	Function-022	*CTL	
023	Function-023	*CTL	
024	Function-024	*CTL	
025	Function-025	*CTL	
026	Function-026	*CTL	[0 to 99999999 / 0 / 1]
027	Function-027	*CTL	
028	Function-028	*CTL	
029	Function-029	*CTL	
030	Function-030	*CTL	
031	Function-031	*CTL	[0 to 99999999 / 0 / 1]
032	Function-032	*CTL	
033	Function-033	*CTL	
034	Function-034	*CTL	
035	Function-035	*CTL	

036	Function-036	*CTL	
037	Function-037	*CTL	
038	Function-038	*CTL	
039	Function-039	*CTL	
040	Function-040	*CTL	
041	Function-041	*CTL	[0 to 99999999 / 0 / 1]
042	Function-042	*CTL	
043	Function-043	*CTL	
044	Function-044	*CTL	
045	Function-045	*CTL	
046	Function-046	*CTL	
047	Function-047	*CTL	
048	Function-048	*CTL	
049	Function-049	*CTL	
050	Function-050	*CTL	
051	Function-051	*CTL	[0 to 99999999 / 0 / 1]
052	Function-052	*CTL	
053	Function-053	*CTL	
054	Function-054	*CTL	
055	Function-055	*CTL	
056	Function-056	*CTL	
057	Function-057	*CTL	
058	Function-058	*CTL	
059	Function-059	*CTL	
060	Function-060	*CTL	
061	Function-061	*CTL	[0 to 99999999 / 0 / 1]

062	Function-062	*CTL	
063	Function-063	*CTL	
064	Function-064	*CTL	

8771	[Dev Counter]		
	These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.		
001	Total	*CTL	[0 to 99999999 / 0 / 1]
002	K	*CTL	
003	Y	*CTL	
004	M	*CTL	
005	C	*CTL	

8781	Toner_Bottle_Info.	*ENG	[0 to 99999999 / 0 / 1]
	These SPs display the number of already replaced toner bottles. NOTE: Currently, the data in SP7-833-011 through 014 and the data in SP8-781-001 through 004 are the same.		
001	Toner: BK	The number of black-toner bottles	
002	Toner: Y	The number of yellow-toner bottles	
003	Toner: M	The number of magenta-toner bottles	
004	Toner: C	The number of cyan-toner bottles	

8801	[Toner Remain]		
	These SPs display the percent of toner remaining for each color. This SP allows the user to check the toner supply at any time. Note: This precise method of measuring remaining toner supply (1% steps) is better than other machines in the market that can only measure in increments of 10 (10% steps).		
001	K	*CTL	[0 to 100 / 0 / 1% /step]
002	Y	*CTL	

003	M	*CTL	
004	C	*CTL	

8811	[Eco Counter]		
	-		
001	Eco Total	*CTL	[0 to 99999999 / 0 / 1]
002	Color	*CTL	
003	Full Color	*CTL	
004	Duplex	*CTL	
005	Combine	*CTL	
006	Color (%)	*CTL	[0 to 100 / 0 / 1% /step]
007	Full Color (%)	*CTL	
008	Duplex (%)	*CTL	
009	Combine (%)	*CTL	
010	Paper Cut (%)	*CTL	
101	Eco Totalr>Last	*CTL	[0 to 99999999 / 0 / 1]
102	Color>Last	*CTL	
103	Full Color>Last	*CTL	
104	Duplex>Last	*CTL	
105	Combine>Last	*CTL	
106	Color(%):Last	*CTL	[0 to 100 / 0 / 1% /step]
107	Full Color (%):Last	*CTL	
108	Duplex (%):Last	*CTL	
109	Combine (%):Last	*CTL	
110	Paper Cut (%):Last	*CTL	

8851	[Cvr Cnt: 0-10%]		
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	These SPs display the number of scanned sheets on which the coverage of each color is from 0% to 10%.		
011	0 to 2%: BK	*ENG	[0 to 99999999 / 0 / 1]
012	0 to 2%: Y	*ENG	
013	0 to 2%: M	*ENG	
014	0 to 2%: C	*ENG	
021	3 to 4%: BK	*ENG	[0 to 99999999 / 0 / 1]
022	3 to 4%: Y	*ENG	
023	3 to 4%: M	*ENG	
024	3 to 4%: C	*ENG	
031	5 to 7%: BK	*ENG	[0 to 99999999 / 0 / 1]
032	5 to 7%: Y	*ENG	
033	5 to 7%: M	*ENG	
034	5 to 7%: C	*ENG	
041	8 to 10%: BK	*ENG	[0 to 99999999 / 0 / 1]
042	8 to 10%: Y	*ENG	
043	8 to 10%: M	*ENG	
044	8 to 10%: C	*ENG	

8861	[Cvr Cnt: 11-20%]		
	These SPs display the number of scanned sheets on which the coverage of each color is from 11% to 20%.		
001	BK	*ENG	[0 to 99999999 / 0 / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8871	[Cvr Cnt: 21-30%]		
	These SPs display the number of scanned sheets on which the coverage of each color is from 21% to 30%.		
001	BK	*ENG	[0 to 99999999 / 0 / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8881	[Cvr Cnt: 31%-]		
	These SPs display the number of scanned sheets on which the coverage of each color is 31% or higher.		
001	BK	*ENG	[0 to 99999999 / 0 / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8891	[Page/Toner Bottle]		
	These SPs display the amount of the remaining current toner for each color.		
001	BK	*ENG	[0 to 99999999 / 0 / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8901	[Page/Ink_prev1]		
	These SPs display the amount of the remaining previous toner for each color.		
001	BK	*ENG	[0 to 99999999 / 0 / 1]
002	Y	*ENG	
003	M	*ENG	

004	C	*ENG	
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8911	[Page/Ink_prev2]		
	These SPs display the amount of the remaining 2nd previous toner for each color.		
001	BK	*ENG	[0 to 99999999 / 0 / 1]
002	Y	*ENG	
003	M	*ENG	
004	C	*ENG	

8921	[Cvr Cnt/Total]		
	Displays the total coverage and total printout number for each color.		
001	Coverage (%) Bk	*CTL	[0 to 2147483647 / 0 / 1% /step]
002	Coverage (%) Y	*CTL	
003	Coverage (%) M	*CTL	
004	Coverage (%) C	*CTL	
011	Coverage /P: Bk	*CTL	[0 to 99999999 / 0 / 1]
012	Coverage /P: Y	*CTL	
013	Coverage /P: M	*CTL	
014	Coverage /P: C	*CTL	
031	Coverage(%):Eco BK	*CTL	[0 to 2147483647 / 0 / 1% /step]
032	Coverage(%):Eco Y	*CTL	
033	Coverage(%):Eco M	*CTL	
034	Coverage(%):Eco C	*CTL	
041	Coverage/P:Eco BK	*CTL	[0 to 99999999 / 0 / 1]
042	Coverage/P:Eco Y	*CTL	
043	Coverage/P:Eco M	*CTL	
044	Coverage/P:Eco C	*CTL	

8941	Machine Status	*CTL	[0 to 99999999 / 0 / 1]
	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.		
001	Operation Time	Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).	
002	Standby Time	Engine not operating. Includes time while controller saves data to HDD. Does not include time spent in Energy Save, Low Power, or Off modes.	
003	Energy Save Time	Includes time while the machine is performing background printing.	
004	Low Power Time	Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.	
005	Off Mode Time	Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.	
006	SC	Total time when SC errors have been staying.	
007	PrtJam	Total time when paper jams have been staying during printing.	
008	OrgJam	Total time when original jams have been staying during scanning.	
009	Supply PM Unit End	Total time when toner end has been staying	

8961	[Electricity Status]		
	-		
001	Ctrl Standby Time	*CTL	[0 to 99999999 / 0 / 1]
002	STR Time	*CTL	
003	Main Power Off Time	*CTL	
004	Reading and Printing Time	*CTL	

005	Printing Time	*CTL	[0 to 99999999 / 0 / 1]
006	Reading Time	*CTL	
007	Eng Waiting Time	*CTL	
008	Low Power State Time	*CTL	
009	Silent State Time	*CTL	
010	Heater Off State Time	*CTL	
011	LCD on Time	*CTL	

8971	[Unit Control]		
	-		
001	Engine Off Recovery Count	-	[0 to 99999999 / 0 / 1]
002	Power Off Count	-	
003	Force Power Off Count	-	

8999	[AdminCounter]		
	-		
001	Total	-	[0 to 99999999 / 0 / 1]
006	Printer: FC	-	
007	Printer: BW	-	
008	Printer: OneC	-	
009	Printer: TwoC	-	
012	A3/DLT	-	
013	Duplex	-	
026	Printer:FC %	-	[0 to 2147483647 / 0 / 1]
027	Printer:BW %	-	
028	Printer:OneC %	-	
029	Printer:TwoC %	-	

Input and Output Check

Input Check Table

5803	[INPUT CHECK]		
001	PSIZE&TRYSET	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: A4 SEF 2: A4 LEF 3: A5 SEF 4: A5 LEF 5: A6 SEF 6: DLT SEF 7: LG SEF 8: LT SEF 9: LT LEF 10: Custom 11: Folio 12:Executive 13:16K 14:8K 15:Tray not set		
004	PAPEND_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the by-pass paper end sensor. 0: paper remaining 1: paper end		
005	HANDBP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Base plate goes down 1: Base plate goes up		
006	HAND_SNS	ENG	[0 or 1 / 0 / 1/step]

	0: Paper detected 1: No paper detected		
008	PAPOUT_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
009	PEFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper not full 1: Paper full		
010	PAPERON_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
013	DUP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
015	REG_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Paper detected 1: No paper detected		
018	TE_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
019	TE_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
020	TE_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining 1: Toner end		
021	TE_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Toner remaining		

	1: Toner end		
024	INTERLOCK_+24VS1	ENG	[0 or 1 / 0 / 1/step]
	0: +24VS1 On 1: +24VS1 Off		
025	INTERLOCK_+24VS2	ENG	[0 or 1 / 0 / 1/step]
	0: +24VS2 On 1: +24VS2 Off		
026	INTERLOCK_+5VS	ENG	[0 or 1 / 0 / 1/step]
	0: +5VS On 1: +5VS Off		
032	TONERBTLSET_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the waste toner bottle set sensor. 0: Set 1: Not set		
033	TONERFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the waste toner overflow sensor. 0: Not full 1: Full		
034	ITBNEW_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
035	MINFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
036	FUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
037	PSUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]

	0: Normal 1: Error		
048	TCSP_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Abutting 1: Spaced		
049	FEEDMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
050	BWMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
051	FUMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
052	COLMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
053	TRANSMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
054	HVP_ERR_D	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output of separation part. If the error is detected, it returns SC460-00. 0: Error 1: Normal		
055	HVP_ERR_1	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output of charging and development. If the error is detected, it returns SC490-00. 0: Error		

	1: Normal		
056	HVP_ERR_2	ENG	[0 or 1 / 0 / 1/step]
	Indicates the state of the error signal from high voltage output of 1st and 2nd transfer. If the error is detected, it returns SC490-01. 0: Abutting 1: Spaced		
058	FUNEW_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
060	FUSET_SNS	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
062	FUCOMP	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: High temp. detected		
072	EGB_VER	ENG	[0 to 15 / 0 / 1/step]
	Increases 1 if version is increased.		
077	BANK_PE_SNS1	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
078	BANK_PE_SNS2	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
079	BANK_PE_SNS3	ENG	[0 or 1 / 0 / 1/step]
	0: paper end 1: paper remaining		
080	BANK_FEED_SNS1	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected		

	1: Paper detected		
081	BANK_FEED_SNS2	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected 1: Paper detected		
082	BANK_FEED_SNS3	ENG	[0 or 1 / 0 / 1/step]
	0: No paper detected 1: Paper detected		
083	BANK_500/250_1	ENG	[0 or 1 / 0 / 1/step]
	Indicates first stage (tray 2) is 500 sheets tray. 0: 500 1: Not used		
084	BANK_500/250_2	ENG	[0 or 1 / 0 / 1/step]
	Indicates second stage (tray 3) is 500 sheets tray. 0: 500 1: Not used		
085	BANK_500/250_3	ENG	[0 or 1 / 0 / 1/step]
	Indicates third stage (tray 4) is 500 sheets tray. 0: 500 1: Not used		
086	BANK_PSIZE_1	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF		

	12: LT LEF 14: Custom 15: Tray not set		
087	BANK_PSIZE_2	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set		
088	BANK_PSIZE_3	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF 1: B4 SEF 2: A4 SEF 3: A4 LEF 4: B5 SEF 5: B5 LEF 6: A5 SEF 9: DLT SEF 10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set		
089	BANK_SET	ENG	[0 to 3 / 0 / 1/step]

Number of bank set			
090	BANK_MT_LOCK_1	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
091	BANK_MT_LOCK_2	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
092	BANK_MT_LOCK_3	ENG	[0 or 1 / 0 / 1/step]
	0: Normal 1: Error		
100	PCDUNEW_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
101	PCDUNEW_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
102	PCDUNEW_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
103	PCDUNEW_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Used 1: New		
104	PCDUSET_SNS_K	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
105	PCDUSET_SNS_C	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		

106	PCDUSET_SNS_M	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
107	PCDUSET_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Set 1: Not set		
115	Door Open Detect	ENG	[0 or 1 / 0 / 1/step]
	Displays the status of the interlock switches. 0: Door closed 1: Door opened		
116	Temperature	ENG	[0 to 999 / 0 / 1 deg/step]
	Displays current temperature.		
117	Relative Humidity	ENG	[0 to 999 / 0 / 1 %RH/step]
	Displays current relative humidity.		
118	Absolute Humidity	ENG	[0.00 to 99.99 / 0.00 / 0.01 %RH/step]
	Displays current absolute humidity.		

Output Check Table

5804	[OUTPUT CHECK]		
001	ALL OFF	ENG	[0 or 1 / 0 / 1/step]
	- Clears NVRAM Data including PM counter and life counter.		
003	BWMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove Bk toner cartridge / Bk PCDU. Toner may contaminate inside of the machine.		
004	BWMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]

	When using this SP, remove Bk toner cartridge / Bk PCDU. Toner may contaminate inside of the machine.		
005	BWMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove Bk toner cartridge / Bk PCDU. Toner may contaminate inside of the machine.		
010	FUMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
011	FUMT_mt_90mm/s	ENG	[0 or 1 / 0 / 1/step]
012	FUMT_t_90m/s	ENG	[0 or 1 / 0 / 1/step]
013	FUMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
017	COLMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.		
018	COLMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.		
019	COLMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.		
024	TRANSMT_144m/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.		
025	TRANSMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.		
026	TRANSMT_60m/s	ENG	[0 or 1 / 0 / 1/step]
	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.		
031	FEEDMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]
032	FEEDMT_mt_90mm/s	ENG	[0 or 1 / 0 / 1/step]

033	FEEDMT_t_90mm/s	ENG	[0 or 1 / 0 / 1/step]
034	FEEDMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]
035	FEEDMT_1TCSP	ENG	[0 or 1 / 0 / 1/step]
	Revolve using transected motor speed of the 1st transfer		
036	FEEDMT_HANDBP	ENG	[0 or 1 / 0 / 1/step]
	To lift manual feed base plate, reverse drive paper transfer motor, and rotate at a speed for lifting.		
039	REG_CL	ENG	[0 or 1 / 0 / 1/step]
040	MID_CL	ENG	[0 or 1 / 0 / 1/step]
041	PAP_CL	ENG	[0 or 1 / 0 / 1/step]
042	HAND_CL	ENG	[0 or 1 / 0 / 1/step]
043	DUP_MID_CL	ENG	[0 or 1 / 0 / 1/step]
044	DUP_OUT_CL	ENG	[0 or 1 / 0 / 1/step]
045	DUP_SOL	ENG	[0 or 1 / 0 / 1/step]
	<p>Drives the switching solenoid to transfer the paper to the duplex unit.</p> <p>0: Off – moves solenoid towards to output bin direction.</p> <p>1: On – moves solenoid towards to duplex unit direction.</p> <p>Do not turn on more than a minute, this might damage the machine because of the high heat.</p>		
046	PAPOUT_SOL	ENG	[0 or 1 / 0 / 1/step]
	<p>Drives solenoid for the idler gear to reverse drive paper exit roller.</p> <p>0: Off</p> <p>1: On – idler gear works to transfer the paper to the duplex unit.</p> <p>Do not turn on more than a minute, this might damage the machine because of the high heat.</p>		
083	1TCSP_CL	ENG	[0 or 1 / 0 / 1/step]
091	TN_CL_K	ENG	[0 or 1 / 0 / 1/step]
092	TN_CL_C	ENG	[0 or 1 / 0 / 1/step]

093	TN_CL_M	ENG	[0 or 1 / 0 / 1/step]
094	TN_CL_Y	ENG	[0 or 1 / 0 / 1/step]
100	MIN_FAN_H	ENG	[0 or 1 / 0 / 1/step]
101	MIN_FAN_L	ENG	[0 or 1 / 0 / 1/step]
102	FU_FAN_H	ENG	[0 or 1 / 0 / 1/step]
103	FU_FAN_L	ENG	[0 or 1 / 0 / 1/step]
107	PSU_FAN_H	ENG	[0 or 1 / 0 / 1/step]
108	PSU_FAN_L	ENG	[0 or 1 / 0 / 1/step]
130	HVP_C_K	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -1100V There is no SP to change output voltage. When turning this ON, make sure to remove Bk toner cartridge and Bk PCDU. OPC Drum might be scratched by the discharge. SP5804-147 must be ON to output voltage.</p>		
131	HVP_C_C	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -1100V There is no SP to change output voltage. When turning this ON, make sure to remove Cy toner cartridge and Cy PCDU. OPC Drum might be scratched by the discharge. SP5804-148 must be ON to output voltage.</p>		
132	HVP_C_M	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -1100V There is no SP to change output voltage. When turning this ON, make sure to remove Ma toner cartridge and Ma PCDU. OPC Drum might be scratched by the discharge. SP5804-148 must be ON to output voltage.</p>		

133	HVP_C_Y	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -1100V There is no SP to change output voltage. When turning this ON, make sure to remove Ye toner cartridge and Ye PCDU. OPC Drum might be scratched by the discharge. SP5804-148 must be ON to output voltage.</p>		
134	HVP_DV_K	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.</p>		
135	HVP_DV_C	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.</p>		
136	HVP_DV_M	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.</p>		
137	HVP_DV_Y	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output -200V There is no SP to change output voltage. SP5804-147 must be ON to output voltage.</p>		
139	HVP_T1_K	ENG	[0 or 1 / 0 / 1/step]
	<p>0: Off 1: On – Output +1000V</p>		

	There is no SP to change output voltage.		
140	HVP_T1_C	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
141	HVP_T1_M	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
142	HVP_T1_Y	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +1000V There is no SP to change output voltage.		
143	HVP_T2_+	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +30uA There is no SP to change output value.		
144	HVP_T2_-	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output -800V There is no SP to change output voltage.		
145	HVP_D	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – Output +2000V There is no SP to change output voltage.		
147	HVP_BION_BK	ENG	[0 or 1 / 0 / 1/step]
	SP to output charging and development for Bk. This SP must be “ON” to enable SP5804-130 / SP5804-134 to output voltage.		
148	HVP_BION_COL	ENG	[0 or 1 / 0 / 1/step]

	SP to output charging and development for Bk. This SP must be "ON" to enable SP5804-135 to SP5804-137 to output voltage.		
185	TM_0	ENG	[0 or 1 / 0 / 1/step]
186	TM_1	ENG	[0 or 1 / 0 / 1/step]
224	BANK_MT1:144mm/s	ENG	[0 or 1 / 0 / 1/step]
225	BANK_MT1:90mm/s	ENG	[0 or 1 / 0 / 1/step]
226	BANK_MT1:60mm/s	ENG	[0 or 1 / 0 / 1/step]
227	BANK_MT2:144mm/s	ENG	[0 or 1 / 0 / 1/step]
228	BANK_MT2:90mm/s	ENG	[0 or 1 / 0 / 1/step]
229	BANK_MT2:60mm/s	ENG	[0 or 1 / 0 / 1/step]
230	BANK_MT3:144mm/s	ENG	[0 or 1 / 0 / 1/step]
231	BANK_MT3:90mm/s	ENG	[0 or 1 / 0 / 1/step]
232	BANK_MT3:60mm/s	ENG	[0 or 1 / 0 / 1/step]
239	BANK_PAP_CL1	ENG	[0 or 1 / 0 / 1/step]
240	BANK_PAP_CL2	ENG	[0 or 1 / 0 / 1/step]
241	BANK_PAP_CL3	ENG	[0 or 1 / 0 / 1/step]
242	BANK_FEED_CL1	ENG	[0 or 1 / 0 / 1/step]
243	BANK_FEED_CL2	ENG	[0 or 1 / 0 / 1/step]
244	BANK_FEED_CL3	ENG	[0 or 1 / 0 / 1/step]
248	ON_DEMAND_2	ENG	[0 or 1 / 0 / 1/step]
	Do not execute.		
249	ITBFU_NEWON	ENG	[0 or 1 / 0 / 1/step]
	0: Off 1: On – flows current to cut the new detection fuse of the Fusing unit. This SP only flows current, no new detection control is working.		
250	PCDU_NEWON	ENG	[0 or 1 / 0 / 1/step]

251	TEON_BK	ENG	[0 or 1 / 0 / 1/step]
252	TEON_COL	ENG	[0 or 1 / 0 / 1/step]
253	UPCOVER_SOL	ENG	[0 or 1 / 0 / 1/step]
	<p>This SP controls shutter to supply toner to PCDU from toner cartridge.</p> <p>If top cover is opened, it is a spec not to open shutter. Must to hear the sound to check if this solenoid is working.</p> <p>When using this SP, remove all toner cartridge / PCDU. Toner may contaminate inside of the machine.</p>		
254	5V_TMP_ON	ENG	[0 or 1 / 0 / 1/step]
	<p>This SP supplies power to the thermopile to check the surface temperature of fusing belt.</p> <p>Design analysis use only. Controlling this SP might damage the thermopile.</p>		
255	BankSerialComm	ENG	[0 or 1 / 0 / 1/step]
	<p>Uses this to check bank substrate connection.</p>		

Test Pattern Printing

Printing Test pattern: SP5-903 [Test Print]

Some of these test patterns are used for print image adjustments but most are used primarily for design testing.

↓ Note

- Do not operate the machine until the test pattern is printed out completely. Otherwise, an SC occurs.
1. Enter the SP mode and select **SP5-903-005**.
 2. Enter the number for the test pattern that you want to print and press [OK].
 1. Enter the SP5-903-001 to 008 and modify the test print parameters below if needed:
 - SP5-903-001: Feed Tray**
 - SP5-903-002: Duplex Setting**
 - SP5-903-003: Paper Size**
 - SP5-903-004: Color Mode**
 - SP5-903-006: Paper Kind**
 - SP5-903-007: Print Page**
 - SP5-903-008: Freerun Setting**
 2. Enter SP-5-903-009 and touch "Execute" to print test pattern.
 3. After checking the test pattern, reset SP5-903-005 to "0: None"
 4. Exit the SP mode.

No.	Pattern	No.	Pattern
0	None	9	20mm Grid
1	V1 Line	10	1 by 1
2	H1 Line	11	2 by 2
3	V2 Line	12	4 by 4
4	H2 Line	13	Full dot
5	V Grid	14	Belt
6	H Grid	15	10mm Gray
7	20mm Grid	16	20mm Gray
8	S Grid	-	-

MEMO

MEMO

MEMO