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

- 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.
- 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.
- 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
$\langle 7 \rangle$	Clip ring
P	Screw
ju L	Connector
ŝ	Clamp
C	E-ring
SEF	Short Edge Feed
LEF	Long Edge Feed



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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TABLE OF CONTENTS

Important Safety Notices			
Important Safety Notices			
Prevention of Physical Injury Health Safety Conditions Observance of Electrical Safety Standards			
		Handling Toner	2
		Safety and Ecological Notes for Disposal	
Symbols, Abbreviations and Trademarks	3		
Trademarks			
1. Product Information			
Product Overview	13		
Component Layout	13		
Paper Path	14		
Drive Layout	15		
Machine Codes and Peripheral Configuration			
Main Frame	17		
Options			
Specifications			
2. Installation			
Installation Requirements			
Check Image Quality / Setting			
Environment			
Moving the Machine			
3. Preventive Maintenance			
Preventive Maintenance Tables	23		
Image Quality Standards	24		
Paper Transfer Quality Standards			
Preparation for PM			
Cleaning Points	27		
4. Replacement and Adjustment			
General Cautions			
Special Tools			
Exterior Covers			

Rear Cover	
Paper Exit Cover (with Operation Panel)	
Right Cover	
Left Cover	
Front Cover Unit	
LED Optics	
LED Head	
Toner End Sensor	51
PCDU	
PCDU	
PCDU Cover (Right)	53
Image Transfer	54
Image Transfer Belt Unit	54
After installing a new Image Transfer Belt Unit	55
Image Transfer Belt Cleaning Unit	55
Transfer Roller	
After installing a new Transfer Roller	
Drive Unit	
Paper Feed Motor	
Image Transfer Unit Motor	60
Fusing Motor	61
Drum Motor: K	
Drum Motor: CMY	62
Duplex Junction Gate Solenoid	62
Duplex Inverter Solenoid	64
Drive Gears and Clutches	67
Registration Clutch	
Toner Supply Clutch	
Bypass Clutch	71
Duplex Intermediate Clutch	72
Duplex Paper Exit Clutch	74
Fusing	
Fusing Unit	

Thermistor	
Thermostat	
Fusing Belt Unit	
Fusing Lamp	
Thermopile	
Paper Feed	
Paper Feed Roller	
Friction Pad	
Bypass Tray Unit	
Bypass Feed Roller	
Bypass Friction Pad	
Paper Size Switch	
Paper End Sensor	
Bypass Paper End Sensor	
Bypass Bottom Plate Home Position Sensor	
Paper Transport	96
Fusing Entrance Sensor	
Duplex Sensor	
Registration Sensor	
Reinstalling the Transport guide	
Paper Exit Sensor	
Paper Exit Full Sensor	
Registration Roller (Drive)	
Registration Roller (Driven)	
Driven Roller (Relay)	
Transport Roller (Relay)	
Paper Exit/Reverse Roller	
Duplex Entrance Roller	
Duplex Intermediate Roller	
Duplex Exit Roller	
Waste Toner	
Waste Toner Bottle	
Waste Toner Bottle Sensor	

Waste Toner Full Sensor	
Waste Toner Duct	
Electrical Components	
ID Chip Relay Board	
Temperature & Humidity Sensor	
Engine Board	
When installing the new engine board	
Controller Board	
When installing the new controller board	
PSU	
High Voltage Power Supply Board (Separation)	
High Voltage Power Supply Board	
PCDU Sensor Board	
TM (ID) Sensor	
Before TM (ID) sensor replacement	
Replacement	
Adjustment after the TM (ID) sensor replacement	
Operation Panel	
Fusing Fan Motor	
Cooling Fan Motor	
Reinstalling the cooling fan motor	
PSU Fan Motor	
Interlock Switch	
NVRAM	
NVRAM on the controller	
EEPROM on the engine board	
5. Service Table	
Service Program Mode	143
SP Tables	143
Enabling and Disabling Service Program Mode	143
Accessing the Required Program	
Inputting a Value or Setting for a Service Program	
Exiting Service Mode	

Service Table Key	145
SP Mode Tables	146
SP1-XXX (Feed)	146
SP2-XXX (Drum)	148
SP3-XXX (Process)	
SP5-XXX (Mode)	
SP7-XXX (Data Log)	
Updating the Firmware	202
Updating Firmware	202
Preparation	202
Updating Procedure	
Error Messages	
Firmware Update Error	203
Recovery after Power Loss	203
Handing Firmware Update Errors	
Error Message Table	
Uploading/Downloading NVRAM Data	206
Uploading Content of NVRAM to an SD card	
Downloading an SD Card to NVRAM	
Using the Debug Log	
Overview	208
Switching ON and Setting UP Save Debug Log	208
Retrieving the Debug Log from the HDD	
Debug Log Codes	
SP5857-015 Copy SD Card-to-SD Card: Any Desired Key	
SP5857-016 Create a File on HDD to Store a Log	
SP5857-017 Create a File on SD Card to Store a Log	212
SMC List Card Save Function	213
Overview	213
SMC List Card Save	
Procedure	213
File Names of the Saved SMC Lists	
Error Messages	215

6. Troubleshooting

Self-Diagnostic Mode	
Self-Diagnostic Mode at Power On	
Service Call	
Service Call Conditions	
Scanning	
LED Optics	
Image Processing – 1	
Image Processing – 2	
Paper Feed and Fusing	
Device Communication	
Peripherals	
Controller	
Jam Detection	
Sensor Position	
Sensor Position	
Paper Feed	
Bypass Tray	
Bank	
Duplex	
Electrical Component Defects	
Image Quality	
Overview	
Checking a Sample Printout	
Printer Driver Setting for Printing a Sample	
Other Problems	
Blown Fuse Conditions	
EGB Fuses	
PSU Fuses	
7. Energy Save	
Energy Save	
Energy Saver Modes	
Timer Settings	

Eco Night Mode	
Weekly Timer	
Fusing Off Mode	
Return to Stand-by Mode	
Recommendation	
Energy Save Effectiveness	
Paper Save	
Effectiveness of Duplex/Combine Function	
1. Duplex:	
2. Combine mode:	
3. Duplex + Combine:	
Recommendation	

Product Overview

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

- 1. Product Information
- 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

See "Appendices" for the following information:

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

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
- 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.

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.

• 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.

• 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.

• 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.

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

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- 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.

2. Installation

3. Preventive Maintenance

Preventive Maintenance Tables

See "Appendices" for the following information:

• Preventive Maintenance Items

Image Quality Standards

ltem	Specification	Remarks
Assured Image Area	Except Envelopes The standard print area of a sheet is the area enclosed by margins of 4.3 mm from all sides of the sheet. Envelopes 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.	Except Envelopes
Magnification Error	Main: ±0.50% or more Sub: ±0.50% or less	Scale

Paper Transfer Quality Standards

ltem	Specification	Remarks
	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	Saula
Regisiration	Duplex:	Scale
	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	
	Single Side:	
	±1.0mm/100mm or less (Less than B5 SEF)	
Skew	±1.0mm/200mm or less (B5 SEF or more, tray 1 / Bypass tray)	Except if the
	±1.2mm/200mm or less (B5 SEF or more, Optional Tray)	paper is longer than 432mm.
	Duplex:	
	±1.5mm/100mm or less (Less than B5 SEF)	
	±1.0mm/100mm or less (B5 SEF or more)	

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".

3. Preventive Maintenance

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.

RTB 54 Avoid touching areas of the PSU that may carry charge.

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]



m1092180

2. Open the Upper cover [A]



3. Connector cover [A] (⋛×1)



4. Paper exit cover [A] (♂×3, ⊯×1)



Right Cover

- 1. Paper exit cover (🖝 page 32)
- 2. Rear cover (🖝 page 31)
- 3. Open the inner cover
4

4. Right cover (*4)



Left Cover

- 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)



m1092107

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



[A] m1092108

5. Brackets [A] and [B]. (🖉×2)



6. Connectors (🕮×2)



m1092110

- 7. Duplex paper exit clutch [A](()×1)
- 8. Bypass clutch [B](()×1)



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





Vote

- [A]: Gear (This gear has a round hole.)
- [B]: Duplex intermediate clutch
- 10. Gear unit [A] (🖉×2)



m1092188

11. Spacer [A]

12. Gears [B], [C], [D] (🕅×1)



m1092189



• The hole in the gear [B] is in the form of a 'D'.

13. Cam [A]



14. Loosen the tension of the spring [A], and then remove the Harness guide [B]. (\mathscr{F} ×2)



15. Cover [A] (*2)



- 16. Power switch [A] (🕅 ×1)
- 17. Harness guide [B] (🖉×1, 🖾×1)



18. Harness guide [A] (hook×2)



4

19. Connectors (🕬×3)



m1092118

20. Ground plate [A] (🕅×2)



21. Gears [A], [B] (()×1)



m1092120



m1092203

Vote

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

22. Bearing [A]



23. Close the Front cover slightly.



m1092122

24. Paper feed roller (🖝 page 87)

25. Snaps (🕅×3)



m1092123





- 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]



30. Open the Front cover.

31. Transport unit [A] (🖉×8)



32. Front cover unit [A] (🖉×6)



m1092128



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



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



5. LED head [A]





- 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.



[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

Toner End Sensor

- 1. LED head (🖝 page 49)
- 2. Toner end sensor [A] (*1)



PCDU

RTB 27 Important Information about Installing a Used PCDU

PCDU

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



3. PCDUs [A]



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

PCDU Cover (Right)

- 1. PCDU (🖝 page 52)
- 2. PCDU cover [A] (hook ×2)



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].



m1092003

↓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.



m1092190

After installing a new Image Transfer Belt Unit

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

Vote

 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	 Execute SP7-804-017 and SP7-804-060 Turn off the machine, and then turn it back on.
2	Paper Transfer Roller	 Execute SP7-804-022 and SP7-804-061 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).

Image Transfer Belt Cleaning Unit

1. Image transfer belt unit (🖝 page 54)

2. Belt guide roller [A] (hook×2)



3. Image transfer belt cleaning unit [A] (\mathscr{F} ×2)



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

Content 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	 Execute SP7-804-017 and SP7-804-060 Turn off the machine, and then turn it back on.
2	Paper transfer roller	 Execute SP7-804-022 and SP7-804-061 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).

Vote

• 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] ($\mathscr{P} \times 1$).



m1099165.jpg

5. Bracket [A] (℡×1, 🕅×3)



m1099030.jpg

6. Paper feed motor [A] (🕅 ×3)



Image Transfer Unit Motor

- 1. Right cover (🖝 page 34)
- 2. Bracket [A] (⋛×4)



m1099012.jpg



3. Image transfer unit motor [A] (🕬×1, 🖉×3)

Fusing Motor

- 1. Right cover (🖝 page 34)
- 2. Fusing motor [A] (🕬×1, 🕅×3)



Drum Motor: K

1. Right cover (🖝 page 34)

2. Drum motor: K (🕬×1, 🕅×3)



m1099008.jpg

Drum Motor: CMY

- 1. Right cover (🖝 page 34)
- 2. Drum motor: CMY [A] ([™]×1, ²×3)



Duplex Junction Gate Solenoid

1. Fusing fan (🖝 page 134)

2. Bracket [A] (□→×2, 2×2)



m1099038.jpg

- 3. Sensor [A]
- 4. Remove the solenoid from the bracket (♂×2, ⇔×1, ⇔×1).



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

5. Duplex junction gate solenoid [A]



Duplex Inverter Solenoid

- 1. Right cover (🖝 page 34)
- 2. Bracket [A] (₽×6, 🕬×3)



3. Gear box bracket [A] (🕅 ×3)

4. Remove the solenoid from the bracket [B] (\mathscr{P} ×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.



m1099045.jpg

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





• 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]



Drive Gears and Clutches

- 1. Right cover (🖝 page 34)
- 2. Paper feed motor (🖝 page 59)
- 3. Harness guide [A] (\mathscr{P} ×2)



m1099027.jpg

- 4. Harness guide (inner) [A] (🖉×5)
 - 1. Relay clutch
 - 2. Paper feed clutch
 - 3. ITB (image transfer belt) Contact Clutch



4

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 (C×1, 🕬 ×1 each)


4. Toner supply clutch [A]



m1099034.jpg

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)



3. Connector x1



m1099107.jpg

4. Gear [A] and clip



m1099108.jpg

5. Duplex intermediate clutch [A]



m1099109.jpg



M1099184.jpg



• 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

• 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)

4

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] (\mathscr{F} ×2)



77



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)



7. Thermistor bracket [A] ($\mathscr{P} \times 1$, 📬 $\times 1$)



8. Thermistor [A] ($\mathscr{P} \times 1$)



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)

4

5. Thermostat bracket [B] (\mathscr{P} ×3)



6. Thermostat (right) [A] (🖉×2 each)



Vote

• 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]



5. Guide [A] (spring ×2, hook ×2)



4

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)



Vote

• 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)

4

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



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



85

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)



Bypass Tray Unit

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

- Image: A marked mark
- 3. Pull out the Front cover Unit [B].

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]



Bypass Friction Pad

- 1. Bypass feed roller (🖝 page 89)
- 2. Guide [A] (🖉×2)



3. Plate [A] (∂²×4)



4. Bypass friction pad [A]



Paper Size Switch

- 1. Standard paper tray (🖝 page 89)
- 2. Paper size switch [A] (*1, hook*2)



Paper End Sensor

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

2. Sensor cover [A] (2×2)



3. Paper end sensor [A] (🕬×1, hook×2)



m1092037

Bypass Paper End Sensor

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

3. Bypass paper end sensor [A] (𝔅×1, ☜×1, ∞×1)



m1092038

Bypass Bottom Plate Home Position Sensor

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



3. Power switch [A] (*1)

4. Harness guide [B] (🖉×1, 🕅×1)



5. Harness guide [A] (hook×2)



6. Connectors (🕮×3)



m1092118

7. Ground plate [A] (🕅×2)



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



Paper Transport

Fusing Entrance Sensor

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



3. Sensor unit [A] (*2)



Fusing entrance sensor [A] (𝔅×1, ҵ⇒×1)



Duplex Sensor

- 1. Open the Front cover.
- 2. Transfer roller (Relay) (🖝 page 109)
- 3. Roller upper cover [A] (*1)



4. Sensor unit [A] (*1)



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] (🖉×2)



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



m1092142

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



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



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



m1092145

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



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



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



m1092205

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



Reinstalling the Transport guide

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



2. Install the Transport guide (front), and then fit the screws loosely. (\mathscr{J} ×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).



4. Fix the screws securely. (\mathscr{P} ×2)



m1092086a

Paper Exit Sensor

- 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")

4

2. Roller left slide rail [A] (🕅 ×1)



m1092052

3. Roller right slide rail [A] (🖉×1)



m1092061

4. Roller rear cover [A]

5. Registration roller (Drive) [B]



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. (\mathscr{P} ×2)




7. Release the Paper exit/reverse roller[A] (\mathscr{P} ×2)

8. Insert a screwdriver through the hole, and then remove the gear plate [A]. ($\mathscr{P} \times 1$)



9. Gear [A]

10. E-Ring





m1092198

m1092199

- 11. Image transfer belt unit lock (right) [A] (*3)
- 12. Registration roller (Driven) [A].

Driven Roller (Relay)

1. Paper exit/reverse roller (
reverse 109)

2. Driven roller (relay) [A]



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]



Paper Exit/Reverse Roller

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

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



m1092081

Duplex Entrance Roller

- 1. Open the Front cover.
- 2. Entrance roller unit [A] ($\mathscr{P} \times 4$)



3. Duplex entrance roller [A] (()×2)



Duplex Intermediate Roller

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



Duplex Exit Roller

- 1. Sensor cover (
 repage 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] (©×2)



Waste Toner

Waste Toner Bottle

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



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Vote
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• 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)





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 (rage 125 "PCDU Sensor Board")
- 4. Waste toner cover [A] (Spring×1)



5. Waste toner duct [A] (🖉×2)



Electrical Components

ID Chip Relay Board

- 1. Right cover (🖝 page 34)
- 2. ID chip relay board cover [A] (P×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)



Engine Board

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

3. Engine board [A] (♂×4, ⊯×All)



4. EEPROM [A]



m1099156.jpg

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.

- 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] (\mathscr{P} ×4).



- 5. Rails [A] and RAMM DIMM [B]
- 6. NVRAM [C]

7. Controller board [D]



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.

- 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)



RTB 54 Avoid touching areas of the PSU that may carry charge.

High Voltage Power Supply Board (Separation)

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

2. Holder [A] (🕅 ×2)



m1099013.jpg

High voltage power supply board (separation) [A] (x1, x1)



m1099014.jpg



 $\overline{}$

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

High Voltage Power Supply Board

1. Left cover (🖝 page 35)

Note

2. High voltage power supply board [A] (*P*×8, [™]×1)



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)



- 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] (℡×2)



m1099114.jpg

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

m1099161.jpg

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 inmput 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)



6. Operation panel [A] (🕅 ×3)



m1099119.jpg

Fusing Fan Motor

- 1. Left cover (🖝 page 35)
- Bracket [A] (𝔅×2)



m1099015.jpg

3. Fan holder [A] (♂×2, ⊯×1)



m1099016.jpg

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



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.)



- 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)



Interlock Switch

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



m1099035.jpg

Vote

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



m1099036.jpg

NVRAM

Vote

 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.
- 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).

Vote

- 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
 - 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
Service Program Mode

• 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"

Enabling and Disabling Service Program Mode

Vote

• 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 "4/D" 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, than press the "OK" key.

Vote

• 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 "</br>



3. Push the "OK" key.



4. Push the "OK" key



- 5. To select a bit switch, push the " Δ/∇ " 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

• 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)

[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

🕹 Note

- 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	Tray 1	*ENG	
002	By-pass	*ENG	
003	Duplex	*ENG	
004	Tray2	*ENG	[-9.0 to 9.0 / 0.0 / 0.1 mm/step]
005	Tray3	*ENG	
006	Tray4	*ENG	

	[Side-to-Side Reg] Side-to-Side Registration Adjustment		
1002	Adjusts the side-to-side registration for each mode. This SP changes the LED main so position and it is recommended that these service programs are set up by the user p		
001	Tray 1	*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	D3 Duplex * ENG [-20.0 to 20.0 / 0.0 / 0.1 mm/step]		[-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.			
	 If "1" is selected, the 1st duplex print starts from ready mode or process control/ MUSIC will be delayed about 20 sec. 			

1141	[FusingSCErrorInfo]			
1141	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 Pre 1Temp:Sens 1	*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]		
	SC Detection *ENG [0 or 1 / 0 / 1 / step]		[0 or 1 / 0 / 1 /step]
001	If a fusing jam occurred 3 times • 0: No SC • 1: SC occurs	continuous	ly, this SP can select if an SC occurs or not.

SP2-XXX (Drum)

2104	[LED Array Setting]				
2100	Sets the LED Array light-emission time.				
021	Stbwd normal Bk	ENG			
022	Stbwd normal C	ENG	[0+45525/0/1m/mm]		
023	Stbwd normal M	ENG			
024	Stbwd normal Y	ENG			
025	Stbwd half/low Bk	ENG			
026	Stbwd half/low C	ENG	[0+45525/0/1m/4m]		
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	С	*ENG		
021	м	*ENG	$\begin{bmatrix} 444 & 42 \\ 0 & 1 \end{bmatrix}$	
039	Y	*ENG		
061	Bk	*ENG		

2183	[MUSIC Condition]		
	Displays the result of the position detection pattern.		
001	Posipattern FC R	*ENG	
002	Posipattern FC L	*ENG	[0++45525/0/1/4+-]
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.			
0.0.4	Black Pagecount	*ENG	[0 to 65535 / 0 / 1 pages/step]	
024	Displays the page counter since	*ENG [(alignment ad *ENG [(JSIC. *ENG [- alignment ad	adjustment was executed in BW mode.	
005	Judge Factor	*ENG	[0 to 255 / 0 / 1 /step]	
025	Displays the judge factor for MUSIC.			
0.0 /	Normal Temp	*ENG	[-128 to 127 / 0 / 1 deg/step]	
020	Environment temperature when alignment adjustment is executed in normal mode.			
	Black Temp	*ENG	[-128 to 127 / 0 / 1 deg/step]	
027	Environment temperature when alignment adjustment is executed in BW mode.			

0104	[MUSIC Result]				
2194	-				
007	Run Result	*ENG	[0 to 0xFFFFFFF / 0 / 1 /step]		
007	Displays the run result of alignm	ent adjustm	nent.		
012	Normal Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
013	Displays the execution number of alignment adjustments in normal mode.				
014	Normal Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
014	Displays the failed number of alignment adjustments in normal mode.				
015	Factory Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
015	Displays the execution number of alignment adjustments in factory mode.				
014	Factory Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
010	Displays the failed number of alignment adjustments in factory mode.				
017	Margin Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
017	Displays the execution number of alignment adjustments in BW mode.				
010	Margin Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
018	Displays the failed number of alignment adjustments in BW mode.				

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

2302	[Env Correct]				
	Crrnt Env Display	ENG	[0 to 7 / 0 / 1 /step]		
	Displays the environmental divisions for high voltage power supply. 0: SSL				
001	1: LL 2: ML 3: MM 4: MH 5: HH1				
	6: нн2 7: НН3				

2412	[Trans2:Correct] DFU
2412	-

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

2004	[Auto revolutions]		
Turn auto revolutions on to rotate the image transfer belt for paper of		e transfer belt for paper dust removal.	
001	On	ENG	[- / - / -] [Execute]

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]			
	-			
0.01	Normal ProCon	ENG	[- / - / -] [Execute]	
001	Executes the normal process control manually (potential control).			
	Check the result with SP3-325-001 and 3-012-001 after executing this SP.			
00.4	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.			

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

	[ManualRmn:Exe]				
301 <i>7</i>	Executes the manual remaining toner detection.				
	Detection result can be checked by SP3411-002 to 004.				
001	TnrRmnSnsFc	ENG	[- / - / -]		
002	TnrRmnSnsBk	ENG	[Execute]		

	[ManualMix:Exe]			
3018	Executes the manual toner mixing.			
	Detection result can be checked by SP3411-001.			
001	TnrMixFc	ENG	[-/-/-]	
002	TnrMixBk	ENG	[Execute]	

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

2101	[TE-NE]				
3101	Amount of total toner consumption (accumulated for the toner cartridge).				
005	Total Usage: Bk	*ENG			
006	Total Usage: C	*ENG	[0 + 00000000 / 0 / 1 + / +]		
007	Total Usage: M	*ENG	[0 to 999999999 / 0 / 1 µg/step]		
008	Total Usage: Y	*ENG			
2101	[TE-NE]				
3101	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	[0.0.1, 200.0. / 150.0 / 0.1, a / 1.a]		
011	TonerRemainM	*ENG	[0.0 to 300.0 / 1 36.0 / 0.1 g/step]		

3103	[RcvrySply]		
	Displays the number of replenishment executions for recovering.		
001	RcvrySplyCntK	*ENG	
002	RcvrySplyCntY	*ENG	[0 to 10000 ((1 times (step]
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	
012	CnsmFromSplyY	*ENG	Consumption since the last time toner was
013	CnsmFromSplyM	*ENG	[0.0 to 100000.0 / 0.0 / 0.1 mg/step]
014	CnsmFromSplyC	*ENG	

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

22.40	[IBACC Setting]				
5547	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				
	TonerRmnY	*ENG	[0 to 2 / - / 1 /step]		
	Displays the detection result of remaining toner for Ye.				
002	0: Upper limit				
	1: Mid				
	2: Lower limit				
	TonerRmnM	*ENG	[0 to 2 / - / 1 /step]		
	Displays the detection result of rer	naining to	ner for Ma.		
003	0: Upper limit				
	1: Mid				
	2: Lower limit				
	TonerRmnC	*ENG	[0 to 2 / - / 1 /step]		
	Displays the detection result of rer	naining to	ner for Cy.		
004	0: Upper limit				
	1: Mid				
	2: Lower limit				
005	SnsOutCntAvK	*ENG	[0 to 255 / - / 1 time/step]		
000	Average number of transmissions for the toner near-end sensor for Bk.				
006	SnsOutCntAvY	*ENG	[0 to 255 / - / 1 time/step]		
000	Average number of transmissions for the toner near-end sensor for Ye				
007	SnsOutCntAvM	*ENG	[0 to 255 / - / 1 time/step]		
007	Average number of transmissions for the toner near-end sensor for Ma				
008	SnsOutCntAvC	*ENG	[0 to 255 / - / 1 time/step]		
008	Average number of transmissions	for the ton	er near-end sensor for Cy		
011	CnsmRate:SplyK	*ENG	[0 to 100 / - / 1 %/step]		
UTT	Toner consumption rate until next	toner supp	bly.		
010	CnsmRate:SplyY	*ENG	[0 to 100 / - / 1 %/step]		
012	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.			
0.1.5	T/HThresh:LL	*ENG	[0.00 to 70.00 / 4.00 / 0.01 g/m^2/step]	
015	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 0xFFFFFFF / 0 / 1 mm^2/step]		
	Print area from judgement to exec	ution of la	st toner refreshment for Bk.		
	Print Area C	*ENG	[0 to 0xFFFFFFF / 0 / 1 mm^2/step]		
002	Print area from judgement to exec	ution of la	st toner refreshment for Cy.		
002	Print Area M	*ENG	[0 to 0xFFFFFFF / 0 / 1 mm^2/step]		
003	Print area from judgement to execution of last toner refreshment for Ma.				
004	Print Area Y	*ENG	[0 to 0xFFFFFFF / 0 / 1 mm^2/step]		
004	Print area from judgement to execution of last toner refreshment for Ye.				
005	Run Distance K	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
005	Run distance of OPC drum from judgement to execution of last toner refreshment for Bk.				
004	Run Distance C	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
008	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 re	freshment	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 re	freshment	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 re	freshment	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.				
	Enable Flag BW	*ENG	[0 or 1 / 1 / 1 /step] DFU		
021	Enables or disables toner refreshment for black and white.O: Disables1: Enables				
	Enable Flag FC	*ENG	[0 or 1 / 1 / 1 /step] DFU		
022	Enables or disables toner refreshment for full color. O: Disables I: Enables				
023	Wait Page Max	*ENG	[0 to 500 / 50 / 1 page/step] DFU		
	Maximum output pages from whe	n the exec	ution condition is satisfied.		
024	Wait Page Bk	*ENG	[0 to 500 / 0 / 1 page/step]		
024	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]		
020	Counts toner refreshment execution time for Cy.				
007	Exec Count M	*ENG	[0 to 1000 / 0 / 1 times/step]		
027	Counts toner refreshment execution time for Ma.				
029	Exec Count Y	*ENG	[0 to 1000 / 0 / 1 times/step]		
028	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.				

0517	[Toner Input]				
3317	-				
	Enable Flag K	*ENG	[0 or 1 / 1 / 1 /step]		
	_		DFU		
001	Enables or disables toner input for	Bk.			
	• 0: Disables				
	• 1: Enables				
	Enable Flag C	*ENG	[0 or 1 / 0 / 1 /step]		
			DFU		
002	Enables or disables toner input for Cy.				
	• O: Disables				
	• 1: Enables				
		*510	[0 or 1 / 0 / 1 /step]		
	Lindble Hug M	LINO	DFU		
003	Enables or disables toner input for Ma.				
	• 0: Disables				
	• 1: Enables				

004	Enable Flag Y	*ENG	[0 or 1 / 0 / 1 /step] DFU		
	Enables or disables toner input for Ye.O: Disables1: 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.				
004	Run Distance C	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
008	OPC drum running distance after previous execution 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 execution for toner input to the cleaning blade.				
009	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]		
001	Temperature	*ENG	[-1280 to 1270 / 0 / 0.1 deg/step]
	Displays the latest temperature 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]

	[Unit Change]		
3524	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]			
	Page Cnt:BW	*ENG	[0 to 5000 / - / 1 sheets/step]	
008	Displays the page counter since the	last proce	ss control was executed.	
007	Page Cnt:FC	*ENG	[0 to 5000 / - / 1 sheets/step]	
007	Displays the page counter since the last process control was executed.			
011	CnsmRate_Upper	*ENG	[0 to 100 / 100 / 1 %/step]	
UII	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.			

9411	[Chrg DC Control]				
3011	Displays the charge DC bias when p	e 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]		
021	UpperLimit	*ENG	[900 to 1300 / 1300 / 1 -V/step]		
031	Displays the upper limit of the charge DC bias to set.				
020	LowerLimit	*ENG	[900 to 1300 / 900 / 1 -V/step]		
032	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]	
001	Displays the development bias for B	k when pri	nting.	
002	Std Speed: C	*ENG	[100 to 350 / 200 / 1 -V/step]	
002	Displays the development bias for C	y when pr	inting.	
002	Std Speed: M	*ENG	[100 to 350 / 200 / 1 -V/step]	
003	Displays the development bias for Ma when printing.			
004	Std Speed: Y	*ENG	[100 to 350 / 200 / 1 -V/step]	
004	Displays the development bias for Ye when printing.			
0.0.1	Low Speed: K	*ENG	[100 to 350 / 200 / 1 -V/step]	
021	Displays the development bias for Bk when printing at mid / low speed.			

022 023 024 031	Low Speed: C	*ENG	[100 to 350 / 200 / 1 -V/step]	
	Displays the development bias for Cy when printing at mid / low speed.			
000	Low Speed M	*ENG	[100 to 350 / 200 / 1 -V/step]	
023 -	Displays the development bias for N	1a when p	rinting at mid / low speed.	
024	Low Speed Y	*ENG	[100 to 350 / 200 / 1 -V/step]	
024	Displays the development bias for Y	Ye when printing at mid / low speed.		
021	MUSIC Std: K	*ENG	[100 to 350 / 200 / 1 -V/step]	
031	Displays the development bias for Bk when MUSIC is executed.			
	MUSIC Std: C	*ENG	[100 to 350 / 200 / 1 -V/step]	
032	Displays the development bias for C	y when M	USIC is executed.	
022	MUSIC Std: M	*ENG	[100 to 350 / 200 / 1 -V/step]	
033	Displays the development bias for Ma when MUSIC is executed.			
02.4	MUSIC Std: Y	*ENG	[100 to 350 / 200 / 1 -V/step]	
034	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]	
001	Displays the exposure amount for Bl	when pri	nting.	
002	Std Speed: C	*ENG	[0 to 200 / 100 / 1 %/step]	
002	Displays the exposure amount for Cy when printing.			
002	Std Speed: M	*ENG	[0 to 200 / 100 / 1 %/step]	
003	Displays the exposure amount for Ma when printing.			
004	Std Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]	
004	Displays the exposure amount for Ye when printing.			
021	Low Speed: K	*ENG	[0 to 200 / 100 / 1 %/step]	
UZI	Displays the exposure amount for Bk when printing at low speed.			

$\begin{array}{c} \left \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \end{array} \end{array} \\ \end{array} \end{array} \\ 022 \end{array} \\ 023 \end{array} \\ \hline \end{array} \\ 024 \end{array} \\ \hline \end{array} \\ 0024 \end{array} \\ \hline \end{array} \\ 0031 \end{array} \\ \hline \end{array} \\ 0032 \end{array} \\ \hline \end{array} \\ 0032 \end{array} \\ \hline \end{array} \\ 0033 \end{array} \\ \hline \end{array} \\ 0034 \end{array} \\ 0035 \end{array} \\ \hline \end{array} \\ 0035 \\ 0$	Low Speed: C	*ENG	[0 to 200 / 100 / 1 %/step]		
	Displays the exposure amount for Cy	y when pri	nting at low speed.		
Description*ENG022Displays the exposure amount for V when023Low Speed: M023Displays the exposure amount for M when024Low Speed: Y024*ENG025Displays the exposure amount for Y when031Ppattern: K031*ENG032Displays the exposure amount for Bk when on033Ppattern: C034*ENG035Displays the exposure amount for Cy when036Ppattern: M037*ENG038Displays the exposure amount for V when039Ppattern: M031*ENG032Displays the exposure amount for V when033Ppattern: M034Stipplays the exposure amount for V when035MUSIC036Strobe time coefficient when a MUSIC patter037Strobe time coefficient when a MUSIC patter038Strobe time coefficient when a MUSIC patter039Strobe time coefficient when a MUSIC patter031*ENG032Strobe time coefficient when a MUSIC patter033Strobe time coefficient when a MUSIC patter034MUSIC035Strobe time coefficient when a MUSIC patter036Strobe time coefficient when a MUSIC patter037Strobe time coefficient when a MUSIC patter038Strobe time coefficient when a MUSIC patter039Strobe time coefficient when a MUSIC patter031Strobe time coefficient when a MUSIC patter <td>Low Speed: M</td> <td>*ENG</td> <td>[0 to 200 / 100 / 1 %/step]</td>	Low Speed: M	*ENG	[0 to 200 / 100 / 1 %/step]		
	a when pr	inting at low speed.			
024	Low Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]		
024	Displays the exposure amount for Ye	e when pri	nting at low speed.		
021	Ppattern: K	*ENG	[0 to 200 / 100 / 1 %/step]		
031	Displays the exposure amount for Bk when a pattern is drawn on the OPC drum.				
020	Ppattern: C	*ENG	[0 to 200 / 100 / 1 %/step]		
032	Displays the exposure amount for Cy when a pattern is drawn on the OPC drum.				
022	Ppattern: M	*ENG	[0 to 200 / 100 / 1 %/step]		
033	Displays the exposure amount for Ma when a pattern is drawn on the OPC drum.				
024	Ppattern: Y	*ENG	[0 to 200 / 100 / 1 %/step]		
034	Displays the exposure amount for Ye when a pattern is drawn on the OPC drum.				
	MUSIC	*ENG	[0 to 200 / 100 / 1 %/step]		
051	Strobe time coefficient when a MUSIC pattern is created.				
	Indicates the correction percentage change this SP because there is a po	for the time ossibility the	e set by SP3613-001 to 004. Do not at MUSIC will fail if the value is changed.		

	[Dev Pot :Set]		
3622	Displays the development potential. Development potential is the potential potential and the development bias.	al differen	ce between the electrostatic latent image
001	К	*ENG	[0 to 800 / - / 1 V/step]
002	С	*ENG	[0 to 800 / - / 1 V/step]
003	Μ	*ENG	[0 to 800 / - / 1 V/step]
004	Y	*ENG	[0 to 800 / - / 1 V/step]

	[Ppattern:Set]		
3628	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]

2620	[Dev gamma :Disp]				
3030	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]		

2421	[Dev Start Vol Vk]		
3031	Displays the latest development starting voltage.		
001	К	*ENG	[-300 to 300 / - / 1 -V/step]
002	С	*ENG	[-300 to 300 / - / 1 -V/step]
003	М	*ENG	[-300 to 300 / - / 1 -V/step]
004	Υ	*ENG	[-300 to 300 / - / 1 -V/step]

2422	[Hlftn:Slope alpha]
3032	Displays the 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 [[Hlftn:Intcpt beta]		
	Displays the halftone 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]

2000	[TN Collec. Bottle]		
3800	-		
Days bfr End *ENG [0 to 2 ,		[0 to 2 / 1 / 1 days/step]	
017	Sets toner collection bottle near end timing.		
	0: Early 1: Normal		
	2: Late		

SP5-XXX (Mode)

5110	[PowerON LowPower]
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	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.			

5803	[INPUT CHECK]				
	PSIZE&TRYSET	ENG	[0 to 15 / 0 / 1/step]		
	O: A3 SEF				
	1: A4 SEF				
	2: A4 LEF				
	3: A5 SEF				
	4: A5 LEF				
	5: A6 SEF				
	6: DLT SEF				
001	7: LG SEF				
	8: LT SEF				
	9: LT LEF				
	10: Custom				
	11: Folio				
	12: Executive				
	13: 16K				
	14: 8K				
	15: Tray not set				
	PAPEND_SNS	ENG	[0 or 1 / 0 / 1/step]		
004	Displays the status of the by-pass po	aper end se	ensor.		
004	0: paper remaining				
	1: paper end				
	HANDBP_SNS	ENG	[0 or 1 / 0 / 1/step]		
005	0: Base plate goes down				
	1: Base plate goes up				
006	HAND_SNS	ENG	[0 or 1 / 0 / 1/step]		

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

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

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

	1: Normal			
	HVP_ERR_2	ENG	[0 or 1 / 0 / 1/step]	
056	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			
	FUNEW_SNS	ENG	[0 or 1 / 0 / 1/step]	
058	0: Used 1: New			
	FUSET_SNS	ENG	[0 or 1 / 0 / 1/step]	
060	0: Set 1: Not set			
	FUCOMP	ENG	[0 or 1 / 0 / 1/step]	
062	0: Off 1: High temp. detected			
070	EGB_VER	ENG	[0 to 15 / 0 / 1/step]	
0/2	Increases 1 if version is increased.			
	BANK_PE_SNS1	ENG	[0 or 1 / 0 / 1/step]	
077	0: paper end 1: paper remaining	1		
	BANK_PE_SNS2	ENG	[0 or 1 / 0 / 1/step]	
078	0: paper end 1: paper remaining			
	BANK_PE_SNS3	ENG	[0 or 1 / 0 / 1/step]	
079	0: paper end 1: paper remaining			
	BANK_FEED_SNS1	ENG	[0 or 1 / 0 / 1/step]	
080	0: No paper detected			

	1: Paper detected				
	BANK_FEED_SNS2	ENG	[0 or 1 / 0 / 1/step]		
081	0: No paper detected				
	1: Paper detected				
	BANK_FEED_SNS3	ENG	[0 or 1 / 0 / 1/step]		
082	0: No paper detected				
	1: Paper detected				
	BANK_500/250_1	ENG	[0 or 1 / 0 / 1/step]		
083	Indicates that the first stage (tray 2)	is a 500-sł	neet tray.		
	0: 500				
	1: Not used				
	BANK_500/250_2	ENG	[0 or 1 / 0 / 1/step]		
084	Indicates that the second stage (tray 3) is a 500-sheet tray.				
004	0: 500				
	1: Not used				
	BANK_500/250_3	ENG	[0 or 1 / 0 / 1/step]		
085	Indicates that the third stage (tray 4) is a 500-sheet tray.				
	0: 500				
	1: Not used				
	BANK_PSIZE_1	ENG	[0 to 15 / 0 / 1/step]		
	0: A3 SEF				
	1: B4 SEF				
	2: A4 SEF				
	3: A4 LEF				
086	4: B5 SEF				
	5: B5 LEF				
	6: A5 SEF				
	9: DLT SEF				
	10: LG SEF				
	TT: LESEF				

	12: LT LEF		
	14: Custom		
	15: Tray not set		
	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		
087	5: B5 LEF		
	6: A5 SEF		
	9: DLT SEF		
	10: LG SEF		
	11: LT SEF		
	12: LT LEF		
	14: Custom		
	15: Tray not set		
	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		
088	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	s set	
	BANK_MT_LOCK_1	ENG	[0 or 1 / 0 / 1/step]
090	0: Normal	1	
	1: Error		
	BANK_MT_LOCK_2	ENG	[0 or 1 / 0 / 1/step]
091	0: Normal		
	1: Error		
	BANK_MT_LOCK_3	ENG	[0 or 1 / 0 / 1/step]
092	0: Normal		
	1: Error	1	
	PCDUNEW_SNS_K	ENG	[0 or 1 / 0 / 1/step]
100	0: Used		
	1: New		1
	PCDUNEW_SNS_C	ENG	[0 or 1 / 0 / 1/step]
101	0: Used		
	1: New		
	PCDUNEW_SNS_M	ENG	[0 or 1 / 0 / 1/step]
102	0: Used		
	1: New		
	PCDUNEW_SNS_Y	ENG	[0 or 1 / 0 / 1/step]
103	0: Used		
	1: New		1
	PCDUSET_SNS_K	ENG	[0 or 1 / 0 / 1/step]
104	0: Set		
	1: Not set		1
	PCDUSET_SNS_C	ENG	[0 or 1 / 0 / 1/step]
105	0: Set		
	1: Not set		

	PCDUSET_SNS_M	ENG	[0 or 1 / 0 / 1/step]		
106	0: Set				
	I: Not set				
	PCDUSET_SNS_Y	ENG	[0 or 1 / 0 / 1/step]		
107	0: Set				
	1: Not set				
	Door Open Detect	ENG	[0 or 1 / 0 / 1/step]		
115	Displays the status of the interlock switches.				
	0: Door closed				
	1: Door opened				
116	Temperature	ENG	[0 to 999 / 0 / 1 deg/step]		
110	Displays the current temperature.				
117	Relative Humidity	ENG	[0 to 999 / 0 / 1 %RH/step]		
	Displays the current relative humidity.				
110	Absolute Humidity	ENG	[0.00 to 99.99 / 0.00 / 0.01 %RH/step]		
110	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.			
	TRANSMT_144m/s	ENG	[0 or 1 / 0 / 1/step]	
024	When using this SP, remove all toner cartridges / all PCDUs. This may damage the PCDUs and transfer belt, and would affect print image quality.			
	TRANSMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]	
025	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]	
	 Drives the switching solenoid to transfer the paper to the duplex unit. 0: Off – moves the solenoid to the output tray direction. 1: On – moves the solenoid to the duplex unit direction. Do not turn on more than a minute; this might damage the machine because of high heat. 			
	PAPOUT_SOL	ENG	[0 or 1 / 0 / 1/step]	
046	Drives the solenoid for the idler gear to reverse drive the paper exit roller. 0: Off 1: On – the idler gear works to transfer the paper to the duplex unit. Do not turn on more than a minute; this might damage the machine because of high heat.			
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]					
	0: Off 1: On – Output -1100V There is no SP to change the output voltage. 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.							
		FNG	[0 or] / 0 /] /step]					
131	0: Off 1: On – Output -1100V There is no SP to change the output voltage. 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. SP5804-148 must be ON to output the voltage.							
132	HVP_C_MENG[0 or 1 / 0 / 1/step]0: Off1: On - Output -1100VThere is no SP to change the output voltage.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.SP5804-148 must be ON to output the voltage.							
	HVP_C_Y	ENG	[0 or 1 / 0 / 1/step]					
133	0: Off 1: On – Output -1100V There is no SP to change the output voltage. 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. SP5804-148 must be ON to output the voltage.							
	HVP_DV_K	ENG	[0 or 1 / 0 / 1/step]					
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	0: Off							
134	1: On – Output -200V							
	There is no SP to change the output	voltage.						
	SP5804-147 must be ON to output	the voltag	e.					
	HVP_DV_C	ENG	[0 or 1 / 0 / 1/step]					
	0: Off							
135	1: On – Output -200V							
	There is no SP to change the output	voltage.						
	SP5804-147 must be ON to output	the voltag	е.					
	HVP_DV_M	ENG	[0 or 1 / 0 / 1/step]					
	0: Off							
136	1: On – Output -200V							
	There is no SP to change the output voltage.							
	SP5804-147 must be ON to output the voltage.							
	HVP_DV_Y	ENG	[0 or 1 / 0 / 1/step]					
	0: Off							
137	1: On – Output -200V							
	There is no SP to change the output voltage.							
	SP5804-147 must be ON to output the voltage.							
	HVP_T1_K	ENG	[0 or 1 / 0 / 1/step]					
120	0: Off							
139	1: On – Output +1000V							
	There is no SP to change the output voltage.							
	HVP_T1_C	ENG	[0 or 1 / 0 / 1/step]					
140	0: Off							
140	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.						
	HVP_T1_Y	ENG	[0 or 1 / 0 / 1/step]				
142	0: Off						
142	1: On – Output +1000V						
	There is no SP to change the output	voltage.					
	HVP_T2_+	ENG	[0 or 1 / 0 / 1/step]				
143	0: Off						
140	1: On – Output +30uA						
	There is no SP to change the output	value.					
	HVP_T2	ENG	[0 or 1 / 0 / 1/step]				
144	0: Off						
144	1: On – Output -800V						
	There is no SP to change the output	voltage.					
	HVP_D	ENG	[0 or 1 / 0 / 1/step]				
145	0: Off						
140	1: On – Output +2000V						
	There is no SP to change the output voltage.						
	HVP_BION_BK	ENG	[0 or 1 / 0 / 1/step]				
147	SP to output charging and development for Bk.						
	This SP must be "ON" to enable SP5804-130 / SP5804-134 to output voltage.						
	HVP_BION_COL	ENG	[0 or 1 / 0 / 1/step]				
148	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]				
2.40	ON_DEMAND_2	ENG	[0 or 1 / 0 / 1/step]				
248	Do not execute. Design analysis use	only. Adju	sting 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 f	use of the Fusing unit.				
	This SP only flows current; no new d	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]				
	UPCOVER_SOL	ENG	[0 or 1 / 0 / 1/step]				
253	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.						
	5V_TMP_ON ENG [0 or 1 / 0 / 1/step]						
254	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.						
055	BankSerialComm	ENG	[0 or 1 / 0 / 1/step]				
200	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]		
	B/W Priority Mode	*ENG	[0 or 1 / 0 / 1 /step]
001	Turn the monochrome printing priority BW printing mode if this SP is set to "1 0: OFF (default), 1: ON	mode on c : ON".	or off. This SP can reduce color toner in the

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

					1: Duple	ex	
	Sets the duplex / single-sided setting to print test printing executed by SP5-930-009.						
				[0 to 5 ,	/ 0 / 1/step]		
					0: A3		
	Papar Siz	•	ENIC		1: DLT		
003	ruper Siz	e	LING		2: A4 S	EF	
					3: A4 LI	EF	
					4: B5 S	EF	
	Sets the p	aper size to print test printing	g execut	ed b	y SP5-9	230-009.	
	Color Mo	ode	ENG		[0 to 6 ,	/ 0 / 1/step]	
	Sets the c	olor mode to print test printin	g execu	ited l	by SP5-	930-009.	
	Red (Mag	genta + Yellow)					
	Blue (Cyan + Magenta)						
004	Green (Yellow + Cyan)						
00-1	0	Bk			4	Red	
	1	Cyan			5	Blue	
	2	Magenta			6	Green	
	3	Yellow			-	-	
	Test Patter	rn ENG			[0 to 16 / 0 / 1/step]		
	Sets the te	est pattern to print test printing	g execul	ted b	by SP5-9	930-009.	
	0	None			9	20mm SGrid	
	1	V 1Line			10	1by1	
005	2	H 1Line			11	2by2	
005	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			_	-	
	Paper Kind E					[0 to 2 / 0 / 1/step]		
	Sets t	he p	aper weight and paper type	to print	test	t printing	executed by SP5-930-009.	
006	0	Pla	in Paper	Normal Speed (144mm/s)				
	1	Thie	ck1-2	Mid Speed (90mm/s)				
	2	Thie	ck3	Low Speed (60mm/s)				
	Print I	Page		ENG		[0 to 2	55 / 1 / 1/step]	
007	Sets t	he p	rint page to print test printing	execute	ed l	oy SP5-9	230-009.	
	If this SP is set to "O", it prints an unlimited number of copies. To exit the test printing, pull out the paper tray of the machine.					es. To exit the test printing, pull		
					[0 or 1 / 0 / 1/step]			
	Freerun Setting			ENG		0: Normal		
						1: Freel	Run	
800	Sets t	he fr	ee-run on / off to print test p	rinting e	xec	cuted 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.							
	Duint	C		ENIC		[-/-/	-]	
009	Print Start		ENG		[Execut	e]		
	Execu	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]			
010	O: 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)". 						
	Trans Unit * ENG [0 or 1 / 1 / 1/step]						
014	 0: OFF (End notification on) 1: ON (End notification off) Displays or does not display the State State SP5930-001 is "1 (ON)". 	 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)". 					
	Fusing Unit	*ENG	[0 or 1 / 1 / 1/step]				
016	 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.	
003	Page: PDCU: C	*ENG	[0 to 999999 / 0 / 1 page/step]	

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	
032	Dist: PDCU: C	*ENG	
033	Dist: PDCU: M	*ENG	Displays the rotation distance.
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.
048	Dist: PTR	*ENG	[0 to 999999999 / 0 / 1 mm/step]
110	Pass Dist: PTR	*ENG	Distance is used to determine lifecycle, and
112	Pass Dist: Fusing	*ENG	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]

7904	[PM Counter.Reset]	
7804	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	Clears the unit counter for each unit.
005	PCU: Y	ENG	[- / - / -]
017	ITB Unit	ENG	[Execute]
019	Fusing Unit	ENG	
022	PTR Unit	ENG	
			DFU
030	Consump	ENG	Executing this SP does not work after mass production.
			[-/-/-]
			[Execute]
050	Life:PCU: Bk	ENG	
051	Life:PCU: C	ENG	
052	Life:PCU: M	ENG	Clears the unit counter for each unit.
053	Life:PCU: Y	ENG	[- / - / -]
060	Life:ITB Unit	ENG	[Execute]
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 field. [- / - / -] [Execute]

70.50	[MachineCounter]				
7850	Parameter to calculate ID log saving data.				
	Total Counter	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
001	Total sheets printed by this machine.	A3 counts	as 1 sheet.		
002	Total Counter FC	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
002	Total number of sheets printed in full	color by th	nis machine. A3 counts as 1 sheet.		
002	Duplex	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
003	Total number of sheets printed in du	plex mode	. A3 counts as 1 sheet.		
004	Size:DL/A3	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
004	Displays ratio of total counter that D	LT / A3 hc	ive been through the machine. (%)		
005	Size:LT/A4	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
005	Displays ratio of total counter that LT / A4 have been through the machine. (%)				
004	Pkind:Normal	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
008	Displays ratio of total counter that plain paper has been through the machine. (%)				
007	Pkind:Recycle	*ENG	[0 to 0xFFFFFFF / 0 / 1 page/step]		
007	Displays ratio of total counter that recycle paper has been through the machine. (%)				
000	Pkind:MidThick	*ENG	[O to OxFFFFFFF / 0 / 1page/step]		
008	Displays ratio of total counter that mid-thick paper has been through the machine. (%)				
000	Pkind:Glossy	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
009	Displays ratio of total counter that glossy paper has been through the machine. (%)				
010	Pkind:Post	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
010	Displays ratio of total counter that p	ostcards ho	ave been through the machine. (%)		
011	Feed:Tray 1	*ENG	[O to OxFFFFFFF / O / 1page/step]		
	Displays ratio of total counter that a	re printed k	py tray 1. (%)		
010	Feed:Tray2	*ENG	[O to OxFFFFFFF / O / 1page/step]		
012	Displays ratio of total counter that are printed by tray 2. (%)				

012	Feed:Tray3	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
013	Displays ratio of total counter that are printed by tray 3. (%)				
	Feed:Tray4	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
014	Displays ratio of total counter that a	re printed b	py tray 4. (%)		
	Env:HH	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
015	Displays ratio of total counter that a (%)	re printed i	n HH environment defined by SP2302-001.		
	Env:HL	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
016	Displays ratio of total counter that are printed in HL environment defined by SP2302-001. (%)				
	Env:LH	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
017	Displays ratio of total counter that are printed in LH environment defined by SP2302-001. (%)				
	Env:LL	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]		
018	Displays ratio of total counter that are printed in LL environment defined by SP2302-001. (%)				
019	Coverage:Bk	*ENG			
020	Coverage:C	*ENG	conversion for each color and counted as		
021	Coverage:M	*ENG	a cumulative value.		
022	Coverage:Y	*ENG	[0 10 0x11 FFFFF / 0 / 1page/step]		

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

011	Cartridge: M	*ENG	
012	Cartridge: Y	*ENG	
013	ITB Unit	*ENG	
015	Fusing Unit	*ENG	Displays the replacement counter.
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	
002	Page: PCDU: C	*ENG	
003	Page: PCDU: M	*ENG	Displays the number of pages printed to
004	Page: PCDU: Y	*ENG	make a life end decision.
013	Page: ITB Unit	*ENG	[0 to 999999 / - / 1 page/step]
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	Displays the rotation distance to make a
034	Dist: PCDU: Y	*ENG	life end decision.
043	Dist: ITB Unit	*ENG	[0 to 999999999 / - / 1 mm/step]
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	
063	Dist(%): PCDU:M	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step]
064	Dist(%): PCDU:Y	ENG	0: New
073	Dist(%): ITB Unit	ENG	It counts up to 250% and stays until new
075	Dist(%): Fusing	ENG	unit is installed.
078	Dist(%): PTR	ENG	
091	Page(%): PCDU: Bk	ENG	
092	Page(%): PCDU: C	ENG	Displays the threshold of page count to
093	Page(%): PCDU: M	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step]
094	Page(%): PCDU: Y	ENG	0: New
103	Page(%): ITB Unit	ENG	100: reached life end
105	Page(%): Fuser	ENG	It counts up to 250% and stays until a new unit is installed.
108	Page(%): PTR Unit	ENG	

7004	[Prev. Counter] Previous Unit Counter Display			
7900	Copies the life counter to this SP as the previous counter when the life counter is cle			
001	Page: PCDU: Bk	*ENG		
002	Page: PCDU: C	*ENG		
003	Page: PCDU: M	*ENG	Displays the number of pages printed with	
004	Page: PCDU: Y	*ENG	the previous unit counter.	
013	Page: ITB Unit	*ENG	[0 to 999999 / - / 1 page/step]	
015	Page: Fusing Unit	*ENG		
018	Page: PTR Unit	*ENG		
031	Dist: PCDU: Bk	*ENG	Displays the rotation distance with the	
032	Dist: PCDU: C	*ENG	previous unit counter.	
033	Dist: PCDU: M	*ENG	[0 to 999999999 / - / 1 mm/step]	

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	
002	PCDU: C	ENG	
003	PCDU: M	ENG	
004	PCDU: Y	ENG	
005	PDCU: FC	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step]
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	
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	Displays the information number for each
005	Product Type ID	*ENG	category.
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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [O to OxFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [O to OxFFFFFFFF / - / 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	
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	Displays the information number for each
004	Area ID	*ENG	category.
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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [O to OxFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [O to OxFFFFFFFF / - / 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
002	Cartridge Ver	*ENG	category.

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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [O to OxFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [O to OxFFFFFFFF / - / 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	
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	Displays the information number for each
005	Product ID	*ENG	category.
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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [0 to 0xFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end.

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

7025	[Toner Log: Bk]			
7935	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	[O to OxFFFFFFF / - / 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 0xFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 1/step]	
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]	

700/	[Toner Log: C]			
7930	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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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 0xFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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 0xFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

7952	[PM Yield Setting]		
021	Days Thres:PCDU: K	*ENG	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
022	Days Thres:PCDU: FC	*ENG	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

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.

Updating Procedure

- 1. Turn the main power switch off.
- 2. Remove the slot cover ($\hat{P} \times 1$).
- 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.

Handing 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).

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.

Error Message Table

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.

Vote

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

Vote

• 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.

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.

Vote

- 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.

Vote

• 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.

 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").

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
ІМН	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)

Key to Acronyms

 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.
- Use a card reader to copy the file and send it for analysis to your local Ricoh representative by email. You can also send the SD card by regular mail if you want.

Debug Log Codes

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

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

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

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

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

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

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

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

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

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

Vote

- 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



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.

Vote

• 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.

5. Service Table

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 selfdiagnostic 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.
В	The error involves one or some specific units. The machine operates as usual, excluding the related units.	Turn the main switch off and on.
С	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)
		FGATE: Does not turn ON.(01: Bk, 02: C, 03: M, 04: Y)
230-01		GBIO has not been asserted, although the specified time (200 ms)
230-02	D	elapsed after setting JOB to be started and reaching the FGAT assert
230-03		time.
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)
	D	FGATE: Does not turn OFF.(01: Bk, 02: C, 03: M, 04: Y)
231-01 231-02		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.
		Control BoardEngine 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
		• 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.
		• Turn the power OFF and then ON.
		• Engine Board

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	LEDA communication error (01: Bk
277-01		The head type data was read three times in succession
277-02		LED Head error
277-03		Harness Error
277-04		Turn the power OFF and then ON.Replace the LED Head

Image Processing – 1

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Toner supply feed lock (01: Bk, 02: C, 03: M, 04: Y)
		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. n: The value was set at SP3-131-015.
332-01		• Disconnected or broken Solenoid: Upper cover. (Failed to
332-02	D	open the toner supply shutter)
332-03		Disconnection of Toner Supply Clutch
332-04		 Failed PCDU. (Toner leak)
		Toner clogging
		• 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)
	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.
364-01		- Bad connector contact or connector disconnected/wire broken
364-02		- Failed TE Sensor
364-03		- Turn the main power of the printer OFF and then ON
364-04		- 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
		 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 2.31V)

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		- Disconnected TM(ID) Sensor connector/bad contact - Stained TM(ID) Sensor window
		- Failed TM(ID) Sensor
		- Image Transfer Belt loosened or out of place
		 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.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		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)
	D-02 D	Lower limit (initially 2.31V)
		- Disconnected TM(ID) Sensor connector/bad contact
370-02		- Stained TM(ID) Sensor window
		- Failed TM(ID) Sensor
		- Image Transfer Belt loosened or out of place
		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)
		 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
		 When the motor rotation request or speed change request is issued, the motor is in the stopped state.
		Motor Stop Timing
		 A command to stop the rotation of the motor has been issued, but the motor is still rotating.
		- Disconnected connector
		- Broken signal wire
		- Excessive motor torque
		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)
204.05	D	Drum Motor: CMY error
		 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.
		 When the motor rotation request or speed change request is issued, the motor is in the stopped state.
370-03		Motor Stop Timing
		A command to stop the rotation of the motor has been issued, but the motor is still rotating.
		 Disconnected connector Broken signal wire Excessive motor torque
		Check the connector connection.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		 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:
		Transfer Roller error
		 High Voltage Power Supply (Separation) error
		 Damaged HVP connection harness
		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:
		Failed PCDU
		 Failed High Voltage Power Supply (Separation)
		 Damaged HVP connection harness
		Repalce 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)
		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:
		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
		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:
		 HVP Connect harness disconnected Damaged HVP connection harness
		Check the HVP Connect harnessReplace 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)
		 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
		 When the motor rotation request or speed change request is issued, the motor is in the stopped state.
		Motor Stop Timing
		A command to stop the rotation of the motor has been issued, but the motor is still rotating.
		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
		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)
	D	Intermediate transfer contact Sensor error (01: Home position error, 02: Contact error, 03: Non-contact error)
		- Home position error: SC442-01
442-01		If the home position is not set within the T4 time after turning ON the
442-02		feed motor and feed clutch, an error results.
442-03		- Contact error: SC442-02
		If the contact state is not set within the T3 time after turning ON the
		feed motor and feed clutch, an error results.
		- Non-contact error: SC442-03

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		If the non-contact state is not set within the T3 time after turning ON the feed motor and feed clutch, an error results.
		[Error time T3]
		SP value: 100 to 25500 ms
		Initial value: 3000 ms
		Note: Contact/non-contact error judgment
		[Error time T4]
		SP value: 100 to 25500 ms
		Initial value: 3000 ms
		Note: Home position error judgment
		High motor load
		• Failed motor
		Disconnected connector
		Broken harness wire
		• PSU: +24 V fuse blown
		Failed interlock mechanism
		Failed Engine Board
		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	С	Temperature/humidity Sensor error
		 Temperature Sensor output error: Out of range between 076 V and 2.90 V
		Humidity Sensor output error: 2.4 V or more
		- Unmounted Sensor (Unset connector or broken wire) - Failed Sensor
		• Turn the power OFF and then ON.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		 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	В	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
		• 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
		 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
		 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.
		- Disconnected connector
		- Broken signal wire
		- Excessive motor torque
		- Check the connector connection.
		- Turn the power OFF and then ON.
		- Replace the Fusing Motor.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
521-01		Bank 1 motor error (Bank: paper tray unit)
		Early Detection
	В	 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.
		- Disconnected connector
		- Broken signal wire
		- Excessive motor torque
		- 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)
521-02	В	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)
		A command to stop the rotation of the motor has been issued, but the motor is still rotating.
	- Disconnected connector - Broken signal wire	
		- Excessive motor torque
		- Check the connector connection.
	- Replace the bank 2 motor.	

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	В	Bank 3 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
521-03		A command to stop the rotation of the motor has been issued, but the motor is still rotating.
		- Disconnected connector
		- Broken signal wire
		- Excessive motor torque
		- 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)
		Cooling fan error
530-00	D	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

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

	 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
	 When the motor rotation request or speed change request is issued, the motor is in the stopped state.
	Motor Stop Timing
	A command to stop the rotation of the motor has been issued, but the motor is still rotating.
	- Disconnected connector - Broken signal wire - Excessive motor torque
	- 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)
541-00	A	Broken fusing (Center) thermopile wire
		At least ten times, the temperature is detected to stay at 0 deg C or less for three seconds.
		- Broken thermopile wire - Bad connector contact
		Clear the SP: fusing SC.
		Replace the connector.
		Replace the thermopile.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
542-02	A	Fusing lamp (Center) thermopile not reloaded 1
		The heater (Center) thermopile does not reach 50 deg C 2.4 seconds after the start of heat control (during normal startup control).
		Stained thermopile lens

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		 Deformed or floating thermistor
		 Input voltage out of range
		• The overtemperature prevention mechanism started working
		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.
		 Stained thermopile lens Deformed or floating thermistor Input voltage out of range The overtemperature prevention mechanism started working
		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).
		Stained thermopile lens
		Deformed or floating thermistor
		Input voltage out of range
		The overtemperature prevention mechanism started working
		Clear the SP: fusing SC.
		Clean the thermopile lens.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		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.
		Shorted triacFailed Engine Board
		• Clear the SP: fusing SC.
		Replace the PSU.
		Replace the Engine Board.

SC NO.PatternDetails (Symptom, Possible Cause, Troubleshooting Procedures)AFusing (Center) thermopile high-temperature detected (hardware)The hardware high-temperature error Sensor flag is detected at 10 ms intervals.• Damaged triac (shorted) • Failed engine control board • Failed fusing thermopile • Failed fusing thermopile • Failed fusing thermopile • Calear the SP: fusing SC. • Replace the PSU. • Replace the Fusing Unit.			
544-00 A Fusing (Center) thermopile high-temperature detected (hardware) The hardware high-temperature error Sensor flag is detected at 10 ms intervals. Damaged triac (shorted) Failed engine control board Failed fusing thermopile Failed fusing thermistor A The PWM signal is control software behavior Clear the SP: fusing SC. Replace the Engine Board. Replace the Fusing thermopile. Replace the Fusing thermopile.	SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
544-00 A 544-00 A • 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). • Clear the SP: fusing SC. • Replace the Fostu. • Replace the Fusing thermopile. • Replace the Fusing thermopile.			Fusing (Center) thermopile high-temperature detected (hardware)
 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). Clear the SP: fusing SC. Replace the PSU. Replace the Engine Board. Replace the Fusing Unit. 			The hardware high-temperature error Sensor flag is detected at 10 ms intervals.
 Failed engine control board Failed fusing thermopile Failed fusing thermistor Failed fusing control software behavior The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error). Clear the SP: fusing SC. Replace the PSU. Replace the Engine Board. Replace the fusing thermopile. Replace the Fusing Unit. 			Damaged triac (shorted)
 544-00 A 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). Clear the SP: fusing SC. Replace the PSU. Replace the Engine Board. Replace the fusing thermopile. Replace the Fusing Unit. 			 Failed engine control board
 544-00 A 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). Clear the SP: fusing SC. Replace the PSU. Replace the Engine Board. Replace the fusing thermopile. Replace the Fusing Unit. 		A	 Failed fusing thermopile
 A Abnormal fusing control software behavior The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error). Clear the SP: fusing SC. Replace the PSU. Replace the Engine Board. Replace the fusing thermopile. Replace the Fusing Unit. 			 Failed fusing thermistor
 The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error). Clear the SP: fusing SC. Replace the PSU. Replace the Engine Board. Replace the fusing thermopile. Replace the Fusing Unit. 	544-00		 Abnormal fusing control software behavior
 Clear the SP: fusing SC. Replace the PSU. Replace the Engine Board. Replace the fusing thermopile. Replace the Fusing Unit. 			 The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error).
 Replace the PSU. Replace the Engine Board. Replace the fusing thermopile. Replace the Fusing Unit. 			Clear the SP: fusing SC.
Replace the Engine Board.Replace the fusing thermopile.Replace the Fusing Unit.			Replace the PSU.
 Replace the fusing thermopile. Replace the Fusing Unit.			Replace the Engine Board.
Replace the Fusing Unit.			Replace the fusing thermopile.
			Replace the Fusing Unit.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	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).
		Deformed or floating thermistor
545-00		 Broken fusing lamp wire
545-00		 The overtemperature prevention mechanism started working
		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)
		• 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.
		- Damaged fusing relay (open contact) - Failed fusing relay drive circuit - PSU fuse (24VS) blown
		• Turn the main power OFF and then ON.

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

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Stained thermopile lens
		 Deformed or floating thermistor
		 Input voltage out of range
		 The overtemperature prevention mechanism started working
		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.
		Shorted triacFailed Engine Board
		Clear the SP: fusing SC.
		Replace the PSU.
		Replace the Engine Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	A	Fusing (End) thermistor high-temperature detected (software)
		The hardware high-temperature error Sensor flag is detected at 10 ms intervals.
		Damaged triac (shorted)
		 Failed engine control board
554-00		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).
		Clear the SP: fusing SC.
		Replace the PSU.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		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).
		Deformed or floating thermistor
	A	Broken fusing lamp wire
		• The overtemperature prevention mechanism started working
		CLEAR THE SP: FUSING SC.
		• Replace the thermistor.
		• Replace the fusing (End) lamp.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
557-00	С	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
		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).
		Stained thermopile lens
562-00		 Deformed or floating thermistor
		Input voltage out of range
		• The overtemperature prevention mechanism started working
		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.
		Shorted triacFailed Engine Board
		CLEAR THE SP: FUSING SC.
		Replace the PSU.
		 Replace the Engine Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		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.)
		Damaged triac (shorted)
	A	Failed Engine Board
		Failed fusing thermopile
564-00		Failed fusing thermistor
504 00		 Abnormal fusing control software behavior
		 The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error).
		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.
		- Broken thermistor wire - Bad connector contact
		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)
		The temperature is detected to stay at 230 deg C or higher for one second.
		Shorted triac
		Failed Engine Board
		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
		Damaged triac (shorted)
	A	Failed Engine Board
		Failed fusing thermopile
		Failed fusing thermistor
574-00		 Abnormal fusing control software behavior
		 The PWM signal is continuously supplied from the IH inverter (due to a software or temperature Sensor error).
		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)
		An error is notified during EEPOM communication and the printer does not recover after three retries.
		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
		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
		Turn the power OFF and then ON.

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

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		- Noise - Engine Board error
		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.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		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
		 Use SP5-811 to enter the product S/N, and turn the power OFF and then ON.
995-**	D	• Replace the NVRAM with the one before the replacement.
		SC995-02
		• 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
		Replace the controller with the specified one.
		SC995-04

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Replace the CTL Board
		Replace the .Engine Board.

Controller

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Expanded authentication module error
		If the expanded authentication management is set to "Enabled", an error is detected when:
		 There is no external expanded authentication module in the machine;
		 The SD card or the file of the expanded authentication module is broken;
		 There is no external expanded authentication module in the machine.
636-01		 The SD card or the file of the expanded authentication module is broken
		• 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:
		 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)
		Communication error of the remote service modem
		When an error in the communication line of the Cumin-M Embeded RC gate as a modem due to the incorrect Embeded RC gate Cumin modem setting is detected when the power is turned on.
		650-01
		Dial-up authentication has failed.
		650-04
650-**	В	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 Embeded 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 Embeded RC gate as a network equipment modem is installed, or the wired/ wireless LAN does not work properly.

SC NO.	Pattern	Details (Troubleshooting Procedures)
		650-01 SP5-816-156: Check the dial-up user name. SP5-816-157: Check the dial-up password. 650-04
		SP5-816-160: Check if the AT command is correct.
	В	If correct, it is a software bug.
		650-05
		None
650-**		650-13
		 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.
		650-14
		• If the modem board is installed, remove the modem board.
		Check if the wired/wireless LAN is available.

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

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

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
	D	Remote service ID2 mismatch error
		When the ID2 of the individual certificate for the device does not match the ID2 of the NVRAM.
		• The controller board has been replaced with the one with which the Embeded 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.
652-00		If an error occurs during the Embeded 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.
		If an error occurs after the Embeded RC gate Cumin installation:
		CE clears the installation of the Embeded 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.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
653-00	D	Incorrect ID2 for the remote service
		When the ID2 stored in the NVRAM has one of the following problems:
		• 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 Embeded RC gate Cumin, creates a common certificate, and then installs the Embeded RC gate modem again.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Engine startup error
		Case 1:
670-00	D	 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).
		Case 2:
		After the /ENGRDY signal assertion, an unintended shutdown is detected.
		Case 1:
		• The Engine Board does not start up.
		Case 2:
		The Engine Board is reset at an unintended timing.
		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)
		Controller startup error
672-**	С	 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)
		 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.
		672-10
		After the machine is powered on, communication (receiving) between the controller and operation panel is unable to begin normally.
		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.
		672-12
		Communication with the controller is interrupted after a normal startup.
		672-13
		The operation panel detects that the controller is down for reasons other than those described above.
		672-99
		The software for the operation panel (OCS) is aborted.
		Turn the main switch off and on.

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

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.
		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.
		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: 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)
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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	В	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	В	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-**	В	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
		• Turn the main switch off and on.
		• Replace the wireless LAN card.

SC NO. Pattern Details (Symptom, Possible Cause, Troubleshooting Procedures) 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 858-** А error that seems to be recoverable occurred. 858-31 A fatal error occurred during data conversion. • 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)
	В	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
859-**		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.
		Check the HDD connection.
		 Initialize the HDD.
		Replace the HDD.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		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
860-00	В	(-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.
		• 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)
		• 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	В	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)
		SD card access error
		When an error reply is returned while the SD controller board is in operation.
		• Defective SD card
		Defective SD controller
868-**	D	868-01
		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.
		868-02
		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.
		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.
		If the error persists even after replacing the SD card, replace the Controller Board.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
870-**	В	Address book data error
		During startup or machine operation, an error is detected in the handling and the configuration of the address book data.
		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)
		 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.
		 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	В	HDD mail received data error
		An error is detected in the HDD at machine power-on.
		Defective HDD
		 Power failure while accessing the HDD
		 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	В	HDD mail transfer error
		An error is detected in the HDD at machine power-on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		Defective HDDPower failure while accessing the HDD
		 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
		 Error occurred at "hddchack –I".
		875-01
		• Data erase failed.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause)
		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
	D	 Damaged log data file (This can be caused by the machine being switched off while it is operating.)
876-00		876-02
		 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
		 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)
		 The log data file has not been encrypted even though log encryption is enabled (due to a defective NVRAM)
		876-05
		 Installed NVRAM has been used in another machine.
		 Installed HDD has been used in another machine.
		876-99
		 Causes other than those described above

SC NO.	Pattern	Details (Troubleshooting Procedures)
876-00	D	 876-01 Initialize the HDD. 876-02 Replace/reconfigure the encryption module. Disable the log encryption setting. 876-03 Use SP5832-004 to initialize the HDD. Disable the log encryption setting. 876-04 Use SP5832-004 to initialize the HDD. 876-04 Use SP5832-004 to initialize the HDD. 876-05 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	TPM system authentication error
		878-01
		Defective file system in the USB Flash memory
		878-02
		An error occurred in the TPM or the TPM driver.
		878-03

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
		 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.
		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)
		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
920-**	В	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-**		Printer font error
		921-00
	В	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.
		Turn the main switch off and on.

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
		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.
923-00	Б	Defective HDD
		 HDD inconsistency caused by switching the machine off while writing to HDD
		Software bug
		 When HDD error-related service calls (SC860-SC865) are issued at the same time:
		This error can be caused by a defective HDD. Therefore, take the necessary countermeasures specified for SC860, etc.
		 When other HDD error-related service calls (SC860-SC865) are NOT issued at the same time:
		1) Turn the main switch off and on.
		 If it cannot be restored by taking the above measure, initialize the Net File partition in the HDD.
		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.
		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.
		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.
		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.
		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	С	Software continuity error
		The software has attempted to perform an unexpected operation. (However, the process can continue running if recovery processing is carried out.)
		 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)
		Application function selection error
		• 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
997-00	В	 Check whether an option required by the application (RAM, DIMM, board) is installed properly.
		 Check whether downloaded applications are correctly configured.
		(Take necessary countermeasures specific to the application in which the error occurs. In some applications, the logs can be taken from the monitor. If this option is available, analyze the logs.)

SC NO.	Pattern	Details (Symptom, Possible Cause, Troubleshooting Procedures)
998-00	D	Application start error
		 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.
		 Software bug An option required by the application (RAM, DIMM, board) is not installed properly
		 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



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

6

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.	В	Front Cover
32	Not reached the Paper Exit Sensor.	С	Front Cover
87	Didn't pass the Registration Sensor.	В	Front Cover
96	Didn't pass the Paper Exit Sensor.	С	Front Cover

Bypass Tray

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

Jam, with Paper Lost



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

Electrical Component Defects



Surface

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).



Unit	Parts	Interval
	Drum	95mm
	Development Roller	36mm
PCDU	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



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



m1092001

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:".

			Manage Pre	eset List
Current Setting	One Click Preset List:			
		1→2	-	
	Basic Setting	2 on 1	1 sid	ed
	1→2,	-		
Unregistered	2 on 1 (2 sided)	Black and White (2 sid	led) Unregis	tered
Document Size:	Job Type:			
A4 (210 x 297 mm) Print On:	() Normal Print	1	· D De	tails
Same as Original Size	Document Size:	In	put Tray:	
	A4 (210 × 297 mm) <u> </u>	uto Tray Select	<u>•</u>
Settings Summary	Orientation:	Pa	per Type:	
	Landscape		ain & Recycled	-
	Plack and Whi			

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



Other Problems



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



6

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 Duplex is not performed properly. Cause 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			
			Action Replace the EGB 			
FU2	Microfuse	Overcurrent protection for Solenoid: Upper Cover circuit	 Symptom Toner is not supplied even though the remaining Toner in the Toner Cartridge is sufficient and supplying is performed. Cause There is a short in the solenoid, or a Fuse blows caused by the GND short in the Harness. Action Replase the EGB 			
FU3	Microfuse	Overcurrent protection for LED Power supply	 Symptom LED error Cause Harness(+5V_LED) is shorted to GND. Fuse blows caused by the GND short in the Harness. Action Replace the Operation Panel or EGB 			
FU4	Microfuse	Overcurrent protection for Duplex Inverter Solenoid circuit	Symptom • Duplex is not performed properly. Cause • There is a short in the solenoid, or a fuse blows caused by the GND short in the Harness. Action • Replace the EGB			
FU <i>5</i>	Microfuse	Overcurrent protection for Operation Panel	 Symptom The Operation Panel does not work even though the power is turned on. Cause Harness (+5V_LED) is shorted to GND. 			

FU No.	Fuse	Function	Symptom, Cause, Action			
			 Fuse blows caused by the GND short in the Harness. 			
			Action			
			Replace the Operation Panel or EGB			

PSU Fuses



FU No.	Fuse	Function	Symptom, Cause, Action
FU10 1	Ceramic tube Fuse	Overcurren t protection for the Fusing Heater circuit	 Symptom Fusing errors occur. Cause The harness of the Fusing became shorted with GND. Broken Fusing circuit in the PSU Action

FU No.	Fuse	Function	Symptom, Cause, Action				
			Replace the PSU				
FU10 2	Ceramic tube Fuse	Overcurren t protection for the Power circuit	 Symptom The power cannot be turned on. Cause 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 Action Replace the PSU 				
FU20 3	Microfuse	Protection for the secondary side Harness of the +24V output	 Symptom Engine does not start even though the power of the main body is turned on. Cause The overcurrent protection equipment of the PSU suffered a breakdown and the +24V_LPS output became shorted with GND. Action Replace the PSU 				
FU20 4	Microfuse	Protection for the secondary side Harness of the +24V output	 Symptom Problems occur, including Process Control error, Jam; an image is not generated; and Toner supp is not carried out. Cause The overcurrent protection equipment of the PSL suffered a breakdown and the +24V_LPS output became shorted with GND. Action Replace the PSU 				

6. Troubleshooting

281

Energy Save

Energy Saver Modes

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

Power Consump.



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

Timer Settings

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

• 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

Fusg 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 Consumptio n (Data:a x Data:d) (Wmin.) Data: e
Operatin g mode	NA: 543W EU: 565W	001: Operatin g 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:



7

Reduce paper volume in half!

2. Combine mode:



Reduce paper volume in half!
3. Duplex + Combine:



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.

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.

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

2 in 1 mode:

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

TABLE OF CONTENTS

1. Appendix: General Specifications

General Specifications	3
Mainframe	
Engine	3
Controller	5
Option	6
Paper Feed Unit	6
Supported Paper Sizes	7
Paper Feed	7
Paper Exit	9
Mainframe	9
Software Accessories	12
Printer Drivers	
Utility Software	
Optional Equipment	
LCT Paper Feed Unit TK2000	
Hard Disk Drive Option Type C730	
Memory Unit Type N 1GB	
IEEE802.11 Interface Unit Type O	
IPDS Unit Type C730	
2. Appendix: PM Tables	
Preventive Maintenance	
User Replaceable Items	
Yield Items	
Service Maintenance	16
Preventive Maintenance Items	
Mainframe	
3. Appendix: Service Program Mode Tables	
Service SP Tables	
Service Table Key	
, SP1-XXX (Service Mode)	
Engine SP Tables-1	34
SP1-XXX (Feed)	34

Engine SP Tables-2	
SP2-XXX (Drum)	
Engine SP Tables-3	
SP3-XXX (Process)	
Engine SP Tables-4	122
SP4-XXX (Scanner)	
Engine SP Tables-5	123
SP5-XXX (Mode)	
Engine SP Tables-6	
SP6-XXX (Peripherals)	
Engine SP Tables-7	191
SP7-XXX (Data Log)	
Engine SP Tables-8	214
SP8-XXX (Data Log 2)	214
Keys and abbreviations in Data Log 2	
Input and Output Check	241
Input Check Table	
Output Check Table	
Test Pattern Printing	

General Specifications

Mainframe

Engine

Туре		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 A4/LEF, Paper 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/E	DLT	Automatic		
	-		481 x 515 x 360 mm / 18.9 x 20.3 x 14.2 inch		
Dimensions (W x	D x H)		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		
		Std Tray	250 sheets		
Input capacity (80g/mf, 20lb.Bond)	Standard	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	
	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")	
Input Paper Size (Available the dial)	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")	
	1	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	
Media Type		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	
	Standard Tray		56 - 220 g/m ² (15 lb. Bond - 80 lb. Cover)	
Paper Weight	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: 1GB			
HDD		Option			
Rating Power	NA versior	1	120-127V, 60Hz		
Spec.	EU, Asia, C	China version	220 - 240V, 50/60Hz		
	NA	Max.	1400W or less		
Power	version	Energy Saver	1.0W or less		
Consumption	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
	Standard	PCL6/5c, RPCS, PostScript 3, PDF Direct
Language	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″ × 18″	N	N	N	N
A3 SEF	297 x 420mm	A	A	С	D
B4 SEF	25 7x 364mm	В	В	С	D
A4 SEF	210 x 297mm	A	А	С	D
A4 LEF	297 x 210mm	A	А	С	D
B5 SEF	182 x 257mm	В	В	С	D
B5 LEF	257 x 182mm	В	В	С	D
A5 SEF	148 x 210mm	A	В	С	D
A5 LEF	210 x 148mm	A	N	С	D
B6 SEF	128 x 182mm	В	N	С	D
B6 LEF	182 x 128mm	N	N	С	Ν
A6 SEF	105 x 148mm	А	N	С	D
A6 LEF	148 x 105mm	N	N	N	Ν
DLT SEF	11" x 17"	A	А	С	D
Legal SEF	8 1/2″ x 14″	A	В	С	D
Letter SEF	8 1/2″ x 11″	A	А	С	D
Letter LEF	11″ x 8 1/2″	A	А	С	D
Half Letter SEF	5 1/2″ x 8 1/2″	В	В	С	D
Half Letter LEF	8 1/2″ x 5 1/2″	N	N	С	N
Executive SEF	7 1/4″x10 1/2″	A	В	С	D

Paper	Size (W x L)	Standard Tray	Optional Tray	Bypass Tray	Duplex
Executive LEF	10 1/2″x 7 1/4″	В	В	С	D
F SEF	8″ x 13″	В	В	С	D
Foolscap SEF	8 1/2″ x 13″	В	В	С	D
Folio SEF	8 1/4″ x 13″	А	В	С	D
8 K SEF	267 x 390 mm	А	В	С	D
16 K SEF	195 x 267mm	А	В	С	D
16K LEF	267 x 195mm	В	В	С	D
Com10 SEF	4 1/8″ x 1/2″	В	Ν	С	Ν
Monarch SEF	3 7/8″ x 7 1/2″	В	Ν	С	Ν
C6 SEF	114 x 162mm	В	Ν	С	Ν
C5 SEF	162 x 229mm	В	Ν	С	Ν
C5 LEF	229 x 162mm	В	Ν	С	Ν
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.
В	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

С	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″	Ν
A3 SEF	297 x 420mm	D
B4 SEF	25 7x 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	Ν
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″x10 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 1/2″	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 Le	ngth (inch)	5.0 - 49.6	

Remarks: Output Tray

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

Ν	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.

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	A font management utility with screen fonts for the printer	
(XP / Vista)	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

Memory Unit Type N 1GB

IEEE802.11 Interface Unit Type O

IPDS Unit Type C730

1. Appendix: General Specifications

Preventive Maintenance

User Replaceable Items

ltem	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.

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

ltem	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.

ltem	Yield
PCDU	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

ltem	50K	100K	1 <i>5</i> 0K	180K	EM	Remarks
PCDU						
PCDU	R					
LED lens cleaning					С	-
Paper Feed						
Paper Feed Roller		С		R		Damp cloth , dry cloth
Friction Pad		С		R		Dry cloth
Registration Roller		С				Damp cloth , dry cloth
Registration Sensor		С				Blower brush
Vertical Transport Roller		С				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		С				Damp cloth , dry cloth
Reverse Roller		С				Damp cloth , dry cloth

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

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 Swi	itch]		
001	Bit Swit	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	bit 5 DFU - - bit 6 DFU - - -				
bit 6					
bit 7	[RPCS,PCL]: Printable area frame border	Disabled	Enabled		
	Prints all RPCS and PCL jobs with a border around the	e printable area	l.		

1001	[Bit Switch]							
002	Bit Swit	rch 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 Some host systems submit jobs that contain both PS an switching is disabled, these jobs will not be printed pr	L processor mid-job. and PCL5e/c. If Auto PDL 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 Swi	itch]		
003	Bit Swit	ch 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	5 HP4000/HP8	P8000.				
	In other words, the left margin defined in the job (usually " <esc>*rOA") will be changed to "<esc>*r1A".</esc></esc>						
bit 3	DFU	-	-				
bit 4	DFU	-	-				
bit 5	DFU	-	-				
bit 6	DFU	-	-				
bit 7	DFU	-	-				

1001	[Bit Sw	[Bit Switch]								
004	Bit Swit	rch 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 s of printing on the back side of the page. This might reduce printing spe									
	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 bitswitch changes the assumed direction to LEF.									
	bit 7	DFU	-	-						

1001	[Bit Switch]							
005	Bit Swit	ch 5	0	1				
		Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.	Disabled	Enabled				
	bit 0	If enabled, users will be able to configure a Collate T Type from the operation panel. The available types w configured options.	ype, Staple Typ ill depend on th	e, and Punch ne device and				
		After enabling the function, the settings will appear ur	nder:					
		"User Tools > Printer Features > System"						
	bit 1	Multiple copies if a paper size or type mismatch	Disabled	Enabled				
		occurs	(single copy)	(multiple)				
		If a paper size or type mismatch occurs during the printing of multiple copies, only a single copy is output by default. Using this BitSw, the device can be configured to print all copies even if a paper mismatch occurs.						
	bit 2	Prevent SDK applications from altering the contents of a job.	Disabled	Enabled				
		If this switch is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter".						
		Note: The main purpose of this switch is for troubleshooting the effects of SDK applications on data.						
	bit 3	[PS] PS Criteria	Pattern3	Pattern 1				
		Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not.						
	Pattern3: includes most PS commands.							
		Pattern 1 : A small number of PS tags and headers						
	bit 4	Increase max number of the stored jobs.	Disabled (100)	Enabled (750)				
		Changes the maximum number of jobs that can be stored on the HDD. The default (disabled) is 100. If this is enabled, the max. will be raised to 750.						
	bit 5	DFU	-	-				

bit 6	Method for determining the image rotation for the edge to bind on.	Disabled	Enabled					
	ey were in the station jobs.	were in the specifications of on jobs.						
	The old models are below:							
	- PCL: Pre-04A models							
	- PS/PDF/RPCS:Pre-05S models							
bit 7	Letterhead mode printing	Disabled	Enabled (Duplex)					
	Routes all pages through the duplex unit.							
If this is disabled, simplex pages or the last page of an odd-paged duplex job, on not routed through the duplex unit. This could result in problems with letterhead/printed pages.								
	Only affects pages specified as Letterhead paper.							

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

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

	bit 7	DFU -									
1001	[Bit Swi	Bit Switch]									
008	Bit Swit	ch 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 Swit	ch 9	0	1					
	bit 0	PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284).	Disabled (Immediatel y)	Enabled (10 seconds)					
		To be used if PDL auto-detection fails. A failure of PDL autodetection doesn't necessarily mean that the job can't be printed. This bit switch tells the device whether to time-out immediately (default) upon failure or to wait 10 seconds.							
	bit 1	DFU	-	-					

	bit 2	Job Cancel	Disabled (Not cancelled)	Enabled (Cancelled)				
		If this bit switch, all jobs will be cancelled after a jam Note: If this bitsw is enabled, printing under the follow problems:	occurs. ving conditions	might result in				
		- Job submission via USB or Parallel Port						
		- Spool printing (WIM >Configuration > Device Settin	gs > System)					
	bit 3	DFU	-	-				
	bit 4	Timing of the PJL Status ReadBack (JOB END) when printing multiple collated copies.	Disable	Enable				
		This switch determines the timing of the PJL USTATUS JOB END sent when multiple collated copies are being printed.						
		O (default): JOB END is sent by the device to the client after the first copy has completed printing. This causes the page counter to be incremented after the first copy and then again at the end of the job.						
		1: JOB END is sent by the device to the client after the This causes the page counter to be incremented at the	END is sent by the device to the client after the last copy has finished printing. uses the page counter to be incremented at the end of each job.					
	bit 5	Display UTF-8 text in the operation panel	Enabled	Disabled				
		Enabled (=0):						
		Text composed of UTF-8 characters can be displayed in the operation panel.						
		Disabled (=1):						
		UTF-8 characters cannot be displayed in the operation panel.						
		For example, job names are sometimes stored in the MIB using UTF-8 encoded characters. When these are displayed on the operation panel, they will be garbled unless this switch is enabled (=0).						
	bit 6	Disable super option	OFF	ON				
		Switches super option disable on / off.						
If this is On, multiple jobs are grouped at LPR port. PJL settings are enabled that are specified queue names are sent.								
	bit 7	Enable/Disable Print from USB/SD's Preview function	Enabled	Disabled				
		Determines whether Print from USB/SD will have the Preview function.						

Enab	led	(=(D): Pi	int from	USB/	'SD	will	have	e the	e Prev	iew fu	nction.	

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

1001	[Bit Switch]							
010	Bit Swit	ch 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.						
	bit 7	DFU	-	-				

1001	[Bit Switch]						
011	Bit Swit	ch B	0	1			
	bit 0	DFU	-	-			
	bit 1	Print job interruption	Does not allow interruption	Allow interruption			
		O (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 Swit	ch 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.		[- / - / -] [Execute] If the user mode.	
003	Delete Program	*CTL	[- / - / -] [Execute]	

1004	[Print Summary]
------	-----------------

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

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

	[Supply Display]				
1007	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			
002	PCU	*CTL	[0 or 1 / 1 / 1 / step]		
004	Int. Transfer	*CTL	^a The Detault setting is T but the Factory setting is 0		
006	Fuser	*CTL			

	[ToneCtlSet]				
1101	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			
002	Tone (Previous)	*CTL	[-/-/-]		
003	Tone (Current)	*CTL	[_,,,,,,,,]		

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

1102	[PrnColorSheet]			
1103	Prints the test page to check the color balance before and after the gamma adjustment.			
001	ToneCtlSheet	CTL	[-/-/-]	
002	ColorChart	CTL	[Execute]	

1104	[ToneCtlValue]			
1104	Adjusts the printer gamma for the mode selected in the "Mode Selection" menu.			
001	Set Black 1	CTL		
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	[0 to 30 / 00 / 1/step]	
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		

29

015	Set Black 15	CTL	
016	Set Black 16	CTL	
021	Set Cyan 1	CTL	
022	Set Cyan 2	CTL	[0 to 30 / 00 / 1/step]
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	
3

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	
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	[0 + 20] / 00 / 1 / (top)]
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]

31

	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]

 Indext
 [TonerLimit]

 Adjusts the maximum toner amount for image development.

 001
 TonerLimitValue
 *CTL
 [0 to 400 / 220 / 1 %/step]

1100	[Ext.TonerSave]			
1100	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	Mode 1 : 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]	

	[IBACC Exec]			
1113	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]	

	[IBACC ToneCtlSet]			
1114	14 Sets back to the previous value of IBACC gamma correction for all resolutions. It 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)

	[Leading Edge Reg] Leading Edge Registration					
	(Tray or By-pass, Paper Type, Process Speed)					
	Process Speed: LowSpd: Low S	peed, HlfS	pd: Half speed, NorSpd: Normal speed			
	♦ Note	♦ Note				
1001	 Adjusts the leading edge registration by changing the registration motor operation timing for each mode. 					
	 Increasing a value: an ima 	ige is move	ed to the trailing edge of paper.			
	 Decreasing a value: an im 	age is mov	ed to the leading edge of paper. It is			
	recommended that these s	ervice prog	grams are set up by the user program.			
001	Tray l	*ENG				
002	By-pass	*ENG				
003	Duplex	*ENG				
004	Tray2	*ENG	[-9.0 to 9.0 / 0.0 / 0.1 mm/step]			
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]

	[Side-to-Side Reg] Side-to-Side Registration Adjustment			
1002	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	Tray 1	*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]	

	[Paper Buckle] Paper Buckle Adjustment (Tray or By-pass, Paper Type, Process Speed)			
1003	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	Dpulex: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]

	[Reload Permit Set] DFU				
1101	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				
1101	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]		

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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			
1101	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]	
	[Reload Permit Set] DFU			
1101	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				
1102	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]

	[Print Target Temp] DFU			
1105	(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]	
001	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]	
002	Specifies the heating roller target temperature for the ready condition in BW printing.			
002	Plain2:FC:Center	*ENG	[130 to 170 / 153 / 1 deg/step]	
003	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 targe	et temperat	ure 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	Plain 1: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	Plain 1 : FC: Press	*ENG	[50 to 150 / 95 / 1 deg/step]
102	Plain 1: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	Thick 1: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	Plain 1: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:FCPress	*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]

3

1107 [Stdby Target Temp] DFU

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]	
002	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	[Aftr 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.			
	Press	*ENG	[100 to 150 / 110 / 1 deg/step]	
002	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 r	oller 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 temper	ature for th	e heating roller when printing or idling.	

[Flicker mode] DFU

Flicker mode

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

[0 or 1 / **0** / 1 / step]

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1110

001

0: Flicker control OFF1: Flicker control ON

If it is set to "ON", the fusing performance becomes worse a little.

*ENG

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.			
	Temp:Thresh:High	*ENG	[40 to 20 / 30 / 1 deg/step]	
002	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.			
	LowCorrection	*ENG	[0 to 10 / 0 / 1 deg/step]	
003	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.			
	HighCorrection	*ENG	[0 to 10 / 0 / 1 deg/step]	
004	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:LowCorrct:Sp	*ENG	[0 to 20 / 10 / 1 deg/step]	
008	Prnt:HighCrrct:Sp	*ENG	[0 to 20 / 0 / 1 deg/step]	

1112

[ImageTempCorrect] DFU

	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.				
	Temp:Level1	*ENG	[-10 to 0 / 0 / 1 deg/step]		
001	Specifies the subtractive temperature level 1 of the fusing temperature control for variable job images.				
	Temp:Level2	*ENG	[-30 to 0 / -14 / 1 deg/step]		
002	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		
001	If it is set to On, printing speed to take another 1 min.	goes 20% (down and warming up time for the first print will		
00.4	TmpDlt:PrssM-Hum (DFU)	*ENG	[0 to 50 / 10 / 1 deg/step]		
004	Specifies the threshold tempera	ture for the	curl control in middle humidity.		
005	TmpDlt:PrssH-Hum (DFU)	*ENG	[0 to 50 / 0 / 1 deg/step]		
005	Specifies the threshold temperature for the curl control in high humidity.				
004	TmpDlt:PrssH-HumS (DFU)	*ENG	[0 to 50 / 0 / 1 deg/step]		
008	Specifies the threshold temperature for the no curl control in middle humidity.				
	CPM:M-humid (DFU)	*ENG	[0 to 100 / 80 / 1 %/step]		
008	Specifies the CPM ratio of the decurl control against to the normal operation in middle humidity.				
	CPM:H-humid (DFU)	*ENG	[0 to 100 / 80 / 1 %/step]		
009	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]		

RTB 2e -008, -009: Defaults changed

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.		

	[Target Temp Crrct] DFU			
1115	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		
	ONOFF Switch Temp	*ENG	[0 to 2 / 1 / 1 step]
OO1 Adjusts the scope of application for fusing temperature correction, depending of 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.				
	Delay:Std FC1	*ENG	[0 to 20000 / 0 / 1 msec/step]		
021	Adjusts correction timing of 1st	page while	printing in FC.		
000	Delay:Std:BW1	*ENG	[0 to 20000 / 0 / 1 msec/step]		
022	Adjusts correction timing of 1st	page while	printing in BW.		
021	Delay:Std:FC2	*ENG	[0 to 20000 / 0 / 1 msec/step]		
031	Adjusts correction timing of the	2nd and 3	rd pages while printing in FC.		
022	Delay:Std:BW2	*ENG	[0 to 20000 / 0 / 1 msec/step]		
032	Adjusts correction timing of the 2nd and 3rd pages while printing in BW.				
0.41	PressStandardTemp	*ENG	[0 to 200 / 60 / 1 deg/step]		
041	The standard temperature of the pressure to determine the fusing temperature correction.				
0.42	TmpCrrctLowLimit	*ENG	[-30 to 0 / -4 / 1 deg/step]		
042	Modifies lower limit of the fusing temperature correction.				
0.42	TmpCrrctHigh_Limit	*ENG	[0 to 30 / 0 / 1 deg/step]		
043	Modifies upper limit of the fusing temperature correction.				
051	PprThickCoef:Nm1	*ENG	[0 to 100 / 50 / 1 /step]		
051	Modifies correction coefficient of fusing temperature for plain paper 1.				
050	PprThickCoef:Nm2	*ENG	[0 to 100 / 50 / 1 /step]		
052	Modifies correction coefficient of fusing temperature for plain paper 2.				

1117	[Repeat Temp Crrct] DFU				
	Control Time 1:A	*ENG	[0 to 300 / 0 / 1 sec/step]		
001	Modifies time to execute 1st stage of fusing temperature correction. (paper width more the 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)			
	Temp:Center:1:A	*ENG	[-15 to 20 / 0 / 1 deg/step]	
003	1 st stage of temperature correc 257mm)	tion for cen	ter of the fusing. (paper width more than	
004	Temp:End:1:A	*ENG	[-15 to 20 / 0 / 1 deg/step]	
004	l st stage of temperature correc	tion for end	d of the fusing. (paper width more than 257mm)	
	Temp:Center:2:A	*ENG	[-15 to 20 / 0 / 1 deg/step]	
005	2nd stage of temperature corre 257mm)	ction for ce	enter of the fusing. (paper width more than	
	Temp:End:2:A	*ENG	[-15 to 20 / 0 / 1 deg/step]	
006	2nd stage of temperature corre	ction for en	nd of the fusing. (paper width more than 257mm)	
	Control Time 1:B	*ENG	[0 to 300 / 0 / 1 sec/step]	
011	Modifies time to execute 1st stage of fusing temperature correction. (paper width more than 257mm and also eco print mode)			
	Control Time2:B	*ENG	[0 to 300 / 37 / 1 sec/step]	
012	Modifies time to execute 2nd stage of fusing temperature correction. (paper width more than 257mm and also eco print mode)			
	Temp:Center:1:B	*ENG	[-15 to 20 / 0 / 1 deg/step]	
013	1 st stage of temperature correction for center of the fusing. (paper width more than 257mm and also eco print mode)			
	Temp:End:1:B	*ENG	[-15 to 20 / 0 / 1 deg/step]	
014	2nd stage of temperature correction for center of the fusing. (paper width more than 257mm and also eco print mode)			
	Temp:Center:2:B	*ENG	[-15 to 20 / 10 / 10 deg/step]	
015	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)				
	Control Time 1:C	*ENG	[0 to 300 / 0 / 1 sec/step]		
021	Modifies time to execute 1st sta 210mm and also print on envel	ige of fusing lope / post	g temperature correction. (paper width less than tcard)		
	Control Time2:C	*ENG	[0 to 300 / 0 / 1 sec/step]		
022	Modifies time to execute 2nd st 210mm and also print on envel	age of fusin lope / post	ng temperature correction. (paper width less than tcard)		
	Temp:Center:1:C	*ENG	[-15 to 20 / 0 / 1 deg/step]		
023	1 st stage of temperature correc and also print on envelope / p	tion for cer ostcard)	ter of the fusing. (paper width less than 210mm		
	Temp:End:1:C	*ENG	[-15 to 20 / 0 / 1 deg/step]		
024	2nd stage of temperature correction for center of the fusing. (paper width less than 210mm and also print on envelope / postcard)				
	Temp:Center:2:C	*ENG	[-15 to 20 / 0 / 1 deg/step]		
025	2nd stage of temperature correction for center of the fusing. (paper width less than 210mm and also print on envelope / postcard)				
	Temp:End:2:C	*ENG	[-15 to 20 / 0 / 1 deg/step]		
026	2nd stage of temperature correction for end of the fusing. (paper width less than 210mm and also print on envelope / postcard)				
	Control Time 1:D	*ENG	[0 to 300 / 0 / 1 sec/step]		
027	Modifies time to execute 1st stage of fusing temperature correction. (paper width less than 215.9mm)				
	Control Time2:D	*ENG	[0 to 300 / 0 / 1 sec/step]		
028	Modifies time to execute 2nd stage of fusing temperature correction. (paper width less than 215.9mm)				
	Temp:Center:1:D	*ENG	[-15 to 20 / 0 / 1 deg/step]		
029	1 st 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)			
	Temp:Center:2:D	*ENG	[-15 to 20 / 0 / 1 deg/step]	
031	2nd stage of temperature correct 215.9mm)	ction for ce	nter of the fusing. (paper width less than	
022	Temp:End:2:D	*ENG	[-15 to 20 / 0 / 1 deg/step]	
032	2nd stage of temperature corre	ction for en	d of the fusing. (paper width less than 215.9mm)	
	Control Time 1:E	*ENG	[0 to 300 / 5 / 1 sec/step]	
033	Modifies time to execute 1st sta 215.9mm and less than 257mm	ge of fusing n)	g temperature correction. (paper width more than	
	Control Time2:E	*ENG	[0 to 300 / 20 / 1 sec/step]	
034	Modifies time to execute 2nd stage of fusing temperature correction. (paper width more than 215.9mm and less than 257mm)			
	Temp:Center:1:E	*ENG	[-15 to 20 / 0 / 1 deg/step]	
035	1st stage of temperature correction for center of the fusing. (paper width more than 215.9mm and less than 257mm)			
	Temp:End:1:E	*ENG	[-15 to 20 / 10 / 1 deg/step]	
036	1 st stage of temperature correction for end of the fusing. (paper width more than 215.9mm and less than 257mm)			
	Temp:Center:2:E	*ENG	[-15 to 20 / 0 / 1 deg/step]	
037	2nd stage of temperature correction for center of the fusing. (paper width more than 215.9mm and less than 257mm)			
	Temp:End:2:E	*ENG	[-15 to 20 / 15 / 1 deg/step]	
038	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			
	 If "0" is selected, 1st duplex print start from ready mode or process control/MUSIC will be delayed about 20 sec. 			
002	RotaionTime: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]	

1101	[SwRotate Strt/Stp] DFU			
1121	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]

1100	[StdbyRotationSet] DFU			
1122	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.				
	Low:Down Temp.	*ENG	[-30 to 0 / -15 / 1 deg/step]		
001	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.				
	Low:Up Temp. *ENG [-20 to 0 / -10 / 1 deg/step]				
002	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.				
	Low:1CPM	*ENG	[10 to 100 / 50 / 1 %/step]		
003	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.				

	High:1CPM	*ENG	[10 to 100 / 50 / 1 %/step]			
006	³⁶ Specifies the 1st CPM down ration against the normal CPM in the high temperature condition.					
	High:2CPM	*ENG	[10 to 100 / 25 / 1 %/step]			
007	Specifies the 3rd CPM down ra condition.	tion agains	st the normal CPM in the high temperature			
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:1CPMDwn: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:2CPMDwn: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	1 CPMDown:post:P	*ENG	[0 to 225 / 185 / 1 deg/step]			
121	2CPMDown:post:P	*ENG	[0 to 225 / 195 / 1 deg/step]			
122	!CPMDown: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]	
004	Corrects the timing of fusing spe	ed correct	ion. (Full color and standard speed)	
005	Delay:Std:BW	*ENG	[0 to 20000 / 3265 / 1 msec/step]	
005	Corrects the timing of fusing spe	ed correct	ion. (BW and standard speed)	
00/	Delay:Middle:FC	*ENG	[0 to 20000 / 7914 / 1 msec/step]	
008	Corrects the timing of fusing spe	ed correct	ion. (Full color and middle speed)	
007	Delay:Middle:BW	*ENG	[0 to 20000 / 5583 / 1 msec/step]	
007	Corrects the timing of fusing spe	ed correct	ion. (BW and middle speed)	
009	Delay:Low:FC	*ENG	[0 to 20000 / 12171 / 1 msec/step]	
008	Corrects the timing of fusing speed correction. (Full color and low speed)			
000	Delay:Low:BW	*ENG	[0 to 20000 / 8675 / 1 msec/step]	
009	Corrects the timing of fusing speed correction. (BW and low speed)			
	ONOFESw: Rotations	*ENG	[0 or 1 / 1 / 1 /step]	
020		0:0FF, 1:0N		
	Controls the speeding fluctuating of fusing thermal expansion.			
	GainA:Low	*ENG	[0.00 to 100.00 / 3.45 / 0.01 /step]	
051	051 Using this 1st coefficient to calculate the correction magnification of fusing spee temperature environment)			
	GainB:Low	*ENG	[-5000 to 5000 / -305 / 1 /step]	
052	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)			
	GainB:Normal	*ENG	[-5000 to 5000 / -305 / 1 /step]	
054	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.			
042	Moter:HighLimit	*ENG	[0.0 to 5.0 / -0.3 / 0.1 %/step]	
002	Limits the maximum correction magnification of fusing speed.			

1131	[ContPrtModeSwitch] DFU				
	Sets the permission for paper to feed.				
	ContPrtModeSwitch	*ENG	[0 to 2 / 0 / 1 /step] 0: Productivity Mode 1: Fusing Quality 1 2: Fusing Quality 2		
001	O (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	

1122	[LstPprHeatOffCtrl] DFU
1133	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]			
1141	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]		
0:OFF / 1:ON *ENG [0 or 1 / 1 / 1/step]		[0 or 1 / 1 / 1/step]	
001	Selects the full detection function • 0: Invalid • 1: Activate	n of output	bin On/Off.

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.		

1150	[Nip Band Check] DFU			
1152	Checks and adjusts the nip of the hot roller and pressure roller.			
	Execute	eng	[- / - / -] [Execute]	
001	Executes the nip band measure	ment betwe	een 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.			
000	Pre-idling Time	*ENG	[0 to 999 / 600 / 1 sec/step]	
002	Specifies the fusing rotation time before executing SP1152-001.			
002	Stop Time	*ENG	[0 to 100 / 20 / 1 sec/step]	
003	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		
	Temp:Thresh 1	*ENG	[0 to 30 / 5 / 1 deg/step]
001 Modifies threshold of fusing temperature to judge heat classifications when temperature start-up control is working.		o judge heat classifications when low	
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.				
	Temp:Target	*ENG	[50 to 100/ 100 / 1 deg/step]		
003	Modifies heating target tempera control is working.	ature of fusi	ing to warm up when low temperature start-up		
	Temp:RotateThresh	*ENG	[0 to 50 / 30 / 1 deg/step]		
005	Modifies threshold of rotation start temperature when low temperature start-up control is working.				
	Time:HeatStorage1	*ENG	[0 to 60 / 60 / 1 sec/step]		
010	Modifies threshold of rotation start time when low temperature start-up control is working. (Heating classification 1)				
	Time:HeatStorage2	*ENG	[0 to 60 / 15 / 1 deg/step]		
011	Modifies threshold of rotation start time when low temperature start-up control is working. (Heating classification 2)				
	ETemp:Thresh 1	*ENG	[0 to 30 / 5 / 1 deg/step]		
020	Modifies threshold of environmental temperature to judge heating classification when low temperature start-up control is working.				
	ETemp:Thresh2	*ENG	[0 to 30 / 17 / 1 deg/step]		
021	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.		
	• 0: Not detects SC		
	• 1: Detects SC		

1801	[MoterSpeedAdjust] DFU		
	Adjusts the speeds of each moto	or.	
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]		
001	Sets SSCG On/Off.				
000	SSCG Down/Center	*ENG	[0 or 1 / 1 / 1 /step]		
002	Selects SSCG setting Down Spread / Center Spread.				
003	SSCG Rate	*ENG	[0 to 1023 / 246 / 1 /step]		
003	Sets SSCG rate.				
004	SSCG Freq	*ENG	[0 to 3 / 0 / 1 /step]		
004	Sets SSCG frequency.				
005	Video I/F	*ENG	[0 to 3 / 3 / 1 /step]		
005	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 / 1clk_w /step]	
009	Hail	*ENG	[0 to 16383 / 6865 / 1clk_w /step]	
010	Low	*ENG	[0 to 16383 / 10298 / 1clk_w /step]	

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

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

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

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

2104	[LEDA Setting]			
2100	Sets the LEDA light-emission tim	e.		
021	Stbwd normal Bk	ENG		
022	Stbwd normal C	ENG	$\begin{bmatrix} 0 + 45525 \\ 0 \\ 1 + 1 \end{bmatrix}$	
023	Stbwd normal M	ENG		
024	Stbwd normal Y	ENG		
025	Stbwd half/low Bk	ENG		
026	Stbwd half/low C	ENG	$\begin{bmatrix} 0 + 45525 \\ 0 \\ 1 + 1 \end{bmatrix}$	
027	Stbwd half/low M	ENG		
028	Stbwd half/low Y	ENG		
029	Stbwd Elmt normal	ENG		
030	Stbwd Elmt half	ENG	[0 to 65535 / 0 / 1 ns/step]	
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

0107	[Check sum err cnt] DFU				
2107	Saves number of connection error between LEDA and OROCHI.				
039	Bk	*ENG			
040	С	*ENG	[0 + 65525 / 0 / 1 / top]		
041	Μ	*ENG			
042	Y	*ENG			

2109	[ColorShiftCorrect] DFU			
2100	Saves the auto adjustment of su	stration.		
043	Main C	*ENG		
044	Main M	*ENG	[-188 to 188 / 0 / 1 dot/step]	
045	Main Y	*ENG		
046	Sub Bk	*ENG		
047	Sub C	*ENG	$\begin{bmatrix} 470 + 470 \\ 0 \\ 1 \end{bmatrix}$	
048	Sub M	*ENG		
049	Sub Y	*ENG		
050	F-Phase normal Bk	*ENG		
051	F-Phase normal C	*ENG	[0 + 14202 / 1 / 1 - 1 + /]	
052	F-Phase normal M	*ENG	[0 to 10383 / 1 / 1 ctk_w/step]	
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	
056	F-Phase half M	*ENG	
057	F-Phase half Y	*ENG	
058	F-Phase low Bk	*ENG	
059	F-Phase low C	*ENG	[0+- 14292 / 1 / 1 - II, / - +]
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]					
2110	Generates the test pattern.					
	Pattern Selection *ENG [0 to 16 / (0 / 1 /step]
	0	None			9	20mm SGrid
	1	V 1Line			10	1by1
	2	H 1Line			11	2by2
003	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			-	-

0111	[Line Position Adj]		
2111	Executes the fine line position adjustment.		

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

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

2181	[Skew Correction]			
	The following SPs display the result of MUSIC for the skew correction.			
003	С	*ENG		
021	Μ	*ENG	$\begin{bmatrix} 4 & 42 & 40 & 41 & 40 & 41 & 40 & 41 & 40 & 41 & 40 & 41 & 40 & 41 & 41$	
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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0.40	Pattern Offset	*ENG	[-236 to 239 / 0 / 1 dot/step]		
040	Displays main dot offset value fo	*ENG [or MUSIC po *ENG [ISIC pattern. *ENG [SIC pattern.	pattern.		
041	Width	*ENG	[0 to 236 / 118 / 2 dot/step]		
	Displays main dot width for MUSIC pattern.				
0.40	Cycle	*ENG	[-236 to 236 / 0 / 1 dot/step]		
042	Displays main dot cycle for MUSIC pattern.				

2183	[MUSIC Condition]				
	Displays the result of position detection pattern.				
001	Posipattern FC R	*ENG			
002	Posipattern FC L	*ENG	[0+45525/0/1/4+-]		
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 mod	le 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 + 65525 / 0 / 1 / stan]		
012	Position Bk Base	*ENG			
012	Standard values for the pattern of position detection.				
021	Correct FC	*ENG			
022	Correct Bk	*ENG	[-52706105270670717step]		
022	Correction values for the margin position.				

2193	[MUSIC Condition]					
	Judge Mode	*ENG	[0 or 1 / 0 / 1 /step] DFU			
017	Displays condition of MUSIC a	uto executi	on.			
	O: Auto execution enabled	ł				
	• 1: Deterrence					
018	Power On Mode	*ENG	[0 or 1 / 1 / 1 /step] 0:Run, 1:None DFU			
	Displays MUSIC condition to e	xecute or n	ot to execute when power is turned on.			
019	Run Per Pages	*ENG	[0 to 65535 / 400 / 1 pages/step] DFU			
019	Interval pages to execute MUS	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.					
000	Normal Pagecount	*ENG	[0 to 65535 / 0 / 1 pages/step]			
023	Displays page counter since ali	gnment ad	justment is executed in normal mode.			
02.4	Black Pagecount	*ENG	[0 to 65535 / 0 / 1 pages/step]			
024	Displays page counter since ali	gnment ad	justment is executed in BW mode.			

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

2194	[MUSIC Result]				
	-				
007	Run Result	*ENG	[0 to 0xFFFFFFF / 0 / 1 /step]		
007	Displays the run result of alignm	nent adjustr	nent.		
010	Normal Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
013	Displays the execution number	of alignme	nt adjustment in normal mode.		
01.4	Normal Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
014	Displays the failed number of alignment adjustment in normal mode.				
015	Factory Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
015	Displays the execution number of alignment adjustment in factory mode.				
01/	Factory Fail Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
016	Displays the failed number of alignment adjustment in factory mode.				
017	Margin Run Num	*ENG	[0 to 65535 / 0 / 1 time/step]		
017	Displays the execution number of alignment adjustment in BW mode.				
010	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	
002	Average volume C	ENG	Displays the average light intensity data of LEDA. [0 to 65535 / 0 / 1 /step]
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]				
001	Crrnt Env Display	ENG	[0 to 7 / 0 / 1 /step]		
	Displays the environmental compartments of high pressure control. O: 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 the	an threshol	d, 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 thresh	old, 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 thresh	old, 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.				

0011	[Paper Intvl Cur] DFU				
2311	Sets current value of 2nd transfer unit between the papers.				
001	Trans2 Current	*ENG	[0 to 255 / 1 / 1 µA/step]		

2224	[Trans2 CL Bias] DFU				
2320	Sets cleaning bias value according to speed and the environment.				
001	PLUS:Spd 1:MM	*ENG			
002	PLUS:Spd 2:MM	*ENG			
003	PLUS:Spd 3:MM	*ENG			
004	PLUS:Spd 1:HH	*ENG			
005	PLUS:Spd 2:HH	*ENG	[0 to 255 / 0 / 1 µA/step]		
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			
011	MINUS:Spd 2:MM	*ENG			
012	MINUS:Spd 3:MM	*ENG			
013	MINUS:Spd 1:HH	*ENG			
014	MINUS:Spd 2:HH	*ENG	[0 to 255 / 0 / 1 x10V/step]		
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			
020	MODE4:Spd 2:MM	*ENG			
021	MODE4:Spd 3:MM	*ENG			
022	MODE4:Spd 1:HH	*ENG			
023	MODE4:Spd 2:HH	*ENG	[0 to 255 / 0 / 1 µA/step]		
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]		
001	Sets standard output value of 1	st transfer u	unit bias before correction.		
002	Magenta	*ENG	[20 to 200 / 104 / 1 x10V/step]		
002	Sets standard output value of 1	st transfer u	unit bias before correction.		
002	OPC low Bias	*ENG	[20 to 200 / 60 / 1 x10V/step]		
003	Sets output value of 1 st transfer unit bias while low charging bias is applying to OPC drum.				
004	Time adj	*ENG	[0 to 255 / 20 / 1 V/step]		
004	Sets time correction value to offset (+) for standard output of 1 st transfer unit bias.				
	Env Adj:LL	*ENG	[0 to 255 / 104 / 1 %/step]		
005	Sets correction coefficient according to the environment for standard output of 1 st transfer unit bias.				
	Env Adj:HH1	*ENG	[0 to 255 / 100 / 1 %/step]		
006	Sets correction coefficient according to the environment for standard output of 1 st transfer unit bias.				

3. Appendix: Service Program Mode Tables

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		
009	Y Fixed	ENG	Sets output immediate value of 1st transfer unit	
010	M Fixed	ENG	[0 to 255 / 0 / 1 %/step]	
011	C Fixed	ENG		

	[Separate Bias] DFU				
2401	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			
002	Spd1:2ndt:THIN	*ENG			
003	Spd1:1st:NORMAL	*ENG	[0 to 255 / 0 / 1 x100V/step]		
004	Spd1:2nd:NORMAL1	*ENG			
005	Spd1:1st:NORMAL2	*ENG			
006	Spd1:2nd:NORMAL2	*ENG			
007	Spd2:1st:THICK2	*ENG			
008	Spd2:2nd:THICK2	*ENG	[0 to 255 / 0 / 1 x100V/step]		
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		
002	ММ	*ENG	[0 to 255 / 0 / 1 %/step]	
003	HH1	*ENG		

	[Separate Sub Adj] DFU				
	Head: top edge of the paper.				
	L1: means the timing to switch separate bias from top edge of the paper.				
	• Main dot width is more the	ın 279mm:	position of paper length x 90%		
2403	 Main dot width is less than 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%			position of paper length x 70%		
	HEAD_L1	*ENG	[0 to 255 / 0 / 1 %/step]		
001	Sets correction coefficient for separate bias according to the environment.				
	Separation bias value to apply from top edge of the paper to L1.				
	L1_TAIL	*ENG	[0 to 255 / 0 / 1 %/step]		
002	Sets correction coefficient for separate bias according to the environment.				
	Separation bias value to apply from L1 to end of the paper.				
002	L1	*ENG	[-40.0 to 471.0 / 0.0 / 0.1 mm/step]		
003	Sets threshold of sub-line position for separate bias.				

2404	[Separate Timing] DFU				
2404	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]		

	[Separate:Head Adj] DFU				
2405	Adjusts application timing for separate bias.				
2-100	A + value sets the application timing later.				
	A - value sets the application timing earlier.				
001	Spd1:1st:THIN	*ENG			
002	Spd1:2nd:THIN	*ENG	[-12/ to 12/ / 0 / 1 mm/step]		

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	
008	Spd2:2nd:THICK1	*ENG	[-127 to 127 / 0 / 1 mm/step]
009	Spd3:1st:THICK3	*ENG	
010	Spd3:2nd:THICK3	*ENG	

2406	[Separate:Tail Ad]] DrU				
	Adjusts application timing for separate bias.				
2400	A + value sets the application timing later.				
	A - value sets the application tin	ning earlier			
001	Spd1:1st:THIN	*ENG			
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:THIICK1	*ENG			
008	Spd2:2nd:THICK1	*ENG	[-127 to 127 / 0 / 1 mm/step]		
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	
003	Spd1:1st:S1:C:N	*ENG	
004	Spd1:2nd:S1:C:N	*ENG	
005	Spd1:1st:S2:K:N	*ENG	
006	Spd1:2nd:S2:K:N	*ENG	Paper width 210mm ≤ S2 < 279mm
007	Spd1:1st:S2:C:N	*ENG	DFU
008	Spd1:2nd:S2:C:N	*ENG	
009	Spd1:1st:S3:K:N	*ENG	
010	Spd1:2nd:S3:K:N	*ENG	Paper width 148mm ≤ S3 < 210mm
011	Spd1:1st:S3:C:N	*ENG	FCU
012	Spd1:2nd:S3:C:N	*ENG	
013	Spd1:1st:S4:K:N	*ENG	
014	Spd1:2nd:S4:K:N	*ENG	Paper width S4 < 148mm
015	Spd1:1st:S4:C:N	*ENG	
016	Spd1:2nd:S4:C:N	*ENG	
017	Spd1:1st:S1:K:PC	*ENG	
018	Spd1:2nd:S1:K:PC	*ENG	Paper width S1 ≥ 279mm
019	Spd1:1st:S1:C:PC	*ENG	DFU
020	Spd1:2nd:S1:C:PC	*ENG	
021	Spd1:1st:S2:K:PC	*ENG	
022	Spd1:2nd:S2:K:PC	*ENG	Paper width 210mm ≤ S2 < 279mm
023	Spd1:1st:S2:C:PC	*ENG	DFU
024	Spd1:2nd:S2:C:PC	*ENG	
025	Spd1:1st:S3:K:PC	*ENG	Paper width 148mm ≤ S3 < 210mm
026	Spd1:2nd:S3:K:PC	*ENG	[0 to 200 / 0 / 1 μA/step]
027	Spd1:1st:S3:C:PC	*ENG	FCU

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 µA/step]
032	Spd1:2nd:S4:C:PC	*ENG	
033	Spd2:1st:S1:K:T1	*ENG	
034	Spd2:2nd:S1:K:T1	*ENG	Paper width S1 ≥ 279mm
035	Spd2:1st:S1:C:T1	*ENG	0 to 200 / 0 / 1 µA/step]
036	Spd2:2nd:S1:C:T1	*ENG	
037	Spd2:1st:S2:K:T1	*ENG	
038	Spd2:2nd:S2:K:T1	*ENG	Paper width 210mm ≤ S2 < 279mm
039	Spd2:1st:S2:C:T1	*ENG	0 to 200 / 0 / 1 ¤A/step] DFU
040	Spd2:2nd:S2:C:T1	*ENG	
041	Spd2:1st:S3:K:T1	*ENG	
042	Spd2:2nd:S3:K:T1	*ENG	Paper width 148mm ≤ S3 < 210mm
043	Spd2:1st:S3:C:T1	*ENG	[0 to 200 / 0 / 1 ¤A/step] FCU
044	Spd2:2nd:S3:C:T1	*ENG	
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 ¤A/step] DFU
048	Spd2:2nd:S4:C:T1	*ENG	
049	Spd3:1st:S1:K:T3	*ENG	
050	Spd3:2nd:S1:K:T3	*ENG	Paper width S1 ≥ 279mm
051	Spd3:1st:S1:C:T3	*ENG	[U to 200 / U / T ⊬A/step] DFU
052	Spd3:2nd:S1:C:T3	*ENG	
053	Spd3:1st:S2:K:T3	*ENG	Paper width 210mm ≤ S2 < 279mm

054	Spd3:2nd:S2:K:T3	*ENG	[0 + 200 / 0 / 1 + 4 / 4 + m]
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
059	Spd3:1st:S3:C:T3	*ENG	FCU
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
063	Spd3:1st:S4:C:T3	*ENG	DFU
064	Spd3:2nd:S4:C:T3	*ENG	

2400	[Trans2:HH]			
2409	Sets 2nd transfer bias according to the environment and each printing conditions.			
001	Spd1:1st:S1:K:N	*ENG		
002	Spd1:2nd:S1:K:N	*ENG	Paper width S1 ≥ 279mm	
003	Spd1:1st:S1:C:N	*ENG		
004	Spd1:2nd:S1:C:N	*ENG		
005	Spd1:1st:S2:K:N	*ENG		
006	Spd1:2nd:S2:K:N	*ENG	Paper width 210mm \leq S2 $<$ 279mm	
007	Spd1:1st:S2:C:N	*ENG		
008	Spd1:2nd:S2:C:N	*ENG	-	
009	Spd1:1st:S3:K:N	*ENG		
010	Spd1:2nd:S3:K:N	*ENG	Paper width 148mm ≤ S3 < 210mm	
011	Spd1:1st:S3:C:N	*ENG		
012	Spd1:2nd:S3:C:N	*ENG		

013	Spd1:1st:S4:K:N	*ENG	
014	Spd1:2nd:S4:K:N	*ENG	Paper width S4 < 148mm
015	Spd1:1st:S4:C:N	*ENG	
016	Spd1:2nd:S4:C:N	*ENG	
017	Spd1:1st:S1:K:PC	*ENG	
018	Spd1:2nd:S1:K:PC	*ENG	Paper width S1 ≥ 279mm
019	Spd1:1st:S1:C:PC	*ENG	- [0 to 200 / 0 / Ι μΑ/ step] DFU
020	Spd1:2nd:S1:C:PC	*ENG	
021	Spd1:1st:S2:K:PC	*ENG	
022	Spd1:2nd:S2:K:PC	*ENG	Paper width 210mm ≤ S2 < 279mm
023	Spd1:1st:S2:C:PC	*ENG	DFU
024	Spd1:2nd:S2:C:PC	*ENG	
025	Spd1:1st:S3:K:PC	*ENG	
026	Spd1:2nd:S3:K:PC	*ENG	Paper width 148mm ≤ S3 < 210mm
027	Spd1:1st:S3:C:PC	*ENG	- [0 to 200 / 0 / Τ μΑ/ step] FCU
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	DFU
032	Spd1:2nd:S4:C:PC	*ENG	
033	Spd2:1st:S1:K:T1	*ENG	
034	Spd2:2nd:S1:K:T1	*ENG	Paper width S1 ≥ 279mm
035	Spd2:1st:S1:C:T1	*ENG	□ [0 to 200 / 0 / 1 ¤A/step] DFU
036	Spd2:2nd:S1:C:T1	*ENG	
037	Spd2:1st:S2:K:T1	*ENG	Paper width 210mm ≤ S2 < 279mm
038	Spd2:2nd:S2:K:T1	*ENG	[0 to 200 / 0 / 1 µA/step]

039	Spd2:1st:S2:C:T1	*ENG	DELL
040	Spd2:2nd:S2:C:T1	*ENG	
041	Spd2:1st:S3:K:T1	*ENG	
042	Spd2:2nd:S3:K:T1	*ENG	Paper width 148mm ≤ S3 < 210mm
043	Spd2:1st:S3:C:T1	*ENG	FCU
044	Spd2:2nd:S3:C:T1	*ENG	-
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	DFU
048	Spd2:2nd:S4:C:T1	*ENG	-
049	Spd3:1st:S1:K:T3	*ENG	
050	Spd3:2nd:S1:K:T3	*ENG	Paper width S1 ≥ 279mm
051	Spd3:1st:S1:C:T3	*ENG	DFU
052	Spd3:2nd:S1:C:T3	*ENG	-
053	Spd3:1st:S2:K:T3	*ENG	
054	Spd3:2nd:S2:K:T3	*ENG	Paper width 210mm \leq S2 $<$ 279mm
055	Spd3:1st:S2:C:T3	*ENG	DFU
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
059	Spd3:1st:S3:C:T3	*ENG	FCU
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 $[0 to 200] (0 / 1) = 148 \text{ mm}$
063	Spd3:1st:S4:C:T3	*ENG	
064	Spd3:2nd:S4:C:T3	*ENG	

0.410	[Trans2:LL]				
2410	Sets 2nd transfer bias according to the environment and each printing conditions.				
001	Spd1:1st:S1:K:N	*ENG			
002	Spd1:2nd:S1:K:N	*ENG	Paper width S1 ≥ 279mm		
003	Spd1:1st:S1:C:N	*ENG	- [0 to 200 / 0 / Τ μΑ/ step] DFU		
004	Spd1:2nd:S1:C:N	*ENG			
005	Spd1:1st:S2:K:N	*ENG			
006	Spd1:2nd:S2:K:N	*ENG	Paper width 210mm ≤ S2 < 279mm		
007	Spd1:1st:S2:C:N	*ENG	- [0 to 200 / 0 / Τ μΑ/ step] DFU		
008	Spd1:2nd:S2:C:N	*ENG			
009	Spd1:1st:S3:K:N	*ENG			
010	Spd1:2nd:S3:K:N	*ENG	Paper width 148mm ≤ S3 < 210mm		
011	Spd1:1st:S3:C:N	*ENG	- [0 to 200 / 0 / Τ μΑ/ step] FCU		
012	Spd1:2nd:S3:C:N	*ENG			
013	Spd1:1st:S4:K:N	*ENG			
014	Spd1:2nd:S4:K:N	*ENG	Paper width S4 < 148mm		
015	Spd1:1st:S4:C:N	*ENG			
016	Spd1:2nd:S4:C:N	*ENG			
017	Spd1:1st:S1:K:PC	*ENG			
018	Spd1:2nd:S1:K:PC	*ENG	Paper width S1 ≥ 279mm		
019	Spd1:1st:S1:C:PC	*ENG	DFU		
020	Spd1:2nd:S1:C:PC	*ENG			
021	Spd1:1st:S2:K:PC	*ENG			
022	Spd1:2nd:S2:K:PC	*ENG	Paper width 210mm ≤ S2 < 279mm		
023	Spd1:1st:S2:C:PC	*ENG	DFU		
024	Spd1:2nd:S2:C:PC	*ENG			

025	Spd1:1st:S3:K:PC	*ENG	
026	Spd1:2nd:S3:K:PC	*ENG	Paper width 148mm ≤ S3 < 210mm
027	Spd1:1st:S3:C:PC	*ENG	FCU
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 / ΤμΑ/ step] DFU
032	Spd1:2nd:S4:C:PC	*ENG	
033	Spd2:1st:S1:K:T1	*ENG	
034	Spd2:2nd:S1:K:T1	*ENG	Paper width S1 ≥ 279mm
035	Spd2:1st:S1:C:T1	*ENG	DFU
036	Spd2:2nd:S1:C:T1	*ENG	-
037	Spd2:1st:S2:K:T1	*ENG	
038	Spd2:2nd:S2:K:T1	*ENG	Paper width 210mm ≤ S2 < 279mm
039	Spd2:1st:S2:C:T1	*ENG	DFU
040	Spd2:2nd:S2:C:T1	*ENG	
041	Spd2:1st:S3:K:T1	*ENG	
042	Spd2:2nd:S3:K:T1	*ENG	Paper width 148mm ≤ S3 < 210mm
043	Spd2:1st:S3:C:T1	*ENG	FCU
044	Spd2:2nd:S3:C:T1	*ENG	-
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	DFU
048	Spd2:2nd:S4:C:T1	*ENG	
049	Spd3:1st:S1:K:T3	*ENG	Paper width S1 ≥ 279mm
050	Spd3:2nd:S1:K:T3	*ENG	[0 to 200 / 0 / 1 µA/step]

051	Spd3:1st:S1:C:T3	*ENG	DFU
052	Spd3:2nd:S1:C:T3	*ENG	
053	Spd3:1st:S2:K:T3	*ENG	
054	Spd3:2nd:S2:K:T3	*ENG	Paper width 210mm \leq S2 $<$ 279mm
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 \leq S3 < 210mm
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
063	Spd3:1st:S4:C:T3	*ENG	
064	Spd3:2nd:S4:C:T3	*ENG	

2412	[Trans2:Correct] DFU				
	-				
	PrintRatio:Txt:C1	*ENG	[0 to 100 / 80 / 1 %/step]		
001	Sets correction coefficient for 2r	nd transfer	bias according to printing ratio.		
	C1: correction value (%) of 2nd transfer image bias setting value.				
	Time Adj:T1	*ENG	[0 to 100 / 100 / 1 %/step]		
002	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.				
	Time Adj:T2	*ENG	[0 to 100 / 80 / 1 %/step]		
003	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 2	nd transfer	bias according to the distance.		
	T3: correction value (%) of 2nd pages is more than 30K and les	transfer im ss than 45k	age bias setting value when number of printed K.		
	Time Adj:T4	*ENG	[0 to 100 / 65 / 1 %/step]		
005	Sets correction coefficient for 2	nd transfer	bias according to the distance.		
	T4: correction value (%) of 2nd pages is more than 45K and less	transfer im ss than 60k	age bias setting value when number of printed K.		
	Time Adj:T5	*ENG	[0 to 100 / 60 / 1 %/step]		
006	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.				
0.07	Timing: 1 st	*ENG	[-127 to 127 / 0 / 1 mm/step]		
007	Sets application timing of 2nd transfer bias according to the number of printed pages				
009	Timing:Other	*ENG	[-127 to 127 / 0 / 1 mm/step]		
008	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	Mode 1	ENG	
002	Mode2	ENG	[- / - / -]
003	Mode3	ENG	[ryecole]

	004	Mode4	ENG	
	005	Mode5	ENG	
	006	Modeó	ENG	
	007	Mode7	ENG	
	008	Mode8	ENG	[- / - / -]
	009	Mode9	ENG	[LYECOLE]
	010	Mode10	ENG	
	011	Data UC1	*ENG	
	012	Data UC2	*ENG	
	013	Data UC3	*ENG	[0 to 255 / 0 / 1 /step]
	014	Data UC4	*ENG	
	015	Data UC5	*ENG	
t	016	Data SC1	*ENG	
	017	Data SC2	*ENG	
	018	Data SC3	*ENG	[-128 to 127 / 0 / 1 /step]
	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]
	024	Data UW4	*ENG	
	025	Data UW5	*ENG	
	026	Data SW1	*ENG	
	027	Data SW2	*ENG	[-32768 to 32767 / 0 / 1 /step]
	028	Data SW3	*ENG	Not used
	029	Data SW4	*ENG	

RTB 2e -016: Defaul changed

030	Data SW5	*ENG	
031	Data UL1	*ENG	
032	Data UL2	*ENG	
033	Data UL3	*ENG	[0 to 0xFFFFFFF / 0 / 1 /step]
034	Data UL4	*ENG	
035	Data UL5	*ENG	
036	Data UL6	*ENG	
037	Data UL7	*ENG	
038	Data UL8	*ENG	[0 to 0xFFFFFFF / 0 / 1 /step]
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]		

	[ACS SW: FC Mode]		
2907	Adjusts the threshold of BW dat printing color and BW mixed d	a continuo ata.	us page to switch FC mode to BW mode when
001	Cont.Mono Sheet	ENG	[0 to 10 / 1 / 1 sheet/step]

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Engine SP Tables-3

SP3-XXX (Process)

3011	[AdjustManualExe]				
	-				
001	Normal ProCon	ENG	[- / - / -] [Execute]		
001	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.				

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

	3015	[ManualSply:Exe]	DFU
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	Executes the manual toner supply to the development unit. Execution time can be set by SP3016-001 to 004		
001	TnrSplyFc	ENG	
003	TnrSplyK	ENG	
004	TnrSplyY	ENG	[- / - / -]
005	TnrSplyM	ENG	
006	TnrSplyC	ENG	

2014	[ManualSply:Set] DFU				
3010	Specifies the manual toner supply time for each color.				
001	SplyTimeK	*ENG			
002	SplyTimeY	*ENG	[0 to 255 / 20 / 1 to 5 (to 7]		
003	SplyTimeM	*ENG	[0 10 233 / 30 / 1 sec/ step]		
004	SplyTimeC	*ENG			

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

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	[-/-/-]	
002	TnrMixBk	ENG	[Execute]	

2010	[ManualMix:Set] DFU			
3019	Specifies the manual toner mixing time.			
001	MlxTime	*ENG	[0 to 255 / 30 / 1 sec/step]	

3022	[TonerFillMode] DFU				
3022	-				
001	FillPhaseID:K	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill		
002	FillPhaseID:Y	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill		
003	FillPhaseID:M	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill		
004	FillPhaseID:C	*ENG	[0 to 2 / 2 / 1 /step] 0:Factory, 1:Init Fill, 2:Normal Fill		

2007	[TonerFillAmnt] DFU				
3097	Fill amount of toner cartridge.				
001	FillAmnt:2.2K:K	*ENG	[0 to 300 / 63 / 1 g/step]		
002	FillAmnt:2K:Y	*ENG			
003	FillAmnt:2K:M	*ENG	[0 to 300 / 59 / 1 g/step]		
004	FillAmnt:2K:C	*ENG			
005	FillAmnt:3K:K	*ENG	[0 to 300 / 80 / 1 g/step]		
006	FillAmnt:2.5K:Y	*ENG			
007	FillAmnt:2.5K:M	*ENG	[0 to 300 / 68 / 1 g/step]		
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	
012	FillAmnt:7K:C	*ENG	
013	FillAmnt:10K:K	*ENG	
014	FillAmnt:10K:Y	*ENG	[0 + 200 / 224 / 1 - 4 + 500]
015	FillAmnt:10K:M	*ENG	[0 10 300 / 224 / 1 g/slep]
016	FillAmnt:10K:C	*ENG	

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

2000	[TEConsumption] DFU				
3099	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			
003	2K:M	*ENG	[0.0 to 300000.0 / 59000.0 / 0.1 mg/ step]		
004	2K:C	*ENG			
005	3К:К	*ENG	[0.0 to 300000.0 / 80000.0 / 0.1 mg/ step]		
006	2.5K:Y	*ENG			
007	2.5K:M	*ENG	[0.0 to 300000.0 / 68000.0 / 0.1 mg/ step]		
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	
012	7K:C	*ENG	
013	10К:К	*ENG	
014	10K:Y	*ENG	[0.0 to 300000.0 / 224000.0 / 0.1 mg/
015	10K:M	*ENG	step]
016	10K:C	*ENG	

2100	[TE-NEConsumption] DFU					
3100	Consumption amount from toner r	Consumption amount from toner near end through toner end.				
001	1 DayBeforeTE: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	1 DayBeforeTE:M	*ENG	[0.0 to 300000.0 / 10000.0 / 0.1 mg/ step]			
004	1 DayBeforeTE: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]				
3101	Amount of total toner consumption (accumulation for a toner cartridge).				
005	Total Usage: Bk	*ENG			
006	Total Usage: C	*ENG	[0.1, 00000000 / 0 / 1 11/2 / 11/2		
007	Total Usage: M	*ENG	[0 to 999999999 / 0 / 1 ¤g/step]		
008	Total Usage: Y	*ENG	-		
2101	[TE-NE]				
3101	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			
011	TonerRemainM	*ENG	[0.0 to 300.0 / 158.0 / 0.1 g/step]		
012	TonerRemainY	*ENG	-		
2101	[TE-NE] DFU				
3101	Printing toner usage for each color (accumulation).				
101	Printing Usage: K	*ENG			
102	Printing Usage: C	*ENG	[0 to 999999999 / 0 / 1 µg/step]		
103	Printing Usage: M	*ENG			

104	Printing Usage: Y	*ENG			
2101	[TE-NE]				
3101	Non-printing toner usage for each	Non-printing toner usage for each color (accumulation).			
105	Covering Usage: K	*ENG			
106	Covering Usage: C	*ENG			
107	Covering Usage: M	*ENG	[0 10 999999999 / 0 / 1 ¤g/siep]		
108	Covering Usage: Y	*ENG			
2101	[TE-NE] DFU				
3101	Adjusts consumption distance for each color.				
111	Consum:AdjDist K	*ENG			
112	Consum:AdjDist C	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
113	Consum:AdjDist M	*ENG	Not used		
114	Consum:AdjDist: Y	*ENG			

2102	[RcvrySply:Set] DFU			
3102	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]			
	[RcvrySply:Set] DFU			
2102	[RcvrySply:Set] DFU			
3102	[RcvrySply:Set] DFU Adjusts time to mix after replenish	ment for re	covering.	
3102 015	[RcvrySply:Set] DFU Adjusts time to mix after replenish MixTime:RcvryK	ment for re *ENG	covering. [0 to 300 / 10 / 1 sec/step]	
3102 01 <i>5</i> 016	[RcvrySply:Set] DFU Adjusts time to mix after replenish MixTime:RcvryK MixTime:RcvryY	ment for re *ENG *ENG	covering. [0 to 300 / 10 / 1 sec/step] [0 to 300 / 10 / 1 sec/step]	
3102 015 016 017	[RcvrySply:Set] DFU Adjusts time to mix after replenish MixTime:RcvryK MixTime:RcvryY MixTime:RcvryM	ment for re *ENG *ENG *ENG	Covering. [0 to 300 / 10 / 1 sec/step] [0 to 300 / 10 / 1 sec/step] [0 to 300 / 10 / 1 sec/step]	

3103	[RcvrySply]		
	Displays the number of replenishment execution for recovering.		
001	RcvrySplyCntK	*ENG	
002	RcvrySplyCntY	*ENG	[0 to 10000 ((1 times (stor)]
003	RcvrySplyCntM	*ENG	
004	RcvrySplyCntC	*ENG	

	[TnrSplyErr:Disp]		
3131 Displays the counter of toner supply error for recovering. Counts the number if recovery is failed continuously more than the number			r recovering. nuously more than the number set in reded, 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]

	[TonerSplyErr:Set] DFU			
3132	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]	

2021	[TonerSply:Set] DFU		
3231	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	
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	
012	CnsmFromSplyY	*ENG	Consumption from toner supplied last time.
013	CnsmFromSplyM	*ENG	[0.0 to 100000.0 / 0.0 / 0.1 mg/step]
014	CnsmFromSplyC	*ENG	
015	TonerSplyCOAmntK	*ENG	
016	TonerSplyCOAmntY	*ENG	[0.0 to 30.0 / 0.0 / 0.1 g/step]
017	TonerSplyCOAmntM	*ENG	DFU
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]	

2244	[TonerRmn:Set] DFU				
3244	Sets toner remaining detection.				
001	CleanRotTimes	*ENG	[0 to 20 / 5 / 1 rot/step]		
000	SensorRdyTime	*ENG	[0.0 to 3.0 / 0.0 / 0.1 sec/step]		
002	Ready time for the sensor.				
002	Upperncycle	*ENG	[0 to 20 / 1 / 1 /step]		
003	Parameter to get rid of noises.				
004	Lowermcycle	*ENG	[0 to 20 / 1 / 1 /step]		
004	Parameter to get rid of noises.	•			
2244	[TonerRmn:Set] DFU				
3244	Threshold to judge upper and low	ver for PCE	DU 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	NNThhresh: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]
020	Elps Time:ChngSpd	*ENG	[0 to 255 / 10 / 1 sec/step]
029	Time to be able to detect toner rer	maining af	ter 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]	
001	Displays regular reflection output when right ID. sensor is turned off.			
	Voffset reg (L)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]	
002	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]	
011	Displays diffuse reflection output when right ID. sensor is turned off.			
010	Voffset dif (L)	*ENG	[0.00 to 5.50 / - / 0.01 V/step]	
012	Displays diffuse reflection output when left ID. sensor is turned off.			

2211	[ID.Sens :Vmin]		
3311	Displays black Vmin output of gra	dation pat	ttern 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]		
0.01	Vct_reg(R)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]
001	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]
002	Displays stroke voltage of regular reflection for left ID. sensor.	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 l	for right ID. sensor.
	Vct_dif(L)	*ENG	[0.00 to 5.00 / 0.00 / 0.01 V/step]
012	Displays stroke voltage of diffuse reflection for left ID. sensor.		

2220	[Vsg Adj Excute] DFU				
3320	-				
	P.Samar	FNG	[-/-/-]		
001		LING	[Execute]		
	Executes Vsg adjustments.				
	Vsg Err Count (R)	*ENG	[0 to 99 / 0 / 1 time/step]		
031	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.				
	Vsg Err Count (L)	*ENG	[0 to 99 / 0 / 1 time/step]		
032	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]		
	Vsg reg (R)	*ENG	[0.00 to 5.50 / 0.00 / 0.01 V/step]
001	Displays regular reflection output adjustment execution was succeed	for bare p ded last tin	art of the belt of the right ID. sensor when vsg ne.

3. Appendix: Service Program Mode Tables

	Vsg reg (L)	*ENG	[0.00 to 5.50 / 0.00 / 0.01 V/step]	
002	Displays regular reflection output adjustment execution wais succee	*ENG [I] t for bare part eded last time *ENG [I] for bare part >ded last time. *ENG [I]	art of the belt of the left ID. sensor when vsg ne.	
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.			
	Vsg dif (L)	*ENG	[0.00 to 5.50 / 0.00 / 0.01 V/step]	
012	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]		
	lfsg (R)	*ENG	[0 to 1500 / 544 / 1 /step]
001	Displays current value of the emiss was succeeded last time.	sion for rig	ht ID. sensor when vsg adjustment execution
	lfsg (L)	*ENG	[0 to 1500 / 544 / 1 /step]
002	Displays current value of the emiss succeeded last time.	ssion for left ID. sensor when vsg adjustment execution w	
	lfsg LowThresh(R)	*ENG	[0.0 to 50.0 / 10 / 0.1 mA/step]
011	011 Displays minimum current value of the emission for ri adjustment executions.	ion for right ID. sensor from previous vsg	
	lfsg LowThresh(L)	*ENG	[0.0 to 50.0 / 10 / 0.1 mA/step]
012	Displays minimum current value of adjustment executions.	the emissi	ion for left ID. sensor from previous vsg

	[Vsg Adj OK?]
	Displays latest vsg result codes.
	Readings
3323	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]

2220	[ID. Sens Coef]			
3330	Displays latest correction coefficie	ent of the s	ensitivity 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]
008	Adjusts calibration point (kn) of co	correction coefficient of sensitivity.	
	K5: TargetVoltage	*ENG	[0.00 to 5.00 / 0.75 / 0.01 /step]
009	Adjusts the reference voltage of c	orrection c	oefficient of sensitivity.

2222	[ID. Sens TestVal:F] DFU		
3333	Test values of the shipping inspect	tion for rig	ht 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]

2224	[ID. Sens TestVal:F] DFU		
3334	Test values of the shipping inspect	ion 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 time	S.	
002	Error Counter	*ENG	[0 to 65535 / 0 / 1 /step]
002	Failures counter for IBACC.		
002	ProCon Error Cnt	*ENG	[0 to 65535 / 0 / 1 /step]
003	Process control failure counter for	BACC.	
00.4	Dens Error Cnt	*ENG	[0 to 65535 / 0 / 1 /step]
004	Failures counter of the density det	ection for l	BACC.
005	Photo dithering	*ENG	[0 to 15 / 0 / 1 /step]
005 Displays the result of photo dithering for IBACC.		CC.	
004	Text dithering	*ENG	[0 to 15 / 0 / 1 /step]
008	Displays the result of text dithering	for IBAC	C.

3341	[Target Dens:K] DFU
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	Target density of 1st to 16th grad	ation for B	lack.
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	Т_К_(Р9)	*ENG	[0.00 to 2.55 / 1.09 / 0.01 D /step]
010	T_K_(P1O)	*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]

22.40	[Target Dens:C] DFU		
3342	Target density of 1st to 16th grad	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	Т_С_(Р9)	*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]

2242	[Target Dens:M] DFU		
3343	Target density of 1st to 16th grad	th 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	Т_М_(Р9)	*ENG	[0.00 to 2.55 / 0.51 / 0.01 D / step]
010	T_M_(P1O)	*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]

2244	[Target Dens:Y] DFU		
3344	Target density of 1st to 16th grad	ation for Y	′ellow.
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_(P1O)	*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]

2245	[Density Range] DFU		
5545	Adjusts upper limit and lower limit	of accept	able 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]

	[Reverse Point] DFU		
3346	Sets allowable number of density patters. Used for error judgement.	is reversec	l for density measurement value of gradation
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] • 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] • 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					

3401	[TonerFixSply:Set] DFU		
011	FixedSplyAmntK	*ENG	
012	FixedSplyAmntY	*ENG	Fixed supply amount.
013	FixedSplyAmntM	*ENG	[0 to 100 / 15 / 1 g/step]
014	FixedSplyAmntC	*ENG	
015	MixTime:FixSplyK	*ENG	
016	MixTime:FixSplyY	*ENG	Mixed time when fixed amount of tonner
017	MixTime:FixSplyM	*ENG	[0 to 500 / 60 / 1 sec/step]
018	MixTime:FixSplyC	*ENG	

3411	[TonerFixSply:Disp]				
	TonerRmnK	*ENG	[0 to 2 / - / 1 /step]		
	Displays the detection result of toner remaining for Bk.				
001	0: Upper limit				
	1: Mid				
	2: Lower limit				
	TonerRmnY	*ENG	[0 to 2 / - / 1 /step]		
	Displays the detection result of toner remaining for Ye.				
002	0: Upper limit				
	1: Mid				
	2: Lower limit				
	TonerRmnM	*ENG	[0 to 2 / - / 1 /step]		
	Displays the detection result of toner remaining for Ma.				
003	0: Upper limit				
	1: Mid				
	2: Lower limit				

	TonerRmnC	*ENG	[0 to 2 / - / 1 /step]	
	Displays the detection result of toner remaining for Cy.			
004	0: Upper limit			
	1: Mid			
	2: Lower limit			
005	SnsOutCntAvK	*ENG	[0 to 255 / - / 1 time/step]	
005	Average number of transmission for	or the tone	r remaining detection sensor for Bk.	
006	SnsOutCntAvY	*ENG	[0 to 255 / - / 1 time/step]	
000	Average number of transmission for	or the tone	r remaining detection sensor for Ye	
007	SnsOutCntAvM	*ENG	[0 to 255 / - / 1 time/step]	
007	Average number of transmission for	or the tone	r remaining detection sensor for Ma	
009	SnsOutCntAvC	*ENG	[0 to 255 / - / 1 time/step]	
008	Average number of transmission for the toner remaining detection sensor for Cy			
011	CnsmRate:SplyK	*ENG	[0 to 100 / - / 1 %/step]	
UTT	Toner consumption rate until next toner supply.			
012	CnsmRate:SplyY	*ENG	[0 to 100 / - / 1 %/step]	
012	Toner consumption rate until next toner supply.			
012	CnsmRate:SplyM	*ENG	[0 to 100 / - / 1 %/step]	
013	Toner consumption rate until next toner supply.			
014	CnsmRate:SplyC	*ENG	[0 to 100 / - / 1 %/step]	
014	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]	
013	Temperature and humidity thresho	old to judge	e 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		
	ALL	*ENG	[0 or 1 / 1 / 1 /step]
 001 Switches execution decision of all image quality adjustment on / off. 0: OFF 1: ON 		ality adjustment on / off.	
	ProCon	*ENG	[0 or 1 / 1 / 1 /step]
002	 Switches execution decision of potential control on / off. 0: OFF 1: ON 		

	[ImgQtyAdj: ExeFlag] DFU		
	Lower bits: full color		
3510	High order bits: black and white		
	• 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	[O to OxFFFFFFF / O / 1 mm^2/step]
	Print area from judge to execute last toner refreshment for Bk.		
002	Print Area C	*ENG	[0 to 0xFFFFFFF / 0 / 1 mm^2/step]
	Print area from judge to execute last toner refreshment for Cy.		

002	Print Area M	*ENG	[0 to 0xFFFFFFF / 0 / 1 mm^2/step]		
003	Print area from judge to execute last toner refreshment for Ma.				
00.4	Print Area Y	*ENG	[O to OxFFFFFFF / O / 1 mm^2/step]		
004	Print area from judge to execute l	ast toner re	sfreshment for Ye.		
005	Run Distance K	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
005	Run distance of OPC drum from ju	udge to ex	ecute last toner refreshment for Bk.		
00/	Run Distance C	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
008	Run distance of OPC drum from ju	udge to ex	ecute last toner refreshment for Cy.		
0.07	Run Distance M	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
007	Run distance of OPC drum from ju	udge to ex	ecute last toner refreshment for Ma.		
000	Run Distance Y	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
008	Run distance of OPC drum from ju	idge to ex	ecute 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 re	freshment	criterion for Ye.		
021	Enable Flag BW	*ENG	[0 or 1 / 1 / 1 /step] DFU		
	Enables or disables toner refreshment for black and white.				

	• 0: Disables				
	• 1: Enable				
	Enable Flag FC	*ENG	[0 or 1 / 1 / 1 /step] DFU		
022	Enables or disables toner refreshn	nent for ful	l color.		
	• 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.				
00.4	Wait Page Bk	*ENG	[0 to 500 / 0 / 1 page/step]		
024	Black output pages from the execution condition is satisfied.				
025	Exec Count K	*ENG	[0 to 1000 / 0 / 1 times/step]		
025	Counts toner refreshment execution time for Bk.				
024	Exec Count C	*ENG	[0 to 1000 / 0 / 1 times/step]		
020	Counts toner refreshment execution time for Cy.				
007	Exec Count M	*ENG	[0 to 1000 / 0 / 1 times/step]		
027	Counts toner refreshment execution time for Ma.				
020	Exec Count Y	*ENG	[0 to 1000 / 0 / 1 times/step]		
020	Counts toner refreshment execution time for Ye.				
027	Wait Page Fc	*ENG	[0 to 500 / 0 / 1 page/step]		
037	Full color output pages from the e	xecution c	ondition is satisfied.		

2517	[Toner Input]			
3317	-			
001	Enable Flag K	*ENG	[0 or 1 / 1 / 1 /step] DFU	
	Enables or disables toner input for Bk.			

З

	• 0: Disables				
	• 1: Enable				
	Enable Flag C	*ENG	[0 or 1 / 0 / 1 /step] DFU		
002	Enables or disables toner input for	· Cy.			
	• 0: Disables				
	• 1: Enable				
	Enable Flag M	*ENG	[0 or 1 / 0 / 1 /step] DFU		
003	Enables or disables toner input for	Ma.			
	• 0: Disables				
	• 1: Enable	• 1: Enable			
		*510	[0 or 1 / 0 / 1 /step]		
		EING	DFU		
004	Enables or disables toner input for Ye.				
	• 0: Disables				
	• 1: Enable				
005	Run Distance K	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
005	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	orevious e	xecuting for toner input to the cleaning blade.		
008	Run Distance Y	*ENG	[0 to 999999999 / 0 / 1 mm/step]		
000	OPC drum running distance after	orevious e	xecuting 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]

2521	[Drum Stop Time]				
3521	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]		
001	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 v	when proce	ess 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]

	[Unit Change]			
3524	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]				
00/	Page Cnt:BW	*ENG	[0 to 5000 / - / 1 sheets/step]		
008	Displays the page counter since last process control has been executed.				
	Page Cnt:FC	*ENG	[0 to 5000 / - / 1 sheets/step]		
007	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 v	vhen consi	umption rate is lower than lower limit.		

2520	[PowerON Procon] DFU				
3330	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 star	ts 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 C	N / 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 *ENG [100 to 350 / **200** / 1 -V/step] Std Speed: K 001 Displays development bias for Bk when printing. *ENG [100 to 350 / 200 / 1 -V/step] Std Speed: C 002 Displays development bias for Cy when printing. *ENG Std Speed: M [100 to 350 / 200 / 1 -V/step] 003 Displays development bias for Ma when printing. *ENG [100 to 350 / 200 / 1 -V/step] Std Speed: Y 004 Displays development bias for Ye when printing. *ENG Low Speed: K [100 to 350 / 200 / 1 -V/step] 021 Displays development bias for Bk when printing in mid / low speed. *ENG [100 to 350 / **200** / 1 -V/step] Low Speed: C 022 Displays development bias for Cy when printing in mid / low speed. *ENG Low Speed M [100 to 350 / 200 / 1 -V/step] 023 Displays development bias for Ma when printing in mid / low speed. *ENG [100 to 350 / 200 / 1 -V/step] Low Speed Y 024 Displays development bias for Ye when printing in mid / low speed. *ENG [100 to 350 / 200 / 1 -V/step] MUSIC Std: K 031 Displays development bias for Bk when MUSIC is executed. MUSIC Std: C *ENG [100 to 350 / 200 / 1 -V/step] 032 Displays development bias for Cy when MUSIC is executed.

000	MUSIC Std: M	*ENG	[100 to 350 / 200 / 1 -V/step]	
033	Displays development bias for Ma when MUSIC is executed.			
02.4	MUSIC Std: Y	*ENG	[100 to 350 / 200 / 1 -V/step]	
034	Displays development bias for Ye w	hen MUSI	C is executed.	
120	Vb Limit	*ENG	[0 to 500 / 30 / 1 V/step] DFU	
	Vb changing range when process co	ontrol is cu	tting in.	
201	Plus DC LL Dist1	ENG	[0 to 250 / 250 / 1 V/step] DFU	
	Sets development bias (+) in accord	ance with	environment or distance.	
202	Plus DC ML Dist 1	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 accord	ance 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 accord	ance with	environment or distance.		
209	Plus DC MM Dis2	ENG	[0 to 250 / 250 / 1 V/step] DFU		
	Sets development bias (+) in accord	ance with	environment or distance.		
210	Plus DC HH Dist2	ENG	[0 to 250 / 200 / 1 V/step] DFU		
	Sets development bias (+) in accord	ance 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 accord	ance with	environment or distance.		

217	Plus DC ML Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU		
	Sets development bias (+) in accord	ance with	environment or distance.		
218	Plus DC MM Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU		
	Sets development bias (+) in accord	ance with	environment or distance.		
219	Plus DC MH Dist4	ENG	[0 to 250 / 150 / 1 V/step] DFU		
	Sets development bias (+) in accord	ance 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.			
00.4	Std Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]	
004	Displays exposure amount for Ye wł	nen printing	j.	
001	Low Speed: K	*ENG	[0 to 200 / 100 / 1 %/step]	
021	Displays exposure amount for Bk wh	nen printing	g in low speed.	
000	Low Speed: C	*ENG	[0 to 200 / 100 / 1 %/step]	
022	Displays exposure amount for Cy w	nen printin	g in low speed.	
000	Low Speed: M	*ENG	[0 to 200 / 100 / 1 %/step]	
023	Displays exposure amount for Ma w	hen printir	ng in low speed.	
02.4	Low Speed: Y	*ENG	[0 to 200 / 100 / 1 %/step]	
024	Displays exposure amount for Ye when printing in low speed.			
021	Ppattern: K	*ENG	[0 to 200 / 100 / 1 %/step]	
031	Displays exposure amount for Bk when pattern is drawn on the OPC drum.			
022	Ppattern: C	*ENG	[0 to 200 / 100 / 1 %/step]	
032	Displays exposure amount for Cy when pattern is drawn on the OPC drum.			
022	Ppattern: M	*ENG	[0 to 200 / 100 / 1 %/step]	
033	Displays exposure amount for Ma when pattern is drawn on the OPC drum.			
034	Ppattern: Y	*ENG	[0 to 200 / 100 / 1 %/step]	
034	Displays exposure amount for Ye when pattern is drawn on the OPC drum.			
	MUSIC	*ENG	[0 to 200 / 100 / 1 %/step]	
051	Strobe time coefficient when MUSIC	2 patter is c	preated.	
	Indicating the correction percentage change this SP because there is poss	e for the tim sibility to fo	ne set by SP3613-001 to 004. Do not nil 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]
001	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.			
002	Maximum:M	*ENG	[0.10 to 7.50 / 4.67 / 0.01 g/m^2/step]	
003	Sets solid adhesion amount for Ma.			
004	Maximum:Y	*ENG	[0.10 to 7.50 / 4.67 / 0.01 g/m^2/step]	
004	Sets solid adhesion amount for Ye.			
011	Halftone:K	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m^2/step]	
	Sets halftone adhesion amount for Bk.			
012	Halftone:C	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m^2/step]	
012	Sets halftone adhesion amount for Cy.			
012	Halftone:M	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m^2/step]	
013	Sets halftone adhesion amount for Ma.			
01.4	Halftone:Y	*ENG	[0.10 to 5.00 / 1.50 / 0.01 g/m^2/step]	
014	Sets halftone adhesion amount for Ye.			

	[Dev Pot :Set]				
3622	Displays development potential.				
	Development potential is a potential difference between electrostatic latent image potential and development bias.				
001	К	*ENG	[0 to 800 / - / 1 V/step]		
002	С	*ENG	[0 to 800 / - / 1 V/step]		
003	М	*ENG	[0 to 800 / - / 1 V/step]		
004	Υ	*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	К	*ENG	[-300 to 300 / - / 1 -V/step]	
002	С	*ENG	[-300 to 300 / - / 1 -V/step]	
003	М	*ENG	[-300 to 300 / - / 1 -V/step]	
004	Y	*ENG	[-300 to 300 / - / 1 -V/step]	

2422	[Hlftn:Slope alpha]				
3032	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	[Hlftn:Intcpt beta]			
	Displays halftone 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.		
	U: Not execute		
	I: EXECUTE		
001	ON/OFF Setting	*ENG	[0 or 1 / 1 / 1 / step]

3800	[TN Collec. Bottle]				
	-				
	Full Record *ENG [0 to 2 / 0 / 1 / step]				
	Full history of tonner collection bottle.				
001	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 100000000 / 0 / 1 ug/step]		
		DFU			

	Displays toner accumulation counter after toner near / full sensor turned ON.				
004	Mt_full	*ENG	[0 to 100000000 / 36500 / 1 mg/ step] DFU		
	Toner collection bottle end, accumu	ation tone	r amount.		
005	Mt_near_full	*ENG	[0 to 1000000 / 22200 / 1 mg/step] DFU		
	Toner collection bottle near end, ac	cumulation	toner amount.		
009	МС	*ENG	[0 to 100000000 / 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 ar	ea.			
011	Т3	*ENG	[0 to 100 / 15 / 1 %/step] DFU		
	l st transfer efficiency.				
012	Τ4	*ENG	[0 to 100 / 15 / 1 %/step] DFU		
	2nd transfer efficiency.				
013	Change Chk:M/A	*ENG	[0 to 100000000 / 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 1 00 / 0 / 1 /step] DFU		
	Threshold of early full detection number.				
	Days bfr End *ENG [1 to 5 / 5 / 2 days/s DFU		[1 to 5 / 5 / 2 days/step] DFU		
017	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]

	[Accounting counter]				
	Selects the counting method.				
5045	♦ Note				
	• The counting method can be changed only once, regardless of whether the counter value is negative or positive.				
001			[0 or 1 / 0 / 1 /step]		
	Counter Method	*CTL	0: Developments		
			1: Prints		
			*Factory setting 1		

	[Refill Toner Disp]			
5051	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]
5055	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]				
5074	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]				
5075	Sets the function of the external keyboard.				
001	Function Setting	*CTL	[0 or 1 / 0 / 1/step] 0: Disable, 1: Enable		

	[LED Light Switch]			
5083	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	

	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 to print Bk only and when printing a text mode is on.	text mode v predeterm	when the printer is turned on. Bk text mode is ined ratio. it suppresses the TEC when BW

5112	[Non-Std. Paper Sel.] DFU		
001	0:0FF 1:0N	*CTL	[0 or 1 / 1 / -/step] 0: Off, 1: On

5131	[Paper Size Type] DFU		
001	-	*ENG	[0 or 1 / 1 / 1/step]
	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

	[Set Time]			
	Adjusts the RTC (real time clock) time setting for the local time zone.			
	Examples: For Japan (+9 GMT), enter 540 (9 hours x 60 min.)			
	DOM: +540 (Tokyo)			
5302	NA: -300 (New York)			
0002	EU: + 60 (Paris) CH: +480 (Peking)			
	TW: +480 (Taipei)			
	AS: +480 (Hong Kong)			
	KO: +540 (Korea)			
002	Time difference	*CTL	[-1440 to 1440 / 60 / 1 minute/step]	

5305-101 RTB 6

5307	[Daylight ST]			
001	ON/OFF Enables or disables the summer time Note • Make sure that both SP5-307- activated even if this SP is set to	*CTL • mode. 3 and -4 a • "1".	[0 or 1 / NA, EU, ASIA / 1 /step] 0: Disabled 1: Enabled NA and EUR: 1, ASIA: 0 re correctly set. Otherwise, this SP is not	
	Start	*CTL	-	
	Specifies the start setting for the summer time mode.			
003	There are 8 digits in this SP. For months 1 to 9, the "O" cannot be input in the first digit, so the eight-digit setting for -2 or -3 becomes a seven-digit setting.			
	1st and 2nd digits: The month. [1 to 12]			

	3rd digit: The week of the month. [1 to 5]			
	4th digit: The day of the week. [0 to 6 = Sunday to Saturday]			
	5th and 6th digits: The hour. [00 to 23]			
	7th digit: The length of the advanced	d time. [0 to	o 9 / 1 hour /step]	
	8th digit: The length of the advanced	d time. [0 to	o 5 / 10 minutes /step]	
	• The digits are counted from the	left.		
	• Make sure that SP5-307-1 is s	et to "1".		
	For example: 3500010 (EU default)			
	The timer is advanced by 1 hour at a	am 0:00 o	n the 5th Sunday in March	
	End	*CTL	-	
	Specifies the end setting for the sum	mer time m	ode.	
	There are 8 digits in this SP.			
	1st and 2nd digits: The month. [1 to 12]			
004	3rd digit: The week of the month. [0 to 5]			
004	4th digit: The day of the week. [0 to 7 = Sunday to Saturday]			
	5th and 6th digits: The hour. [00 to 23]			
	The 7th and 8 digits must be set to "00".			
	• The digits are counted from the	left.		
	• Make sure that SP5-307-1 is s	et to "1".		

5401	[Access Control]		
240	Detail Option	*CTL	-
	Enables or disables the log out confi	es or disables the log out confirmation option.	
	Bit 0: Log out confirmation option		
	0: Enable (default), 1: Disable		
	Selects the automatic log out time.		
	• Bit 1 and 2: Automatic log out	timer reduc	tion.
	00: 60 seconds (default), 01:	10 second	s, 10: 20 seconds, 11: 30 seconds

5402	[Access Control]		
240	Detail Option	*CTL	-

Enables or disables the log out confirmation option.
Bit 0: Log out confirmation option
0: Enable (default), 1: Disable
Selects the automatic log out time.
• Bit 1 and 2: Automatic log out timer reduction.
00: 60 seconds (default), 01: 10 seconds, 10: 20 seconds, 11: 30 seconds

5404	[User Code 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	

 Incrypt Incrypt	5412	[Krb-Certification]				
0x10:DES-CBC-MD5	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		

5413	[Lockout Setting]		
001	Lockout On/Off	*CTL	[0 or 1/ 0 /-/step] 0: Off, 1: On

3. Appendix: Service Program Mode Tables

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 / 1min/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)	

	[Error Alarm]			
	Sets the error alarm level.			
5505	 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 she (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		
	[Supply Alarm]				
5507	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			
132	Interval :A3	*CTL	Sets the paper supply alarm level. A paper supply alarm counter increases by +1		
133	Interval: A4	*CTL	when a sheet of the related size is used.		
134	Interval: A5	*CTL	of the paper supply alarm occurs when one		
141	Interval: B4	*CTL	the set value.		
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	r an unatter	nded paper jam.	
002	Frequent Jams	*CTL	[0 or 1 / 0 / -/step] 0: Disable, 1: Enable	
	Enables/disables initiating a call for	consecutiv	ve 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.			
	Jam Remains: Time	*CTL	[3 to 30 / 10 / 1 minute/step]	
011	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".			
	Freq Jam: # Of Time	*CTL	[2 to 10 / 5 / 1 time/step]	
012	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".			

	[SC/Alarm Setting]
5515	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	1: On
004	User Call	*CTL	-
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

	[Individual PM Part Alarm Call]				
5516	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]		
5517	-		
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]
<i>57</i> 31	[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]				
5745	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		
5740	-		
001	available	*CTL	[0 or 1 / 1 / 1 /step]
002	Interval: mon	*CTL	[10 to 3600 / 60 / 1/step]

004	Available: log	*CTL	[0 or 1/1/1/step]
5749	[Import/Export] DFU		
001	Export	*CTL	[- / - / -] [Excute]
002	Import	CTL	[- / - / -] [Excute]
251	Export Result Print	CTL	[- / - / -] [Excute]
252	Import Result Print	CTL	[- / - / -] [Excute]

5751	[] DFU		
5751	-		
001	-	-	[- / - / -] [String In]

5700	[MCS Debug SW] DFU		
5/92	-		
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]

001	1	CTL	[0 to 255 / - / 1 /step]

001	1	CTL	[0 to 255 / 0 / 1 /step]

5801	[Memory Clear]				
001	All Clear	CTL	[-/-/-] [Execute]		
	Resets all correction data for proces modes and adjustments to their defo	ss control a ault values.	nd all software counters, and returns all		
002	Engine	ENG	[-/-/-] [Execute]		
	Clears the engine settings.				
003	SCS	CTL	[- / - / -] [Execute]		
000	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.				
	Printer	CTL	[-/-/-] [Execute]		
	The following service settings:				
008	• Bit switches				
	Gamma settings (User & Service)				
	Toner Limit				
	Tray Priority				

Menu Protect				
System Setting except for setting of Energy Saver				
 I/F Setup (I/O Buffer and I/O Timeout) 				
PCL Menu				
C14/14/S	CTL	[-/-]		
		[Execute]		
Deletes the network file application job login ID.	managem	ent files and thumbnails, and initializes the		
		[-/-]		
NCS	CIL	[Execute]		
All setting of Network Setup (User N	1enu)			
(NCS: Network Control Service)				
		[-/-]		
Clear DCS Setting	CTL	[Execute]		
Initializes the DCS (Delivery Control Service) settings.				
Clear UCS Setting	CTL	[-/-]		
		[Execute]		
Initializes the UCS (User Information Control Service) settings.				
MIRS Memory Clr	CTL	Resets or deletes the MIRS-related data.		
Initializes the MIRS (Machine Inform	ation Rep	ort Service) settings.		
	CTI	[-/-]		
CCS	CIL	[Execute]		
Initializes the CCS (Certification and Chargecontrol				
Service) settings.				
		[-/-]		
SRM Memory Clr	CTL	[Execute]		
Initializes the SRM (System Resource Manager) settings.				
		[-/-/-]		
LCS Memory Clr	CTL	[Execute]		
	 Menu Protect System Setting except for setting I/F Setup (I/O Buffer and I/O PCL Menu GWWS Deletes the network file application of job login ID. NCS All setting of Network Setup (User M (NCS: Network Control Service)) Clear DCS Setting Initializes the DCS (Delivery Control Clear UCS Setting Initializes the UCS (User Information MIRS Memory Clr Initializes the MIRS (Machine Information MIRS Memory Clr Initializes the CCS (Certification and Service) settings. SRM Memory Clr Initializes the SRM (System Resource) 	 Menu Protect System Setting except for setting of Energy I/F Setup (I/O Buffer and I/O Timeout) PCL Menu GWWS CTL Deletes the network file application management iob login ID. NCS CTL All setting of Network Setup (User Menu) (NCS: Network Control Service) Clear DCS Setting CTL Initializes the DCS (Delivery Control Service) setup is a setup of the service) setup of the setup of th		
	Resets or deletes the LCS-related data.			
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021	ECS	CTL	[-/-/-] [Execute]	
	Initializes the ECS settings.			
025	websys	CTL	[-/-/-] [Execute]	
	-			
026	PLN	CTL	[-/-] [Execute]	

5803	[INPUT CHECK]		
	PSIZE&TRYSET	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF	1	
	1: A4 SEF		
	2: A4 LEF		
	3: A5 SEF		
	4: A5 LEF		
	5: A6 SEF		
	6: DLT SEF		
001	7: LG SEF		
	8: LT SEF		
	9: LT LEF		
	10: Custom		
	11: Folio		
	12:Executive		
	13:16K		
	14:8K		
	15:Tray not set		
00.4	PAPEND_SNS	ENG	[0 or 1 / 0 / 1/step]
004	Displays the status of the by-pass paper end sensor.		

	0: paper remaining		
	1: paper end		
	HANDBP_SNS	ENG	[0 or 1 / 0 / 1/step]
005	0: Base plate goes down		
	1: Base plate goes up		
	HAND_SNS	ENG	[0 or 1 / 0 / 1/step]
006	0: Paper detected		
	1: No paper detected		
	PAPOUT_SNS	ENG	[0 or 1 / 0 / 1/step]
800	0: Paper detected		
	1: No paper detected		
	PEFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
009	0: Paper not full		
	1: Paper full		
	PAPERON_SNS	ENG	[0 or 1 / 0 / 1/step]
010	0: Paper detected		
	1: No paper detected		
	DUP_SNS	ENG	[0 or 1 / 0 / 1/step]
013	0: Paper detected		
	1: No paper detected		
	REG_SNS	ENG	[0 or 1 / 0 / 1/step]
015	0: Paper detected		
	1: No paper detected		
	TE_SNS_K	ENG	[0 or 1 / 0 / 1/step]
018	0: Toner remaining		
	1: Toner end		
010	TE_SNS_C	ENG	[0 or 1 / 0 / 1/step]
019	0: Toner remaining		

	1: Toner end					
	TE_SNS_M	ENG	[0 or 1 / 0 / 1/step]			
020	0: Toner remaining	0: Toner remaining				
	1: Toner end					
	TE_SNS_Y	ENG	[0 or 1 / 0 / 1/step]			
021	0: Toner remaining					
	1: Toner end					
	INTERLOCK_+24VS1	ENG	[0 or 1 / 0 / 1/step]			
024	0: +24VS1 On					
	1: +24VS1 Off					
	INTERLOCK_+24VS2	ENG	[0 or 1 / 0 / 1/step]			
025	0: +24VS2 On					
	1: +24VS2 Off					
	INTERLOCK_+5VS	ENG	[0 or 1 / 0 / 1/step]			
026	0: +5VS On					
	1: +5VS Off					
	TONERBTLSET_SNS	ENG	[0 or 1 / 0 / 1/step]			
032	Displays the status of the waste toner bottle set sensor.					
	O: Set					
	1: Not set					
	TONERFUL_SNS	ENG	[0 or 1 / 0 / 1/step]			
033	Displays the status of the waste toner overflow sensor.					
	0: Not full					
	ITBNEW_SNS	ENG	[0 or 1 / 0 / 1/step]			
034	0: Used					
	I: New					
035	MINFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]			

	0: Normal 1: Error		
	FUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
036	0: Normal 1: Error		
	PSUFAN_LOCK	ENG	[0 or 1 / 0 / 1/step]
037	0: Normal 1: Error		
	ITB_TCSP_SNS	ENG	[0 or 1 / 0 / 1/step]
048	0: Abutting 1: Spaced		
	FEEDMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
049	0: Normal 1: Error		
	BWMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
050	0: Normal 1: Error		
	FUMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
051	0: Normal 1: Error		
	COLMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
052	0: Normal 1: Error		
	TRANSMT_LOCK	ENG	[0 or 1 / 0 / 1/step]
053	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				
	HVP_ERR_1	ENG	[0 or 1 / 0 / 1/step]		
055	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				
	HVP_ERR_2	ENG	[0 or 1 / 0 / 1/step]		
056	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				
	Г: Эрасеа				
	FUNEW_SNS	ENG	[0 or 1 / 0 / 1/step]		
058	0: Used				
	1: New				
	FUSET_SNS	ENG	[0 or 1 / 0 / 1/step]		
060	0: Set				
	1: Not set				
	FUCOMP	ENG	[0 or 1 / 0 / 1/step]		
062	O: Off				
	1: High temp. detected				
070	EGB_VER	ENG	[0 to 15 / 0 / 1/step]		
072	Increases 1 if version is increased.				
	BANK_PE_SNS1	ENG	[0 or 1 / 0 / 1/step]		
077	0: paper end 1: paper remaining				
078	BANK_PE_SNS2	ENG	[0 or 1 / 0 / 1/step]		

	0: paper end			
	1: paper remaining			
	BANK_PE_SNS3	ENG	[0 or 1 / 0 / 1/step]	
079	0: paper end			
	1: paper remaining			
	BANK_FEED_SNS1	ENG	[0 or 1 / 0 / 1/step]	
080	0: No paper detected			
	1: Paper detected			
	BANK_FEED_SNS2	ENG	[0 or 1 / 0 / 1/step]	
081	0: No paper detected			
	1: Paper detected			
	BANK_FEED_SNS3	ENG	[0 or 1 / 0 / 1/step]	
082	0: No paper detected			
	1: Paper detected			
	BANK_500/250_1	ENG	[0 or 1 / 0 / 1/step]	
083	Indicates first stage (tray 2) is 500 sheets tray.			
	0: 500			
	1: Not used			
	BANK_500/250_2	ENG	[0 or 1 / 0 / 1/step]	
084	Indicates second stage (tray 3) is 500 sheets tray.			
	0: 500			
	1: Not used			
	BANK_500/250_3	ENG	[0 or 1 / 0 / 1/step]	
085	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]	
000	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		
	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		
097	5: B5 LEF		
007	6: A5 SEF		
	9: DLT SEF		
	10: LG SEF		
	1 1: LT SEF		
	12: LT LEF		
	14: Custom		
	15: Tray not set		
	BANK_PSIZE_3	ENG	[0 to 15 / 0 / 1/step]
	0: A3 SEF		
000	1: B4 SEF		
000	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		
	BANK_MT_LOCK_1	ENG	[0 or 1 / 0 / 1/step]
090	0: Normal		
	1: Error		
	BANK_MT_LOCK_2	ENG	[0 or 1 / 0 / 1/step]
091	0: Normal		
	1: Error		
	BANK_MT_LOCK_3	ENG	[0 or 1 / 0 / 1/step]
092	0: Normal		
	1: Error		
	PCDUNEW_SNS_K	ENG	[0 or 1 / 0 / 1/step]
100	0: Used		
	1: New		
	PCDUNEW_SNS_C	ENG	[0 or 1 / 0 / 1/step]
101	0: Used		
	1: New		
	PCDUNEW_SNS_M	ENG	[0 or 1 / 0 / 1/step]
102	0: Used		
	1: New		
103	PCDUNEW_SNS_Y	ENG	[0 or 1 / 0 / 1/step]

	0: Used				
	1: New				
	PCDUSET_SNS_K	ENG	[0 or 1 / 0 / 1/step]		
104	0: Set				
	1: Not set				
	PCDUSET_SNS_C	ENG	[0 or 1 / 0 / 1/step]		
105	0: Set				
	1: Not set				
	PCDUSET_SNS_M	ENG	[0 or 1 / 0 / 1/step]		
106	0: Set				
	1: Not set				
	PCDUSET_SNS_Y	ENG	[0 or 1 / 0 / 1/step]		
107	0: Set				
	1: Not set				
	Door Open Detect	ENG	[0 or 1 / 0 / 1/step]		
115	Displays the status of the interlock switches.				
	0: Door closed				
	1: Door opened				
116	Temperature	ENG	[0 to 999 / 0 / 1 deg/step]		
110	Displays current temperature.				
117	Relative Humidity	ENG	[0 to 999 / 0 / 1 %RH/step]		
	Displays current relative humidity.				
110	Absolute Humidity	ENG	[0.00 to 99.99 / 0.00 / 0.01 %RH/step]		
118	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.			
	BWMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]	
004	When using this SP, remove Bk tone of the machine.	r cartridge	/ Bk PCDU. Toner may contaminate inside	
	BWMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]	
005	When using this SP, remove Bk tone of the machine.	r cartridge	/ Bk PCDU. Toner may contaminate inside	
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]	
	COLMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]	
017	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.			
	COLMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]	
018	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.			
	COLMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]	
019	When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine.			
	TRANSMT_144m/s	ENG	[0 or 1 / 0 / 1/step]	
024	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.			
	TRANSMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]	
025	When using this SP, remove all tone transfer belt, and would affect printi	r cartridges ng images.	s / all PCDU. This may damage PCDU and	
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]	
025	FEEDMT_1TCSP	ENG	[0 or 1 / 0 / 1/step]	
035	Revolve using transected motor spec	ed of the 1s	st transfer	
	FEEDMT_HANDBP	ENG	[0 or 1 / 0 / 1/step]	
036	To lift manual feed base plate, reven for lifting.	rse drive po	aper transfer motor, and rotate at a speed	
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]	
	DUP_SOL	ENG	[0 or 1 / 0 / 1/step]	
	Drives the switching solenoid to transfer the paper to the duplex unit.			
045	0: Off – moves solenoid towards to output bin direction.			
	 I: On – moves solenoid towards to duplex unit direction. Do not turn on more than a minute, this might damage the machine because of the high heat. 			
	PAPOUT_SOL	ENG	[0 or 1 / 0 / 1/step]	
046	Drives solenoid for the idler gear to reverse drive paper exit roller. 0: Off			
	1: On – idler gear works to transfer	the paper	to the duplex unit.	
	Do not turn on more than a minute, this might damage the machine because of the high heat.			

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]	
	HVP_C_K	ENG	[0 or 1 / 0 / 1/step]	
	0: Off			
	1: On – Output -1100V			
130	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.			
	HVP_C_C	ENG	[0 or 1 / 0 / 1/step]	
	0: Off			
	1: On – Output - 1100V			
131	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.			
	HVP_C_M	ENG	[0 or 1 / 0 / 1/step]	
122	0: Off			
132	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.			
	HVP_C_Y	ENG	[0 or 1 / 0 / 1/step]	
	0: Off			
	1: On – Output -1100V			
133	There is no SP to change output volt	age.		
	When turning this ON, make sure to might be scratched by the discharge	o remove Yo e.	e toner cartridge and Ye PCDU. OPC Drum	
	SP5804-148 must be ON to output	voltage.		
	HVP_DV_K	ENG	[0 or 1 / 0 / 1/step]	
	0: Off			
134	1: On – Output -200V			
	There is no SP to change output voltage.			
	SP5804-147 must be ON to output voltage.			
	HVP_DV_C	ENG	[0 or 1 / 0 / 1/step]	
	0: Off			
135	1: On – Output -200V			
	There is no SP to change output voltage.			
	SP5804-147 must be ON to output voltage.			
	HVP_DV_M	ENG	[0 or 1 / 0 / 1/step]	
	0: Off			
136	1: On – Output -200V			
	There is no SP to change output voltage.			
	SP5804-147 must be ON to output voltage.			
	HVP_DV_Y	ENG	[0 or 1 / 0 / 1/step]	
	0: Off			
137	1: On – Output -200V			
	There is no SP to change output voltage.			
	SP5804-147 must be ON to output voltage.			

	HVP_T1_K	ENG	[0 or 1 / 0 / 1/step]		
139	O: Off				
	1: On – Output +1000V				
	There is no SP to change output volte	age.			
	HVP_T1_C	ENG	[0 or 1 / 0 / 1/step]		
140	0: Off				
140	1: On – Output +1000V				
	There is no SP to change output volte	age.			
	HVP_T1_M	ENG	[0 or 1 / 0 / 1/step]		
1/1	0: Off				
141	1: On – Output +1000V				
	There is no SP to change output voltage.				
	HVP_T1_Y	ENG	[0 or 1 / 0 / 1/step]		
142	0: Off				
	1: On – Output +1000V				
	There is no SP to change output voltage.				
	HVP_T2_+	ENG	[0 or 1 / 0 / 1/step]		
143	0: Off				
	1: On – Output +30uA				
	There is no SP to change output value.				
	HVP_T2	ENG	[0 or 1 / 0 / 1/step]		
144	0: Off				
	1: On – Output -800V				
	There is no SP to change output volte	age.			
	HVP_D	ENG	[0 or 1 / 0 / 1/step]		
145	0: Off				
140	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.		
	HVP_BION_COL	ENG	[0 or 1 / 0 / 1/step]
148	SP to output charging and developm	nent for Bk.	
	This SP must be "ON" to enable SP:	5804-135	to SP5804-137 to output voltage.
185	ТМ_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]
240	ON_DEMAND_2	ENG	[0 or 1 / 0 / 1/step]
240	Do not execute.		
249	ITBFU_NEWON	ENG	[0 or 1 / 0 / 1/step]
	0: Off		

	I: 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]	
	UPCOVER_SOL	ENG	[0 or 1 / 0 / 1/step]	
	This SP controls shutter to supply toner to PCDU from toner cartridge.			
253	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.			
	5V_TMP_ON	ENG	[0 or 1 / 0 / 1/step]	
254	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.			
055	BankSerialComm	ENG	[0 or 1 / 0 / 1/step]	
255	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				
	Model Selection	ENG*	[1 to 3 / 0 / 1/step]		
002	Sets the model for the printer. 1:Type a, 2:Type b, 3:Type L				
	Paper Type Notify	ENG	[0 or 1 / 1 / 1/step]		
003	Sets how to notify paper type from the controller. O: 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		

З

			1: End of the service	
	Performs the CE Call at the start or end of the service.			
	♦ Note			
	• This SP is activated only when	SP 5816-0	01 is set to "2".	
			[0 or 1 / 0 / 1 /step]	
003	Function Flag	*CTL	0: Disabled	
005			1: Enabled	
	Enables or disables the remote servi	ce function		
004		CTI	[- / - / -]	
004	Comunication less	CIL	[Excute]	
005		CTI	[- / - / -]	
005	Device Info	CIL	[Excute]	
	SSL Disable	*CTL	[0 or 1 / 0 / 1 /step]	
			0: Yes. SSL not used.	
007			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.			
	RCG Connect T/O	*CTL	[1 to 90 / 30 / 30 second /step]	
008	Sets the length of time (seconds) for the time-out when the RCG (Remote Communication Gate) connects during a call via the @Remote network.			
	RCG Write Timeout	*CTL	[1 to 100 / 60 / 1 second /step]	
009 Sets the length of time (seconds) for the time-out when sen during a call over the @Remote network.		it when sent data is written to the RCG		
010	RCG Read Timeout	*CTL	[0 to 100 / 60 / 1 second/step]	
010	Sets the timeout counter for reading processing.			
			[0 or 1 / 0 / 1 /step]	
011	Port 80	*CTL	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 firm	ware updo	ıting.			
	RCG Error Cause	CTL	[0 or 1 / 0 / 1 /step]			
014	 O: 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.					
0/1	NotiTime ExpTime	*CTL	[0 to 0xffffffff / 0 / 1/step]			
001	Proximity of the expiration of the cer	tification.				
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.					
	HTTP Proxy Host	*CTL	-			
063	This SP sets the address of the proxy device and the gateway. Use this SF The address is necessary to set up th	server use to set up c e embedd	d for communication between the RCG or display the customer proxy server address. ed RCG-N.			

	♦ Note						
	 The address display is limited to 128 characters. Characters beyond the 128 character are ignored. 						
	• Th	is address is customer inform	ation and i	s not printed in the SMC report.			
	HTTP P	roxy Port	*CTL	[0 to 0xffff / 0 / 1/step]			
064	This SP embed Gate-N	sets the port number of the p ded RCG-N and the gatewa I.	roxy server y. This settin	r used for communication between the ng is necessary to set up the embedded RC			
	Vol	re					
	• Th	is port number is customer in	formation o	and is not printed in the SMC report.			
	HTTP P	rox AutUsr	*CTL	-			
	This SP	sets the HTTP proxy certificat	tion user no	ime.			
065	V Not	re					
	• The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored.						
	• Th	• This name is customer information and is not printed in the SMC report.					
	HTTP P	rox AutPass	*CTL	-			
	This SP sets the HTTP proxy certification password.						
066	♦ Note						
	• The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored.						
	• This name is customer information and is not printed in the SMC report.						
	Cer Up	dt Cond	*CTL	[0 to 255 / 0 / 1/step]			
	Displays the status of the certification update.						
	0	The certification used by RC	CG-N is set	correctly.			
067	1	The certification request (se URL and certification is pres	tAuthKey) sently being	for update has been received from the GW g updated.			
	2	The certification update is c successful update.	ompleted o	and the GW URL is being notified of the			
	3	The certification update fail update.	ed, and the	e GW URL is being notified of the failed			

	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 setti the certification update requ	ng is comp uest.	leted and the GW URL is being notified of		
The notification of the request for certification update has completed succ13and the system is waiting for the certification update request from the resURL.				ication update has completed successfully, cation update request from the rescue GW		
	14	14 The notification of the certification request has been received from the rescue GV 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. The storing of the certification has failed, and the GW URL is being notified of the failure of this event.				
	16					
	The certification update request has been received from the GW URL, the was notified of the results of the update after it was completed, but an certi error has been received, and the rescue certification is being recorded.			een received from the GW URL, the GW URL e after it was completed, but an certification we 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.				
	Cer Ab	nml 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.				
068	2	An SSL error notification ha	s been issu	ed. Issued after the certification has expired.		
	3	Notification of shift from a common authentication to an individual certification.				
	4	Notification of a common c	ertification	without ID2.		
	5	Notification that no certifica	ation was is	sued.		
	6	Notification that GW URL c	loes not ex	ist.		

040	Cer Updt ReqID	*CTL	-		
009	The ID of the request for certification.				
002	Firm Updating	*CTL	[0 to 5 / 0 / 1/step]		
083	Displays the status of the firmware u	pdate.			
	Firm UpUsr Conf	*CTL	-		
085	This SP setting determines if the open before the firmware update execution selected, a notification is sent to the the firmware files from the URL.	rator can co on. If the op system mai	onfirm the previous version of the firmware ation to confirm the previous version is nager and the firmware update is done with		
	Firmware Size	*CTL	-		
086	Allows the service technician to confirm the size of the firmware data files during the firmware update execution.				
007	CERT: MacroVsn	CTL	-		
087	Displays the macro version of the @	Remote cer	tification.		
000	CERT: PAC Vsn	CTL	-		
088	Displays the macro version of the @Remote certification.				
	CERT: ID2 Code	CTL	-		
089	89 Displays ID2 for the @Remote certification. Spaces are displayed as underscores (
	CERT: Subject	CTL	-		
090	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.				
	CERT: SeriNum	CTL	-		
091	Displays serial number for the NRS certification. Asterisks (* * * *) indicate that no DESS exists.				
	CERT: Issuer	CTL	-		
092	Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asterisks (* * * *) indicate that no DESS exists.				

002	CERT: St ExpTime	CTL	-		
093	Displays the start time of the period for which the current @Remote certification is enabled				
004	CERT: End ExpTime	CTL	-		
094	Displays the end time of the period	or which th	e 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	[- / - / -] [Excute]		
	CERT: Encrypt Lv	*CTL	[1 or 2 / 1 / 1/step] 1: 512 bit 2: 2048 bit		
102	 Displays cryptic strength of the NRS certification. Press [Execute]. Setting this SP classifies the telephone line where embedded RCG-M is connected dial-up (pulse dial) or push (DTMF tone) type, so embedded RCG-M can autom distinguish the number that connects to the outside line. The current progress, success, or failure of this execution can be displayed SP5816-152. If the execution succeeded, SP5816-153 will display the result for confirm SP5016-154 will display the result for confirm 				
200	Polling Man Exc	CTL	[-/-/-] [Execute]		
	Executes the manual polling.				
	Instl: Condition	CTL	[0 to 4 / 0 / 1/step]		
201	 Displays a number that indicates the status of the @Remote service device. 0: Neither the registered device by the external nor embedded RCG device is set. 1: The embedded RCG device is being set. Only Box registration is completed. In this status, this unit cannot answer a polling request from the external RCG. 2. The embedded RCG device is set. In this status, the external RCG unit cannot answer a polling request. 				

	3. The registered device by the external RCG is being set. In this status the embedded RCG device cannot be set.				
	4 The registered module by the external RCG has not started.				
202	Instl: ID #	*CTL	-		
202	Allows entry of the number of the re	quest need	ed for the RCG-N device.		
203	Instl: Reference	CTL	[- / - / -] [Excute]		
	Executes the inquiry request to the @	Remote G	W URL.		
	Instl: Ref Rslt	CTL	[0 to 255 / 0 / 1/step]		
	Displays a number that indicates the	e result of th	e inquiry executed with SP5816-203.		
204	0: Succeeded 1: Inquiry number error 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or 6: Communication error 7: Certification update error 8: Other error 9: Inquiry executing Instl: Ref Section	password) CTL	-		
205	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: Rgstltn	CTL	[- / - / -] [Excute]		
	Executes "Embedded RCG Registration".				
	Instl: Rgstltn Rst	CTL	[0 to 255 / 0 / 1/step]		
207	Displays a number that indicates the registration result. 0: Succeeded				

	3: Proxy error (proxy enabled)					
	4: Proxy error (proxy disabled)					
	5: Proxy error (Illegal user name or password)					
	6: Communication error					
	7: Certification update e	rror				
	8: Other error					
	9: Registration executing					
208	Instl: ErrorCode		CTL	[-2147483647 to 2147483647 / 0 / 1/step]		
208	Displays a number that d or SP5816-207 was exe	lescribes the ecuted.	error cod	e that was issued when either SP5816-204		
	Cause	Code	Meanir	ıg		
		-11001	Chat po	arameter error		
	Illegal Modem Parameter	-11002	Chat ex	recution error		
		-11003	Unexpe	Unexpected error		
		-11004				
		-11005				
		-12002	Inquiry device	registration attempted without acquiring status.		
	Operation Error, Incorrect Setting	-12003	Attemp inquiry	ted registration without execution of an and no previous registration.		
		-12004	Attemp and ID:	ted setting with illegal entries for certification 2.		
		-12005	@Remc has an	te communication is prohibited. The device Embedded RC gate-related problem.		
		-12006 A confirm confirmat		rmation request was made after the ation had been already completed.		
	Operation Error, Incorrect Setting	-12007	The rec differer	uest number used at registration was t from the one used at confirmation.		
		-12008	Update in use.	Update certification failed because mainframe was in use.		

		-12009	ID2 mi and N	smatch between an individual certification /RAM		
		-12010	Certific	Certification area is not initialized.		
		-2385	Attemp interna	ted dial up overseas without the correct tional prefix for the telephone number.		
		-2387	Not su	oported at the Service Center		
		-2389	Databo	ase out of service		
		-2390	Progra	m out of service		
		-2391	Two re	gistrations for same device		
	Error Caused by Response from GW	-2392	Parame	eter error		
	URL	-2393	Basil n	pt managed		
		-2394	Device	not managed		
		-2395	Box ID	for Basil is illegal		
		-2396	Device	ID for Basil is illegal		
		-2397	Incorre	ct ID2 format		
		-2398	Incorre	ct request number format		
	Inst Clear		СТІ	[-/-/-]		
209	Insti Clear			[Excute]		
	Releases a machine from	n its Cumin s	setup.			
	Print Com Log		CTI	[-/-/-]		
250	Print Com Log			[Excute]		
	Prints the communication log.					

5821	[NRS Address]				
002	RCG IP Address	*CTL	[00000000h to FFFFFFFh / 00000000h / 1 /step]		
	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.				

	RCG Port	*CTL	[0 to 65535 / 443 / 1 /step]	
003	Sets the port number of the RCG (Re processing at the remote service cer	emote Com nter.	munication Gate) destination for call	
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.			

	[NVRAM Upload]			
5824 Uploads the UP and SP mode data (except for counters and the serial number NVRAM to an SD card. For details, see "NVRAM Data Upload/Download" i chapters: 5. System Maintenance".				
001	NVRAM Upload	CTL	-	

	[NVRAM Download]				
5825	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 address is used with DHCP on an Et	change hernet o	the setting that determines whether the IP r 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	
	ECP (Centro)	*CTL	[0 or 1 / 1 / 1 /step] 0: Disabled, 1: Enabled	
 052 Enables or disables ECP Compatibility. Note • This SP is activated only when SP5-82 			8-50 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".			

	Job Spooling (Protocol)		*CTL	[0 or 1 / 1 / 1 /step] 0: No spooling 1: Spooling enabled		
069	This SP determines whether job spooling is enabled or disabled for each protocol. This is an 8-bit setting.					
007	0	LPR	4	BMLinks (Japan Only)		
	1	FTP (Not Used)	5	DIPRINT		
	2	IPP	6	Reserved (Not Used)		
	3	SMB	7	Reserved (Not Used)		
	Prot	ocol Usingage	*CTL	[0 or 1 / 0x0000000 / 1/step]		
087	 Shows which protocols have been used with the network. O: Off (Not 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, 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, 		th the network. bcol.) once or more.) bit3:Wireless LAN, etalk, bit6: DHCP, : HTTPS, ing, bit13: LPR printing, bit13: LPR printing, bit19: Scan to SMB, Bluetooth, 25: Dynamic DNS, : IPP printing, sftp			
090	TELN	NET (0: OFF 1: ON)	*CTL	Enables or disables the Telnet protocol. [0 or 1 / 1 / 1/step] 0: Disable, 1: Enable		
091	Wel	b (0: OFF 1: ON)	*CTL	Enables or disables the Web operation. [0 or 1 / 1 / 1/step] 0: Disable, 1: Enable		

145	Active IPvó Link Local Address	CTL	This is the IPv6 local address link referenced on the Ethernet or wireless LAN (802.11b) in the format: "Link Local Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.		
147	Active IPv6 Stateless Address 1	CTL			
149	Active IPv6 Stateless Address 2	CTL	referenced on the Ethernet or wireless LAN		
151	Active IPv6 Stateless Address 3	CTL	(802.11b) in the format: "Status Address" + "Prefix Length"		
153	Active IPv6 Stateless Address 4	CTL	The IPv6 address consists of a total 128 bits		
155	Active IPv6 Stateless Address 5	CTL	configured in 8 blocks of 16 bits each.		
156	IPv6 Manual Address	*CTL	This SP is the IPv6 manually set address referenced on the Ethernet or wireless LAN (802.11b) in the format: "Manual Set Address" + "Prefix Length" The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.		
158	IPv6 Gateway Address	*CTL	This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN (802.11b). The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.		
161	IPv6 Stateless Auto Setting	*CTL	Enables or disables the automatic setting for IPv6 stateless. [0 or 1 / 1 / 1 /step] 0: Disable, 1: Enable		
	Web Item visible	*CTL	[0 x 0000 to 0 x ffff / 0 x ffff / - /step] 0: Not displayed 1: Displayed		
236	Displays or does not display the Web system items. bit0: Net RICOH bit1: Consumable Supplier bit2-15: Reserved (all)				

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 of the web system.	to Con	sumable Supplier on the top page and link page			
	Web Link1 Name	*CTL	-			
239	This SP confirms or changes the URL maximum characters for the URL na	1 name me are 3	on the link page of the web system. The 31 characters.			
	Web Link1 URL	*CTL	-			
240	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.					
	Web Link2 Name	*CTL	-			
242	Same as "-239"					
0.40	Web Link2 URL	*CTL	-			
243	Same as "-240"					
0.4.4	Web Link2 visible	*CTL	-			
244	Same as "-241"	•				
249	DHCPv6 DUID	CTL	[0000000000000000000000000000000000000			

	00h (0000:0000:0000:0000:0000:0000: 0000 / 0) / - /step]
Sets DHCPv6 DUID.	

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5022	[HDD] HDD Initialization				
J032	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]			
	Channel MIN	*CTL	[0 to 11 / 1 / 1/step]			
007	Sets the minimum number of channels available for data transmission via the wireless L The number of channels available varies according to location. The default settings are for the minimum end of the range for each area. Adjust the lower 4 bits to set the minim 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]	

			0: Prints, 1: Not print
			Bit switches:
			 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
			Selects the stamp type for the log of Net File Application Analysis.
			Bit switches:
002	Setting 2	*CTL	• Bit 0 to 6: Not used.
			• Bit 7
			0: Minute/second/micro second
			1: Date/hour/minute/second

5844	[USB]		
001	Transfer Rate	*CTL	0x01: Full speed 0x04: Auto Change
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. 	
	 Note 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]

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 date	a are creat	ed 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 AddB	CTL	[- / - / -] [Execute]			
	Uploads all directory information to the SD card.					
052	Restr All AddrB	CTL	[- / - / -] [Execute]			
	Downloads all directory information from the SD card.					
	Clear Backup Info	CTL	[- / - / -] [Execute]			
	Deletes the address book data from the SD card in the service slot.					
0.53	Deletes only the files that were uploaded from this machine.					
	This feature does not work if the card is write-protected.					
	◆Note					
	• After you do this SP, go out of the SP mode, and then turn the power off.					
	• Do not remove the SD card until the Power LED stops flashing.					
060	Search option	*CTL	[0x00 to 0xff / 0x0f / 1 /step]			
	This SP uses bit switches to set up the fuzzy search options for the UCS local address book.					
	[0: Off or 1: On]					
	Bit: Meaning					
	Bit0: Checks both upper/lower case characters					
	Bit1 to 3: Japan Only					
	Bit4 to 7: Not used					
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.					
------	--	---	---	--	--	
	 Note This SP does not normally require adjustment. 					
	This SP is enabled only after the system administrator has set up a group password policy to control access to the address book.					
	Compl Opt 2	*CTL	[0 to 32 / 0 / 1 /step]			
063	Use this SP to set the conditions for par Specifically, this SP limits the password password. Note • This SP does not normally require • This SP is enabled only after the s policy to control access to the ad	ssword entr d entry to lc adjustmer ystem adm dress book	y to access the local address book. wer case and defines the length of the t. inistrator has set up a group password			
	Compl Opt 3	*CTL	[0 to 32 / 0 / 1 /step]			
064	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.					
	 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. 					
	Compl Opt 4	*CTL	[0 to 32 / 0 / 1 /step]			
065	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.					
	Vote					
	 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. 					
00 f	Encryption Stat	*CTL	[0 to 255 / - / 1 /step]			
094	Shows the status of the encryption function of the address book on the LDAP server.					

З

0: No encryption

1: Encryption

2: Decrypting from encrypted data to plain data

3: Encrypting from plain data to encrypted data

4: Decrypted from encrypted data to plain data

5: Encrypted from plain data to encrypted data

6: Changing the encryption setting

7: Changing the encryption key is done.

8: Deleting the encryption key is done before changing the setting.

9: Changing the encryption setting is done.

	[Web Service]		
5848	5848 2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router.		
	5848 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.		
004	ac: UD	*CTL	
009	ac: Job Ctrl	*CTL	Switches access control on and off.
011	ac: Dev Mng	*CTL	[0000 or 0001 / 0000 / 1/step] 0000: No access control
022	acl: Uadmin	*CTL	0001: Access control
024	Ac: Log	*CTL	
217	Timing	*CTL	NIA

5849	[Installation Date]		
001	Display	*CTL	[-/ - /-]
002	Switch to Print	*CTL	[0 or 1 / 1 / 1 /step] 0: OFF (No Print) 1: ON (Print)
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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	[Remote ROM Update]		
5856	Allows the technician to upgrade the firmware using a local port (IEEE1284) when updating the remote ROM.		ing a local port (IEEE1284) when
002	Local Port	* СТІ	[0 or 1 / 0 / 1/step] 0: Disable
002		GIE	1: Enable

5857	[Debug Log Save]				
	ON/ OFF	*CTL	[0 to 2 / 0 / 1/Step]		
 Enables log trace function or debug log saving function. The debug log countil this feature is switched on. 0: Enables log trace function 1: Enables debug log saving function 2: OFF Note If "0" is selected, it disables the settings of SP5857-002 to 013 and failure. If "1" is selected, it disables ordinarily saving function: howe 			unction. The debug log cannot be captured SP5857-002 to 013 and gives executing ily saving function: however, SP5857-101		
	to 112 are able to execute.				
			[1 to 3 / 2 / 1 /step]		
	Target 2:HDD 3:SD	*CTI	1:IC Card		
002		CIL	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 numb		umber in m	emory 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.			
00/	Save to SD Card	*CTL	[-999999 to 9999999 / - / 1/step]	
006	Saves the debug log of the input SC n	umber in m	emory to the SD card.	
	HDD to SD Latest	*CTL	[- / - / -] [Execute]	
009	Takes the most recent 4 MB of the log Card.	written to t	he hard disk and copies them to the SD	
	A unique file name is generated to ave Up to 4MB can be copied to an SD C each SD Card.	oid overwri ard. 4 MB	ting existing file names on the SD Card. segments can be copied one by one to	
	HDD to SD Any	*CTL	[- / - / -] [Execute]	
010	Takes the log of the specified key from the log on the hard disk and copies it to the SD Card.			
	A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4 MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card. This SP does not execute if there is no log on the HDD with no key specified.			
011	Erase HDD Debug	*CTL	[- / - / -] [Execute]	
	Erases all debug logs on the HDD			
	Erase SD Debug Data	*CTL	[- / - / -]	
012	Erases all debug logs on the SD Card. If the card contains only debugging files generated by an event specified by SP5858, the files are erased when SP5857 010 or 011 is executed.			
	To enable this SP, the machine must be	e cycled of	f and on.	
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 de	bug log fro	om an SD card to a different SD card.	
	Copy SD to SD Any	* <i>C</i> TI	[-/-/-]	
015		CIL	[Execute]	
	This SP copies the log on an SD card (from shared memory) to a log specifie	the file that d by key n	t contains the information written directly umber.	
	Make HDD Debua	*CTI	[- / - / -]	
016			[Execute]	
	This SP creates a 32 MB file to store a	log on the	HDD.	
	Make SD Debua	*CTI	[- / - / -]	
017			[Execute]	
	This SP creates a 4 MB file to store a la	og on an S	D card.	
101	Start Date	*CTL	[- / 20120101 / 1/step]	
101	Sets start date of the debug log output.			
100	End Date	*CTL	[- / 20371212 / 1/step]	
102	Sets end date of the debug log output.			
	All Logs	*CTL	[-/-/-]	
103			[Execute]	
	Obtains all debug logs.			
	Controllerlage	*сті	[- / - / -]	
104	connonenoga	CIL	[Execute]	
	Obtains controller debug log only.			
	EngineDobuglogs	* <i>C</i> TI	[- / - / -]	
105	LiigilieDebügtögs	CIL	[Execute]	
	Obtains engine debug log only.			
	SpanshotDobuglogs	*CTL	[- / - / -]	
106	SnapshotDebugLogs		[Execute]	
	Obtains snapshot debug log only.			

107	OpepanelDebugLogs	*CTL	[- / - / -] [Execute]
	Outputs the controller debug log to the media inserted front I/F.		

	[Debug Log Save: SC]				
5858	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.				
	Engine SC	* CTI	[0 or 1 / 0 / 1 / step]		
001	(0: OFF, 1: ON)	°CIL	0: OFF, 1: ON		
	Turns on/off the debug save for SC codes generated by copier engine errors.				
	Controller SC	*CTL	[0 or 1 / 0 / 1 / step]		
002	(0: OFF, 1: ON)		0: OFF, 1: ON		
	Turns on/off the debug save for SC codes generated by GW controller errors.				
002	Any SC	*CTL	[0 to 65535 / 0 / 1 /step]		
003	Sets the SC code whose logs are collected.				
	1	* (71)	[0 or 1 / 0 / 1 / step]		
004	Jam	CIL	0: OFF, 1: ON		
	Turns on/off the debug save for jam errors.				

	[Debug Log SaveKey]		
5859	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	
002	Key 2	*CTL	
003	Key 3	*CTL	[-99999999 to 9999999 / 0 / 1 /
004	Key 4	*CTL	
005	Key 5	*CTL	

006	Key 6	*CTL
007	Key 7	*CTL
008	Кеу 8	*CTL
009	Кеу 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]
025	Selects the authentication method for SMPT.		

	Bit switch:				
	Bit 0: LOGIN				
	Bit 1: PLAIN				
	Bit 2: CRAM MD5				
	Bit 3: DIGEST MD5				
	Bit 4 to 7: Not used				
	↓ Note				
	• This SP is activated only when SMTP authorization is enabled by UP mode.				
[0 to 2 / 0 / 1 /step]					
026	- /	*CTL	0: Microsoft Outlook Express standard		
	5/ MIME: MIME Header		1: Internet Draft standard		
			2: RFC standard		
	Selects the MIME header type of an E	-mail sent l	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]

[SD GerCounter] DFU

Data Overwrite Security

	Enables the Data Overwrite Security unit. Press "EXECUTE" on the operation panel. Then turn the machine off and on.		
002	HDD Encryption	CTL	[- / - / -] [Execute]

5887

001

5888	[Person. InfoProt.] DFU		
001	Person. InfoProt.	* CTL	[0 or 1 / 0 / 1/step]

CTL

[-/-]

[Execute]

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

5903	[Test Print]		
	Feed Tray	ENG	[0 to 4 / 0 / 1/step]
001	Sets the feed tray to print test printing executed by SP5-903-009.		

	0	Bypass			3	Тгау3	
	1	Tray 1			4	Tray4	
	2	Tray2			-	-	
		1			[0 or 1	/ 0 / 1/step]	
002	Duplex Se	etting	ENG		0: Singl	e	
002					1: Dupl	ex	
	Sets the d	uplex / single-sided setting	to print t	test	printing	executed by SP5-903-009.	
					[0 to 5	/ 0 / 1/step]	
					0: A3		
	Paper Siz	e	ENG		1: DLT		
003					2: A4 S	EF	
					3: A4 L	EF	
					4: B5 S	EF	
	Sets the p	aper size to print test printing	g execut	ted	by SP5-9	903-009.	
	Color Mc	ode	ENG		[0 to 6 / 0 / 1/step]		
	Sets the c	olor mode to print test printin	ıg execı	uted	d by SP5-903-009.		
	Red (Mag	genta + Yellow)					
	Blue (Cyc	ın + Magenta)					
004	Green (Ye	ellow + Cyan)					
001	0	Bk			4	Red	
	1	Cyan			5	Blue	
	2	Magenta			6	Green	
	3	Yellow			-	-	
	Test Pattern ENG				[0 to 1 d	6 / 0 / 1/step]	
	Sets the te	est pattern to print test printing	g execu	ted	by SP5-	903-009.	
005	0	None			9	20mm SGrid	
	1	V 1Line			10	1by1	
	2	H 1Line			11	2by2	

	3		V 2Line		12	4by4	
	4 H 2Lir		H 2Line		13	Full Dot	
	5		V Grid		14	Belt	
	6		H Grid		15	10mm Gray	
	7		20mm Grid		16	20mm Gray	
	8		SGrid		-	-	
	Pape	r Kin	d	ENG	[0 to 2	/ 0 / 1/step]	
	Sets t	he p	aper weight and paper type	to print	test printing	executed by SP5-903-009.	
006	0	Pla	in Paper	Norma	al Speed (1	44mm/s)	
	1	Thie	ck1-2	Mid Sp	beed (90mi	n/s)	
	2	Thie	ck3	Low Sp	need (60mm/s)		
	Print	nt Page		ENG	[0 to 2	55 / 1 / 1/step]	
007	Sets t If this cover	he p SP is r of tl	rint page to print test printing s set to "O", it prints unlimited he machine.	l execut I numbe	ed by SP5- r of copies.	903-009. To exit the test printing, open the	
					[0 or 1	/ 0 / 1/step]	
	Freerun Setting			ENG	0: Nor	0: Normal	
					1: Free	1: FreeRun	
008	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 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.			image transfer belt but doesn't but it still detects paper			
009	Print	Start		ENG	[- / - / [Execu	-] le]	
	Executes the test print with parameter			set by S	P5-903-00	1 to 008.	

5907	[Plug & Play]		
001	-	*CTL	-

Selects the brand name and the production name for Windows Plug & Play. This information is stored in the NVRAM. If the NVRAM is defective, these names should be registered again.

After selecting, press the "Original Type" key and "#" key at the same time. When the setting is completed, the beeper sounds five times.

5919	[HDD Encryption]		
001	Display Operation	*CTL	[0 or 1 / 0 / 1 /step] 0: Not Activated 1: Activated

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			
	PCDU	*ENG	[0 or 1 / 1 / 1/step]			
	• 0: OFF (End notification on)					
010	• 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)".					
	Trans Unit	*ENG	[0 or 1 / 1 / 1/step]			
	O: OFF (End notification on)					
014	 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)".					
	Fusing Unit	*ENG	[0 or 1 / 1 / 1/step]			
016	 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 (ONI)" 					

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

5000	[SP print mode]					
3990	Prints out the SMC sheets.					
001	All	CTL				
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				

5000	[SP Text mode]				
3447	Saves the SMC list data to the SD card in csv format.				
001	All	CTL			
002	SP	CTL			
004	Logging Data	CTL			
005	Diagnostic Report	CTL	[- / - / -] [Excute]		
006	Non-Default	CTL			
007	NIB Summary	CTL			
026	Printer SP	CTL			

5007	[PSC] DFU				
2441	Sets the PSC debug log output.				
001	COMMAND	ENG	[0 to 3 / 2 / 1/step]		
002	DOMAIN_IF	ENG			
003	RAPI	ENG	-		
004	PRINT	ENG	$\begin{bmatrix} 0 & 0 & 2 \end{bmatrix} \begin{pmatrix} 0 & 1 \\ 1 & 1 \end{bmatrix}$		
005	ENGINE	ENG			
006	THREAD	ENG	-		
007	THREAD_OBJ	ENG	-		
008	STS_TREE	ENG			
009	TREE_INIT	ENG	-		
010	EVENT	ENG	$\begin{bmatrix} 0 & 0 \\ 1 & 0 \end{bmatrix}$		
011	SP	ENG			
012	OTHER	ENG			
013	MEMORY	ENG			

5998	[Fusing Cont mode] DFU		
	Fast/silent	*ENG	[0 or 1 / 0 / 1/step]
001	Fusing behavior when silent start-u • 0: Off • 1: On - Launch in advance	p-	
Wu Fuser Timing *ENG		*ENG	[0 or 1 / 1 / 1/step]
002	 Switches timing engine to turn fuser ON. 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]		
7401	Displays the number of SC codes de	etected.	
001	SC Counter	*CTL	[0 to 65535 / - / 1/step]
002	Total SC Counter	*CTL	[0 to 65535 / - / 1/step]

	[SC History]			
	Logs and displays the SC codes detected.			
7403	The 10 most recently detected SC Codes are displayed on the screen, and also can be seen on the SMC (logging) outputs.			
	↓Note			
 If the same SC codes are detected continuously and total counter is not in only logs once in case of deleting other SC code logs. 			uously and total counter is not increasing, it C 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]
7404	Logs and displays the SC990 / SC991 detected.

The 10 most recently detected SC.

Note

• If the same SC codes are detected continuously and total counter is not increasing, it only logs once in case of deleting other SC code logs.

001	Latest	*CTL	
002	Latest 1	*CTL	
003	Latest 2	*CTL	
004	Latest 3	*CTL	
005	Latest 4	*CTL	r / / 1
006	Latest 5	*CTL	[-/-/-]
007	Latest 6	*CTL	
008	Latest 7	*CTL	
009	Latest 8	*CTL	
010	Latest 9	*CTL	

7500	[Total Paper Jam]		
7502	Displays the total number of jams detected.		
001	Jam Counter	*CTL	[00000 + 45525 / (1+b-st/ster]]
002	Total Jam Counter	*CTL	

7504	[Paper Jam Loc] Paper Jam Location		
Displays the number of jams according to the location where jams were de		ocation where jams were detected.	
001	At Power On	*CTL	Paper is not fed at power on. [0000 to 9999 / - / 1/step]
003	Tray 1 : 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	
006	A5 LEF	*CTL	
014	B5 LEF	*CTL	
038	LT LEF	*CTL	
044	HLT LEF	*CTL	Displays the number of iams according to
132	A3 SEF	*CTL	the paper size.
133	A4 SEF	*CTL	[0 to 9999 / 0 / 1 sheet/step]
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

[Dspl-P Jam Hist] Paper Jam History Display 7507 Logs and displays the 10 most recently detected paper jams. (CODE, SIZE, TOTAL, DATE) 001 *CTL Latest *CTL 002 Latest 1 *CTL 003 Latest 2 004 *CTL Latest 3 005 Latest 4 *CTL [-/-] *CTL 006 Latest 5 *CTL 007 Latest 6 *CTL 800 Latest 7 009 Latest 8 *CTL *CTL 010 Latest 9

7514	[Paper Jam Cnt Loc] Paper jam location total counter		
7314	Displays the total number of jams ac	plays 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	Tray 1: 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	
006	A5 LEF	*CTL	
014	B5 LEF	*CTL	
038	LT LEF	*CTL	
044	HLT LEF	*CTL	
132	A3 SEF	*CTL	Displays the number of iams according to
133	A4 SEF	*CTL	the paper size.
134	A5 SEF	*CTL	[0 to 9999 / 0 / 1 sheet/step]
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	Record 1	*CTL	
002	Record2	*CTL	
003	Record3	*CTL	
004	Record4	*CTL	
005	Record5	*CTL	[1 + 255 / 0 / 1 / + - 1]
006	Record6	*CTL	
007	Record7	*CTL	
008	Record8	*CTL	
009	Record9	*CTL	
010	Record 10	*CTL	

7901	[ROM Info]		
7801	Displays ROM numbers in the mach	ne.	
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	
002	Page: PDCU: Bk	*ENG	Displays the number of pages printed.
003	Page: PDCU: C	*ENG	[0 10 999999 / 0 / 1 page/siep]

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	
032	Dist: PDCU: C	*ENG	
033	Dist: PDCU: M	*ENG	Displays the rotation distance.
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.
048	Dist: PTR	*ENG	[0 to 999999999 / 0 / 1 mm/step]
110	Pass Dist: PTR	*ENG	Distance is used to determine lifecycle, and
112	Pass Dist: Fusing	*ENG	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]

7904	[PM Counter.Reset]
7804	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	
003	PCU: C	ENG	
004	PCU: M	ENG	Clears the unit counter for each unit.
005	PCU: Y	ENG	[-/-/-]
017	ITB Unit	ENG	[Execute]
019	Fusing Unit	ENG	-
022	PTR Unit	ENG	
030	Consump	ENG	<pre>DFU * Executing this SP does not work after mass production. [- / - / -] [Execute]</pre>
050	Life:PCU: Bk	ENG	_
051	Life:PCU: C	ENG	
052	Life:PCU: M	ENG	Clears the unit counter for each unit.
053	Life:PCU: Y	ENG	[-/-/-]
060	Life:ITB Unit	ENG	[Execute]
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]

7907	[Reset-SC/Jam]			
	Clears the all counters related to SC codes and paper jams.			
/ 60/	♦ Note			
	• This SP doesn't reset either jam histories or SC code histories.			
001		CTI	[-/-/-]	
001	Keset-SC/Jam	CIL	[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	[O to OxFFFFFFF / 0 / 1page/step]	
001	Total sheets printed by this machine.	A3 counts	as 1 sheet.	
002	Total Counter FC	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]	
002	Total number of sheets printed in full color by this machine. A3 counts as 1 sheet.			
002	Duplex	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]	
003	Total number of sheets printed in duplex mode. A3 counts as 1 sheet.			
004	Size:DL/A3	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]	
	Displays ratio of total counter that DL / A3 have been through the machine. (%)			
005	Size:LT/A4	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]	

	Displays ratio of total counter that LT / A4 have been through the machine. (%)			
006	Pkind:Normal	*ENG	[O to OxFFFFFFF / O / 1page/step]	
	Displays ratio of total counter that p	lain paper	has been through the machine. (%)	
007	Pkind:Recycle	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]	
007	Displays ratio of total counter that re	ecycle pape	er has been through the machine. (%)	
009	Pkind:MidThick	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]	
008	Displays ratio of total counter that m	id-thick pa	per has been through the machine. (%)	
000	Pkind:Glossy	*ENG	[O to OxFFFFFFF / 0 / 1page/step]	
009	Displays ratio of total counter that g	lossy pape	r has been through the machine. (%)	
010	Pkind:Post	*ENG	[O to OxFFFFFFF / 0 / 1page/step]	
010	Displays ratio of total counter that postcards have been through the machine. (%)			
011	Feed:Tray 1	*ENG	[O to OxFFFFFFF / 0 / 1page/step]	
	Displays ratio of total counter that are printed by tray 1. (%)			
012	Feed:Tray2	*ENG	[O to OxFFFFFFF / O / 1page/step]	
012	Displays ratio of total counter that are printed by tray 2. (%)			
013	Feed:Tray3	*ENG	[O to OxFFFFFFF / O / 1page/step]	
013	Displays ratio of total counter that are printed by tray 3. (%)			
014	Feed:Tray4	*ENG	[O to OxFFFFFFF / O / 1page/step]	
014	Displays ratio of total counter that are printed by tray 4. (%)			
	Env:HH	*ENG	[O to OxFFFFFFF / O / 1page/step]	
015	Displays ratio of total counter that are printed in HH environment defined by SP2302-001. (%)			
	Env:HL	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]	
016	Displays ratio of total counter that are printed in HL environment defined by SP2302-001. (%)			
017	Env:LH	*ENG	[O to OxFFFFFFF / O / 1page/step]	

	Displays ratio of total counter that are printed in LH environment defined by SP2302-001. (%)		
	Env:LL	*ENG	[0 to 0xFFFFFFF / 0 / 1page/step]
018	Displays ratio of total counter that are printed in LL environment defined by SP2302-001. (%)		
019	Coverage:Bk	*ENG	
020	Coverage:C	*ENG	for each colors and counted cumulative
021	Coverage:M	*ENG	value.
022	Coverage:Y	*ENG	

7853	[Replacement Cnt]		
001	PCDU: Bk	*ENG	
002	PCDU: C	*ENG	Displays the replacement counter.
003	PCDU: M	*ENG	[0 to 999 / - / 1 time/step]
004	PCDU: Y	*ENG	
009	Cartridge: Bk	*ENG	
010	Cartridge: C	*ENG	Displays the replacement counter.
011	Cartridge: M	*ENG	[0 to 999 / - / 1 time/step]
012	Cartridge: Y	*ENG	
013	ITB Unit	*ENG	
015	Fusing Unit	*ENG	Displays the replacement counter.
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 Range 1	*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
002	Number of Lines	*CTL	detected in the program. The data stored in
003	Location	*CTL	this SP is used tor problem analysis.

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

064	Dist(%): PCDU:Y	ENG	
073	Dist(%): ITB Unit	ENG	100: reached life end
075	Dist(%): Fusing	ENG	unit is installed.
078	Dist(%): PTR	ENG	-
091	Page(%): PCDU: Bk	ENG	
092	Page(%): PCDU: C	ENG	Displays the threshold of page count to
093	Page(%): PCDU: M	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step]
094	Page(%): PCDU: Y	ENG	0: New
103	Page(%): ITB Unit	ENG	100: reached life end
105	Page(%): Fuser	ENG	unit is installed.
108	Page(%): PTR Unit	ENG	

7006	[Prev. Counter] Previous Unit Counter Display			
7900	Copies the life counter to this sp as a previous counter when the life counter is cle			
001	Page: PCDU: Bk	*ENG		
002	Page: PCDU: C	*ENG		
003	Page: PCDU: M	*ENG	Displays the number of pages printed with	
004	Page: PCDU: Y	*ENG	the previous unit counter.	
013	Page: ITB Unit	*ENG	[0 to 999999 / - / 1 page/step]	
015	Page: Fusing Unit	*ENG		
018	Page: PTR Unit	*ENG		
031	Dist: PCDU: Bk	*ENG		
032	Dist: PCDU: C	*ENG	Displays the rotation distance with the	
033	Dist: PCDU: M	*ENG	previous unit counter.	
034	Dist: PCDU: Y	*ENG	[0 to 999999999 / - / 1 mm/step]	
043	Dist: ITB Unit	*ENG		

045	Dist: Fusing Unit	*ENG
048	Dist: PTR	*ENG

7907	[Life(%) Counter]		
001	PCDU: Bk	ENG	
002	PCDU: C	ENG	
003	PCDU: M	ENG	
004	PCDU: Y	ENG	
005	PDCU: FC	ENG	[0.0 to 250.0 / 0.0 / 0.1%/step]
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	
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	Displays the information number for each
005	Product Type ID	*ENG	category.
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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [O to OxFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*eng	Displays the color counter at the toner end. [O to OxFFFFFFFF / - / 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	
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	Displays the information number for each
005	Product Type ID	*ENG	category.
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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [O to OxFFFFFFFF / - / 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	
002	Cartridge Ver	*ENG	Displays the information number for each
003	Brand ID	*ENG	category.
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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 1 sheet/step]
018	End: Total Cnt	*ENG	Displays the total counter at the toner end. [O to OxFFFFFFFF / - / 1 sheet/step]
019	End: Color Cnt	*ENG	Displays the color counter at the toner end. [O to OxFFFFFFFF / - / 1 sheet/step]
020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.
7934	[Toner Bottle Y]		

[Toner Bottle Y]

001	Machine Serial ID	*ENG	
002	Cartridge Ver	*ENG	
003	Brand ID	*ENG	
004	Area ID	*ENG	Displays the information number for each
005	Product ID	*ENG	category.
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. [O to OxFFFFFFFF / - / 1 sheet/step]
017	Set: Color Cnt	*ENG	Displays the total color counter from the installation. [O to OxFFFFFFFF / - / 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. [O to OxFFFFFFFF / - / 1 sheet/step]

020	Set Date	*ENG	Displays the installation date.
021	End Date	*ENG	Displays the toner end date.

7025	[Toner Log: Bk]				
7935	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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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 0xFFFFFFF / - / 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 0xFFFFFFF / - / 1/step]	
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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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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 0xFFFFFFF / - / 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	[O to OxFFFFFFF / - / 1/step]	
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]	

7029	[Toner Log: Y]			
7930	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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 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	[O to OxFFFFFFF / - / 1/step]
020	Log5:Refill Info	*ENG	[0 to 99 / - / 1/step]

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

			2: Notify Later
033	Days Thres:Trans	*ENG	Sets the near end timing for the image transfer unit. Recommend to set by UP. [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 UP. [0 to 2 / 1 / 1/step] 0: Notify Sooner 1: Normal 2: Notify Later
071	Day Rate:Trans	*ENG	Sets the daily life cycle rate for the image transfer unit. DFU [0.1 to 25.5 / 0.1 / 0.1 %/step]
073	Day Rate:Fuser	*ENG	Sets the daily life cycle rate for the fusing unit. DFU [0.1 to 25.5 / 0.1 / 0.1 %/step]
076	Day Rate:PTR	*ENG	Sets the daily life cycle rate for the PTR. DFU [0.1 to 25.5 / 0.1 / 0.1 %/step]
080	Day Rate: PCDU: K	*ENG	Sets the daily life cycle rate for Bk. DFU [0.1 to 25.5 / 0.1 / 0.1 %/step]
081	Day Rate: PCDU: C	*ENG	Sets the daily life cycle rate for Cy. DFU [0.1 to 25.5 / 0.1 / 0.1 %/step]
082	Day Rate: PCDU: M	*ENG	Sets the daily life cycle rate for Ma. DFU [0.1 to 25.5 / 0.1 / 0.1 %/step]
083	Day Rate: PCDU: Y	*ENG	Sets the daily life cycle rate for Ye. DFU [0.1 to 25.5 / 0.1 / 0.1 %/step]

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.

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		
1	"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		
С	Cyan		
ColCr	Color Create		
ColMode	Color Mode		
Comb Combine			
Comp Compression			
Delivery 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.	
К	Black (YMCK)	
LS	Local Storage. Refers to the document server.	
LSize	Large (paper) Size	
Mag	Magnification	
МС	One color (monochrome)	
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.	
Org	Original for scanning	
OrgJam	Original Jam	
Palm 2 Palm 2 Pa		
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			
ҮМСК	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.

T:FIN Jobs		*CTL	[0 to 99999999 / 0 / 1]	
8001	These SPs total the finishing methods. The finishing method is specified by the application.			

	P:FIN Jobs	*CTL	[0 to 99999999 / 0 / 1]	
8064	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.			
	O:FIN Jobs	*CTL	[0 to 99999999 / 0 / 1]	
8067	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 o	of jobs started in Sort mode.	
002	Stack	Number o	of jobs started out of Sort mode.	
003	Staple	Number o	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	1)	
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.			
	O:Jobs/PGS	*CTL	[0 to 99999999 / 0 / 1]	
8077	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
8384	P:Total PrtPGS	*CTL	by the customer. The counter for the application used for storing the pages
8387	O:Total PrtPGS	*CTL	increments. [0 to 99999999 / 0 / 1]

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.

	LSize PrtPGS	*CTL	[0 to 99999999 / 0 / 1]
8391	These SPs count pages printed of Note: In addition to being displading the User Tools displayed in the User Tools disp	on paper si ayed in the lay on the	zes A3/DLT and larger. SMC Report, these counters are also 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. [O to 99999999 / O / 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.			
	P:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / 0 / 1]	
8424	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.			
	O:PrtPGS/Dup Comb	*CTL	[0 to 99999999 / 0 / 1]	
8427	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	2in 1	2 pages on 1 side (2-Up)		
007	4 in 1	4 pages on 1 side (4-Up)		
008	6 in 1	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:

Вос	oklet	Magazine		
Original Pages	Count	Original Pages	Count	
1	1	1	1	
2	2	2	2	
3	2	3	2	
4	2	4	2	

Вос	oklet	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.				
	P:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / 0 / 1]		
8434	These SPs count the total number of pages output with the three features below with the print application.				
	O:PrtPGS/ImgEdt	*CTL	[0 to 99999999 / 0 / 1]		
8437	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 cou 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	В5	
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.

9451	[PrtPGS/Ppr Tray]			
0431	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	
003	Tray 2	*CTL	[0 to 99999999 / 0 / 1]	
004	Tray 3	*CTL	Paper Tray Unit (Option)	
005	Tray 4	*CTL	[0 to 99999999 / 0 / 1]	
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.

	T:PrtPGS/Ppr Type	*CTL	[0 to 99999999 / 0 / 1]	
	These SPs count by paper type the number pages printed by all applications.			
8461	These counters are not the same as the PM counter. The PM counter is based on feed timing to accurately measure the service life of the feed rollers. However, these counts are based on output timing.			
	Blank sheets (covers, chapter co	overs, slip s	heets) are also counted.	
	During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1.			
0464	P:PrtPGS/Ppr Type	*CTL	[0 to 99999999 / 0 / 1]	
0404	These SPs count by paper type the number pages printed by the printer application.			
001	Normal			
002	Recycled			
003	Special			
004	Thick			
005	Normal (Back)			
006	Thick (Back)			
007	OHP			
008	Other			

0.471	[PrtPGS/Mag]				
04/1	These SPs count by magnification rate the number of pages printed.				
001	< 49%	*CTL			
002	50% to 99%	*CTL			
003	100%	*CTL	[0 to 99999999 / 0 / 1]		
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 + 0000000 / 0 / 1]
8484	P:PrtPGS/TonSave	*CTL	[0 10 4444444 \ 0 \ 1]
	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	
8504	P:PrtPGS/Col Mode	*CTL	These SPs count the number of pages printed in the Color Mode by the print application.
8507	O:PrtPGS/Col Mode	*CTL	
001	B/W		
002	Mono Color		
003	Full Color		
004	Single Color		
005	Two Color		

0511	T:PrtPGS/Emul	*CTL	[0 to 99999999 / 0 / 1]
8511	These SPs count by printer emulation mode the total number of pages printed.		
0.51.4	P:PrtPGS/Emul	*CTL	[0 to 99999999 / 0 / 1]
8514	These SPs count by printer emul	ation mode	e 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 Or	ly
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.

0.501	T:PrtPGS/FIN	*CTL	[0 to 99999999 / 0 / 1]			
0321	These SPs count by finishing mo	ese SPs count by finishing mode the total number of pages printed by all applications.				
	P:PrtPGS/FIN	*CTL	[0 to 99999999 / 0 / 1]			
8524	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.

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	
002	Total: Under A3/DLT	*CTL	[0 + 0000000 / 0 / 1]
003	Duplex: Over A3/DLT	*CTL	[0 10 99999999 0]
004	Duplex: Under A3/DLT	*CTL	

8564	[P:A Sheet Of Paper]		
001	Total: Over A3/DLT	*CTL	
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	[0 10 99999999 0]
004	Duplex: Under A3/DLT	*CTL	

8567	[O:A Sheet Of Paper]		
001	Total: Over A3/DLT	*CTL	
002	Total: Under A3/DLT	*CTL	
003	Duplex: Over A3/DLT	*CTL	[0 10 99999999 0]
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		
002	Total: Full Color	*CTL	[0 to 99999999 / 0 / 1]	
003	B&W/Single Color	*CTL		

004	Development: CMY	*CTL	
00.5	Development: K	*CTI	
008	Print: Color	*CTL	
009	Print: B/W	*CTL	
010	Total: Color	*CTL	
011	Total: B/W	*CTL	
012	Full Color: A3	*CTL	
013	Full Color: -B4	*CTL	
014	Full Color Print	*CTL	
015	Mono Color Print	*CTL	[0 to 99999999 / 0 / 1]
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	[0 to 99999999 / 0 / 1]
025	Total: Color (Eco Bk)	*CTL	
026	Total: B/W (Eco Bk)	*CTL	
027	Total: Color (Eco FC)	*CTL	
028	Development: CMY (A3)	*CTL	
029	Development: K (A3)	*CTL	[0 to 99999999 / 0 / 1]
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		
002	Mono Color	*CTL		
003	Full Color	*CTL	[0 to 99999999 / 0 / 1]	
004	Single Color	*CTL		
005	Two Color	*CTL		

	[O:Counter]			
8591 These SPs count the totals for A3/DLT paper use, number of duplex page the number of staples used. These totals are for Other (O:) applications of the number of staples used.		er use, number of duplex pages printed, and e for Other (O:) applications only.		
001	A3/DLT	*CTL	[0 + 0000000 / 0 / 1]	
002	Duplex	*CTL		

	[T:CvgCounter]			
8601	These SPs count the total coverage for each color and the total printout pages for each printing mode.			
001	Cvg: BW %	*CTL	[0 + 2] 47 4926 47 / 0 / 19 / step]	
002	Cvg: FC %	*CTL	[0 10 2 1 47 4 0 3 0 47 / 0 / 1 / 6 / siep]	
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		
022	CvgCounter 2	*CTL	[0 to 9999999 / 0 / 1/step]	
023	CvgCounter 3	*CTL		
031	CvgCounter 1(YMC)	*CTL		
032	CvgCounter 2(YMC)	*CTL	[0 to 9999999 / 0 / 1/step]	
033	CvgCounter 3(YMC)	*CTL		

8604	[P:CvgCounter]		
	-		
001	Cvg: B/W %	*CTL	
002	Cvg: Single Color %	*CTL	[0 + 0.2] 47492647 / 0 / 19 / step]
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	
002	SDK-2	*CTL	
003	SDK-3	*CTL	
004	SDK-4	*CTL	[0 10 4444444 0 / 1]
005	SDK-5	*CTL	
006	SDK-6	*CTL	

9401	Func Use Counter			
8021	-			
001	Function-001	*CTL		
002	Function-002	*CTL		
003	Function-003	*CTL	[0 to 99999999 / 0 / 1]	
004	Function-004	*CTL		
005	Function-005	*CTL		
006	Function-006	*CTL		
007	Function-007	*CTL		
008	Function-008	*CTL	[0 to 99999999 / 0 / 1]	
009	Function-009	*CTL		

010	Function-010	*CTL	
011	Function-011	*CTL	
012	Function-012	*CTL	
013	Function-013	*CTL	[0 to 99999999 / 0 / 1]
014	Function-014	*CTL	
015	Function-015	*CTL	
016	Function-016	*CTL	
017	Function-017	*CTL	-
018	Function-018	*CTL	[0 to 99999999 / 0 / 1]
019	Function-019	*CTL	
020	Function-020	*CTL	-
021	Function-021	*CTL	
022	Function-022	*CTL	-
023	Function-023	*CTL	[0 to 99999999 / 0 / 1]
024	Function-024	*CTL	
025	Function-025	*CTL	
026	Function-026	*CTL	
027	Function-027	*CTL	
028	Function-028	*CTL	[0 to 99999999 / 0 / 1]
029	Function-029	*CTL	
030	Function-030	*CTL	
031	Function-031	*CTL	
032	Function-032	*CTL	
033	Function-033	*CTL	[0 to 99999999 / 0 / 1]
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	
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	
052	Function-052	*CTL	
053	Function-053	*CTL	
054	Function-054	*CTL	
055	Function-055	*CTL	
056	Function-056	*CTL	[0 10 99999999 0]
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	

	[Dev Counter]			
8771	These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.			
001	Total	*CTL		
002	К	*CTL		
003	Y	*CTL	[0 to 99999999 / 0 / 1]	
004	Μ	*CTL		
005	С	*CTL		

	Toner_Bottle_Info.	*ENG	[0 to 9999999 / 0 / 1]	
8781	These SPs display the number of already replaced toner bottles.			
	1 through 014 and the data in SP8-781-001			
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		

	[Toner Remain]			
8801	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	К	*CTL		
002	Y	*CTL	[0 to 100 / 0 / 1% /step]	

003	Μ	*CTL	
004	С	*CTL	

0011	[Eco Counter]			
0011	-			
001	Eco Total	*CTL		
002	Color	*CTL	-	
003	Full Color	*CTL	[0 to 99999999 / 0 / 1]	
004	Duplex	*CTL	-	
005	Combine	*CTL		
006	Color (%)	*CTL		
007	Full Color (%)	*CTL		
008	Duplex (%)	*CTL	[0 to 100 / 0 / 1% /step]	
009	Combine (%)	*CTL		
010	Paper Cut (%)	*CTL		
101	Eco Totalr:Last	*CTL		
102	Color:Last	*CTL		
103	Full Color:Last	*CTL	[0 to 99999999 / 0 / 1]	
104	Duplex:Last	*CTL		
105	Combine:Last	*CTL		
106	Color(%):Last	*CTL		
107	Full Color (%):Last	*CTL		
108	Duplex (%):Last	*CTL	[0 to 100 / 0 / 1% /step]	
109	Combine (%):Last	*CTL		
110	Paper Cut (%):Last	*CTL		

8851 [Cvr Cnt: 0-10%]

	These SPs display the number of scanned sheets on which the coverage of each color is from 0% to 10%.			
011	0 to 2%: BK	*ENG		
012	0 to 2%: Y	*ENG	[0 + 00000000 / 0 / 1]	
013	0 to 2%: M	*ENG	[0 10 44444444 / 0 / 1]	
014	0 to 2%: C	*ENG		
021	3 to 4%: BK	*ENG		
022	3 to 4%: Y	*ENG	[0 + 00000000 / 0 / 1]	
023	3 to 4%: M	*ENG	[0 10 77777777 0 / 1]	
024	3 to 4%: C	*ENG		
031	5 to 7%: BK	*ENG		
032	5 to 7%: Y	*ENG	[0 + 00000000 / 0 / 1]	
033	5 to 7%: M	*ENG	[0 10 44444444 / 0 / 1]	
034	5 to 7%: C	*ENG		
041	8 to 10%: BK	*ENG		
042	8 to 10%: Y	*ENG	[0 + 00000000 / 0 / 1]	
043	8 to 10%: M	*ENG	[0 0 / 77777777 0 / 1]	
044	8 to 10%: C	*ENG		

	[Cvr Cnt: 11-20%]			
8861	These SPs display the number of scanned sheets on which the coverage of each color is from 11% to 20%.			
001	ВК	*ENG		
002	Y	*ENG	[0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	
003	Μ	*ENG	[0 10 99999999 / 0 / 1]	
004	С	*ENG		

	[Cvr Cnt: 21-30%]		
8871	These SPs display the number of scanned sheets on which the coverage of each color i from 21% to 30%.		
001	ВК	*ENG	
002	Υ	*ENG	[0+- 0000000 / 0 / 1]
003	м	*ENG	
004	С	*ENG	

	[Cvr Cnt: 31%-]			
8881	These SPs display the number of scanned sheets on which the coverage of each color is 31% or higher.			
001	ВК	*ENG		
002	Υ	*ENG	[0.4, 0000000 (0 (1)	
003	м	*ENG	[0 10 99999999 0]	
004	С	*ENG		

8891	[Page/Toner Bottle]		
	These SPs display the amount of the remaining current toner for each color.		
001	ВК	*ENG	
002	Υ	*ENG	[0 + 0000000 / 0 / 1]
003	м	*ENG	[0.10.44444444,0,1]
004	С	*ENG	

8901	[Page/Ink_prev1]		
	These SPs display the amount of the remaining previous toner for each color.		
001	ВК	*ENG	
002	Υ	*ENG	[0 to 99999999 / 0 / 1]
003	Μ	*ENG	-

З

00	4 C	*ENG	

8911	[Page/Ink_prev2]		
	These SPs display the amount of the remaining 2nd previous toner for each color.		
001	ВК	*ENG	
002	Y	*ENG	[0 + 0000000 / 0 / 1]
003	Μ	*ENG	[0 10 44444444 \ 0 \ 1]
004	С	*ENG	

8021	[Cvr Cnt/Total]				
8921	Displays the total coverage and total printout number for each color.				
001	Coverage (%) Bk	*CTL			
002	Coverage (%) Y	*CTL	[0+2] 47492447 (0 (19) (1-2)]		
003	Coverage (%) M	*CTL	[0 10 2 1 47 4 6 3 0 47 7 0 7 1 % / siep]		
004	Coverage (%) C	*CTL			
011	Coverage /P: Bk	*CTL			
012	Coverage /P: Y	*CTL	[0 + 00000000 / 0 / 1]		
013	Coverage /P: M	*CTL			
014	Coverage /P: C	*CTL			
031	Coverage(%):Eco BK	*CTL			
032	Coverage(%):Eco Y	*CTL	[0 + 2] 47492647 / 0 / 1% / then]		
033	Coverage(%):Eco M	*CTL			
034	Coverage(%):Eco C	*CTL			
041	Coverage/P:Eco BK	*CTL			
042	Coverage/P:Eco Y	*CTL	[0 + 0000000 / 0 / 1]		
043	Coverage/P:Eco M	*CTL			
044	Coverage/P:Eco C	*CTL			

	Machine Status	*CTL	[0 to 99999999 / 0 / 1]		
8941	These SPs count the amount of t SPs are useful for customers whe in their compliance with ISO Sto	me the machine spends in each operation mode. These o need to investigate machine operation for improvement andards.			
001	Operation Time	Engine op controller operating	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			

9041	[Electricity Status]		
0901	-		
001	Ctrl Standby Time	*CTL	
002	STR Time	*CTL	[0 + 0000000 / 0 / 1]
003	Main Power Off Time	*CTL	[0 10 99999999 0]
004	Reading and Printing Time	*CTL	

005	Printing Time	*CTL	
006	Reading Time	*CTL	
007	Eng Waiting Time	*CTL	
008	Low Power State Time	*CTL	[0 to 99999999 / 0 / 1]
009	Silent State Time	*CTL	
010	Heater Off State Time	*CTL	
011	LCD on Time	*CTL	

9071	[Unit Control]		
07/1	-		
001	Engine Off Recovery Count	-	
002	Power Off Count	-	[0 to 99999999 / 0 / 1]
003	Force Power Off Count	-	

2000	[AdminCounter]			
0777	-			
001	Total	-		
006	Printer: FC	-		
007	Printer: BW	-		
008	Printer: OneC	-	[0 to 99999999 / 0 / 1]	
009	Printer: TwoC	-		
012	A3/DLT	-		
013	Duplex	-		
026	Printer:FC %	-		
027	Printer:BW %	-	[0 + 2] 47 4926 47 / 0 / 1]	
028	Printer:OneC %	-		
029	Printer:TwoC %	-		

Input and Output Check

Input Check Table

5803	[INPUT CHECK]			
	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			
001	7: LG SEF			
	8: LT SEF			
	9: LT LEF			
	10: Custom			
	11: Folio			
	12:Executive			
	13:16K			
	14:8K			
	15:Tray not set			
	PAPEND_SNS	ENG	[0 or 1 / 0 / 1/step]	
004	Displays the status of the by-pass paper end sensor.			
004	0: paper remaining			
	1: paper end			
	HANDBP_SNS	ENG	[0 or 1 / 0 / 1/step]	
005	0: Base plate goes down			
	1: Base plate goes up			
006	HAND_SNS	ENG	[0 or 1 / 0 / 1/step]	

	0: Paper detected		
	I: No paper detected		
	PAPOUT_SNS	ENG	[0 or 1 / 0 / 1/step]
008	0: Paper detected		
	1: No paper detected		
	PEFUL_SNS	ENG	[0 or 1 / 0 / 1/step]
009	0: Paper not full		
	1: Paper full		
		5110	
	PAPERON_SNS	eng	[0 or 1 / 0 / 1 / step]
010	0: Paper detected		
	1: No paper detected		
	DUP_SNS	ENG	[0 or 1 / 0 / 1/step]
013	0: Paper detected		
	1: No paper detected		
	REG_SNS	ENG	[0 or 1 / 0 / 1/step]
015	0: Paper detected		
	1: No paper detected		
	TE_SNS_K	ENG	[0 or 1 / 0 / 1/step]
018	0: Toper remaining		
	1: Toner end		
		5110	
	TE_SNS_C	ENG	[0 or 1 / 0 / 1 / step]
019	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				
	INTERLOCK +24VS1	ENG	[0 or 1 / 0 / 1/step]		
024	0: +24VS1 On				
	1: +24VS1 Off				
	INTERLOCK_+24VS2	ENG	[0 or 1 / 0 / 1/step]		
025	0: +24VS2 On	2			
	1: +24VS2 Off				
	INTERLOCK_+5VS	ENG	[0 or 1 / 0 / 1/step]		
026	0: +5VS On				
	1: +5VS Off				
	TONERBTLSET_SNS	ENG	[0 or 1 / 0 / 1/step]		
032	Displays the status of the waste toner bottle set sensor.				
	0: Set				
	1: Not set				
	TONERFUL_SNS	ENG	[0 or 1 / 0 / 1/step]		
033	Displays the status of the waste toner overflow sensor.				
	0: Not full				
	1: Full				
	ITBNEW_SNS	ENG	[0 or 1 / 0 / 1/step]		
034	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			
	TCSP_SNS	ENG	[0 or 1 / 0 / 1/step]	
048	0: Abutting 1: Spaced			
	FEEDMT_LOCK	ENG	[0 or 1 / 0 / 1/step]	
049	0: Normal 1: Error			
	BWMT_LOCK	ENG	[0 or 1 / 0 / 1/step]	
050	0: Normal 1: Error			
051	FUMT_LOCK	ENG	[0 or 1 / 0 / 1/step]	
	0: Normal 1: Error			
	COLMT_LOCK	ENG	[0 or 1 / 0 / 1/step]	
052	0: Normal 1: Error			
	TRANSMT_LOCK	ENG	[0 or 1 / 0 / 1/step]	
053	0: Normal 1: Error			
	HVP_ERR_D	ENG	[0 or 1 / 0 / 1/step]	
054	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			
	HVP_ERR_1	ENG	[0 or 1 / 0 / 1/step]	
055	Indicates the state of the error signal from high voltage output of charging and development. If the error is detected, it returns SC490-00. O: 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			
	FUCOMP	ENG	[0 or 1 / 0 / 1/step]	
062	0: Off 1: High temp. detected			
070	EGB_VER	ENG	[0 to 15 / 0 / 1/step]	
0/2	Increases 1 if version is increased.			
	BANK_PE_SNS1	ENG	[0 or 1 / 0 / 1/step]	
077	0: paper end 1: paper remaining			
	BANK_PE_SNS2	ENG	[0 or 1 / 0 / 1/step]	
078	0: paper end 1: paper remaining	1		
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	1	

3. Appendix: Service Program Mode Tables

	1: Paper detected				
081	BANK_FEED_SNS2	ENG	[0 or 1 / 0 / 1/step]		
	0: No paper detected				
	1: Paper detected				
	BANK_FEED_SNS3	ENG	[0 or 1 / 0 / 1/step]		
082	0: No paper detected				
	1: Paper detected				
	BANK_500/250_1	ENG	[0 or 1 / 0 / 1/step]		
083	Indicates first stage (tray 2) is 500 sheets tray.				
	0: 500				
	1: Not used				
	BANK_500/250_2	ENG	[0 or 1 / 0 / 1/step]		
084	Indicates second stage (tray 3) is 500 sheets tray.				
	0: 500				
	1: Not used				
	BANK_500/250_3	ENG	[0 or 1 / 0 / 1/step]		
085	Indicates third stage (tray 4) is 500 sheets tray.				
	0: 500				
	1: Not used				
	BANK_PSIZE_1	ENG	[0 to 15 / 0 / 1/step]		
	0: A3 SEF				
086	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				
	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				
087	5: B5 LEF				
	6: A5 SEF				
	9: DLT SEF				
	10: LG SEF				
	11: LT SEF				
	12: LT LEF				
	14: Custom				
	15: Tray not set				
	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				
088	5: B5 LEF				
	6: A5 SEF				
	9: DLT SEF				
	10: LG SEF				
	10: LG SEF 11: LT SEF				
	10: LG SEF 11: LT SEF 12: LT LEF				
	10: LG SEF 11: LT SEF 12: LT LEF 14: Custom				
	10: LG SEF 11: LT SEF 12: LT LEF 14: Custom 15: Tray not set				

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

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

Output Check Table

5804	[OUTPUT CHECK]				
	ALL OFF	ENG	[0 or 1 / 0 / 1/step]		
001	-				
	Clears NVRAM Data including PM counter and life counter.				
	BWMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]		
003	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.			
	BWMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]	
005	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]	
	COLMT_144mm/s	ENG	[0 or 1 / 0 / 1/step]	
017	 When using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may contaminate inside of the machine. 			
	COLMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]	
018	Vhen using this SP, remove FC (CMY) toner cartridge / FC (CMY) PCDU. Toner may ontaminate inside of the machine.			
	COLMT_60mm/s	ENG	[0 or 1 / 0 / 1/step]	
019	When using this SP, remove FC (CN contaminate inside of the machine.	IY) toner co	artridge / FC (CMY) PCDU. Toner may	
	TRANSMT_144m/s	ENG	[0 or 1 / 0 / 1/step]	
024	When using this SP, remove all tone transfer belt, and would affect printi	r cartridges ng images.	s / all PCDU. This may damage PCDU and	
	TRANSMT_90mm/s	ENG	[0 or 1 / 0 / 1/step]	
025	When using this SP, remove all toner cartridges / all PCDU. This may damage PCDU and transfer belt, and would affect printing images.			
	TRANSMT_60m/s	ENG	[0 or 1 / 0 / 1/step]	
026	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]		
0.2.5	FEEDMT_1TCSP	ENG	IG [0 or 1 / 0 / 1/step]		
035	Revolve using transected motor spe	ed of the 1s	st transfer		
	FEEDMT_HANDBP	ENG	[0 or 1 / 0 / 1/step]		
036	To lift manual feed base plate, reven for lifting.	rse drive po	aper transfer motor, and rotate at a speed		
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]		
			. , , , , , ,		
	DUP_SOL	ENG	[0 or 1 / 0 / 1/step]		
045	DUP_SOL Drives the switching solenoid to tran 0: Off – moves solenoid towards to 1: On – moves solenoid towards to	ENG sfer the pa output bin duplex unit	[0 or 1 / 0 / 1/step] per to the duplex unit. direction. t direction.		
045	DUP_SOL Drives the switching solenoid to tran 0: Off – moves solenoid towards to 1: On – moves solenoid towards to Do not turn on more than a minute, heat.	ENG sfer the pa output bin duplex unit this might d	[0 or 1 / 0 / 1/step] per to the duplex unit. direction. t direction. amage the machine because of the high		
045	DUP_SOL Drives the switching solenoid to tran 0: Off – moves solenoid towards to 1: On – moves solenoid towards to Do not turn on more than a minute, heat. PAPOUT_SOL	ENG sfer the pa output bin duplex unit this might d ENG	[0 or 1 / 0 / 1/step] per to the duplex unit. direction. t direction. amage the machine because of the high [0 or 1 / 0 / 1/step]		
045	DUP_SOL Drives the switching solenoid to tran 0: Off – moves solenoid towards to 1: On – moves solenoid towards to Do not turn on more than a minute, theat. PAPOUT_SOL Drives solenoid for the idler gear to 0: Off 1: On – idler gear works to transfer	ENG sfer the pa output bin duplex unit this might d ENG reverse driv the paper t	[0 or 1 / 0 / 1/step] per to the duplex unit. direction. t direction. amage the machine because of the high [0 or 1 / 0 / 1/step] ve paper exit roller.		
045	DUP_SOL Drives the switching solenoid to tran 0: Off – moves solenoid towards to 1: On – moves solenoid towards to Do not turn on more than a minute, theat. PAPOUT_SOL Drives solenoid for the idler gear to 0: Off 1: On – idler gear works to transfer Do not turn on more than a minute, theat.	ENG sfer the pa output bin duplex unit this might d ENG reverse driv the paper t	[0 or 1 / 0 / 1/step] per to the duplex unit. direction. t direction. amage the machine because of the high [0 or 1 / 0 / 1/step] ve paper exit roller. to the duplex unit. amage the machine because of the high		
045 046 083	DUP_SOL Drives the switching solenoid to tran 0: Off – moves solenoid towards to 1: On – moves solenoid towards to Do not turn on more than a minute, theat. PAPOUT_SOL Drives solenoid for the idler gear to 0: Off 1: On – idler gear works to transfer Do not turn on more than a minute, theat. 1TCSP_CL	ENG sfer the pa output bin duplex unit this might d ENG the paper t this might d	[0 or 1 / 0 / 1/step] per to the duplex unit. direction. t direction. amage the machine because of the high [0 or 1 / 0 / 1/step] ve paper exit roller. to the duplex unit. amage the machine because of the high [0 or 1 / 0 / 1/step]		
045 046 083 091	DUP_SOL Drives the switching solenoid to tran 0: Off – moves solenoid towards to 1: On – moves solenoid towards to Do not turn on more than a minute, theat. PAPOUT_SOL Drives solenoid for the idler gear to 0: Off 1: On – idler gear works to transfer Do not turn on more than a minute, theat. 1TCSP_CL TN_CL_K	ENG sfer the pa output bin duplex unit this might d ENG the paper t this might d ENG ENG	[0 or $1 / 0 / 1/step$] per to the duplex unit. direction. amage the machine because of the high [0 or $1 / 0 / 1/step$] ve paper exit roller. to the duplex unit. amage the machine because of the high [0 or $1 / 0 / 1/step$] [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]		
	HVP_C_K	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
	1: On – Output -1100V				
130	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.				
	HVP_C_C	ENG	[0 or 1 / 0 / 1/step]		
	O: Off				
	1: On – Output -1100V				
131	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.				
	HVP_C_M	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
	1: On – Output -1100V				
132	There is no SP to change output volt	age.			
	When turning this ON, make sure to Drum might be scratched by the disc	remove M charge.	a toner cartridge and Ma PCDU. OPC		
	SP5804-148 must be ON to output voltage.				

		i			
	HVP_C_Y	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
	1: On – Output -1100V				
133	There is no SP to change output volt	age.			
	When turning this ON, make sure to might be scratched by the discharge	o remove Yo e.	e toner cartridge and Ye PCDU. OPC Drum		
	HVP_DV_K	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
134	1: On – Output -200V				
	There is no SP to change output volt	age.			
	SP5804-147 must be ON to output	voltage.			
	HVP_DV_C	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
135	1: On – Output -200V				
	There is no SP to change output voltage.				
	SP5804-147 must be ON to output	voltage.			
	HVP_DV_M	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
136	1: On – Output -200V				
	There is no SP to change output voltage.				
	SP5804-147 must be ON to output voltage.				
	HVP_DV_Y	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
137	1: On – Output -200V				
	There is no SP to change output volt	age.			
	SP5804-147 must be ON to output	voltage.			
	HVP_T1_K	ENG	[0 or 1 / 0 / 1/step]		
139	0: Off				
	1: On – Output +1000V				

	There is no SP to change output voltage.						
	HVP_T1_C	ENG	[0 or 1 / 0 / 1/step]				
140	0: Off						
	1: On – Output +1000V						
	There is no SP to change output volt	There is no SP to change output voltage.					
	HVP_T1_M	ENG	[0 or 1 / 0 / 1/step]				
141	0: Off						
	1: On – Output +1000V						
	There is no SP to change output volt	age.					
	HVP_T1_Y	ENG	[0 or 1 / 0 / 1/step]				
142	0: Off						
112	1: On – Output +1000V	1: On – Output +1000V					
	There is no SP to change output volt	There is no SP to change output voltage.					
	HVP_T2_+	ENG	[0 or 1 / 0 / 1/step]				
143	0: Off						
140	1: On – Output +30uA						
	There is no SP to change output value.						
	HVP_T2	ENG	[0 or 1 / 0 / 1/step]				
144	0: Off						
	1: On – Output -800V						
	There is no SP to change output voltage.						
	HVP_D	ENG	[0 or 1 / 0 / 1/step]				
145	0: Off						
	1: On – Output +2000V						
	There is no SP to change output volt	age.					
	HVP_BION_BK	ENG	[0 or 1 / 0 / 1/step]				
147	SP to output charging and developn	nent for Bk.					
	This SP must be "ON" to enable SP:	5804-130	/ 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]		
249	ON_DEMAND_2	ENG	[0 or 1 / 0 / 1/step]		
240	Do not execute.				
249	ITBFU_NEWON	ENG	[0 or 1 / 0 / 1/step]		
	0: Off				
	1: On – flows current to cut the new	detection	use of the Fusing unit.		
	This SP only flows current, no new d	etection co	ntrol is working.		
250	PCDU_NEWON	ENG	[0 or 1 / 0 / 1/step]		

3. Appendix: Service Program Mode Tables

251	TEON_BK	ENG	[0 or 1 / 0 / 1/step]		
252	TEON_COL	ENG	[0 or 1 / 0 / 1/step]		
	UPCOVER_SOL	ENG	[0 or 1 / 0 / 1/step]		
	This SP controls shutter to supply ton	er to PCDL	from toner cartridge.		
253	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.				
	5V_TMP_ON	ENG	[0 or 1 / 0 / 1/step]		
254	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.				
0.5.5	BankSerialComm	ENG	[0 or 1 / 0 / 1/step]		
255	Uses this to check bank substrate co	nnection.			

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