OKI
PRINTING SOLUTIONS

C831

Maintenance Manual

032312A

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PREFACE

This manual explains the maintenance methods for the C831/C841/ES8431/ES8441 Series.

The manual has been prepared for use by the maintenance personnel. For operating methods of the C831/C841/ES8431/ES8441 Series, refer to the corresponding user's manual.

The following notations may be used in this manual.

- C831n/C831dn/ES8431 → C831
- C841n/C841dn/ES8441 → C841

Note!

- The contents of this manual are subject to changes without prior notice.
- Despite that exhaustive efforts were made in preparing the manual to make it accurate, it still may contain errors. Oki Data will not hold itself liable for any damage that results or is claimed to have resulted from repair, adjustment, or modification of the printer conducted by the user using this manual.
- The parts employed in the C831/C841/ES8431/ES8441 Series printer are so delicate that they may be damaged if not treated properly. Oki Data Corporation highly recommends that the maintenance of the printer is undertaken by ODC's registered maintenance personnel.
- Work after eliminating static electricity.

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1. CONFIGURATION

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1.1 System configuration

Figure 1-1 represents the system configuration of the C831/C841.

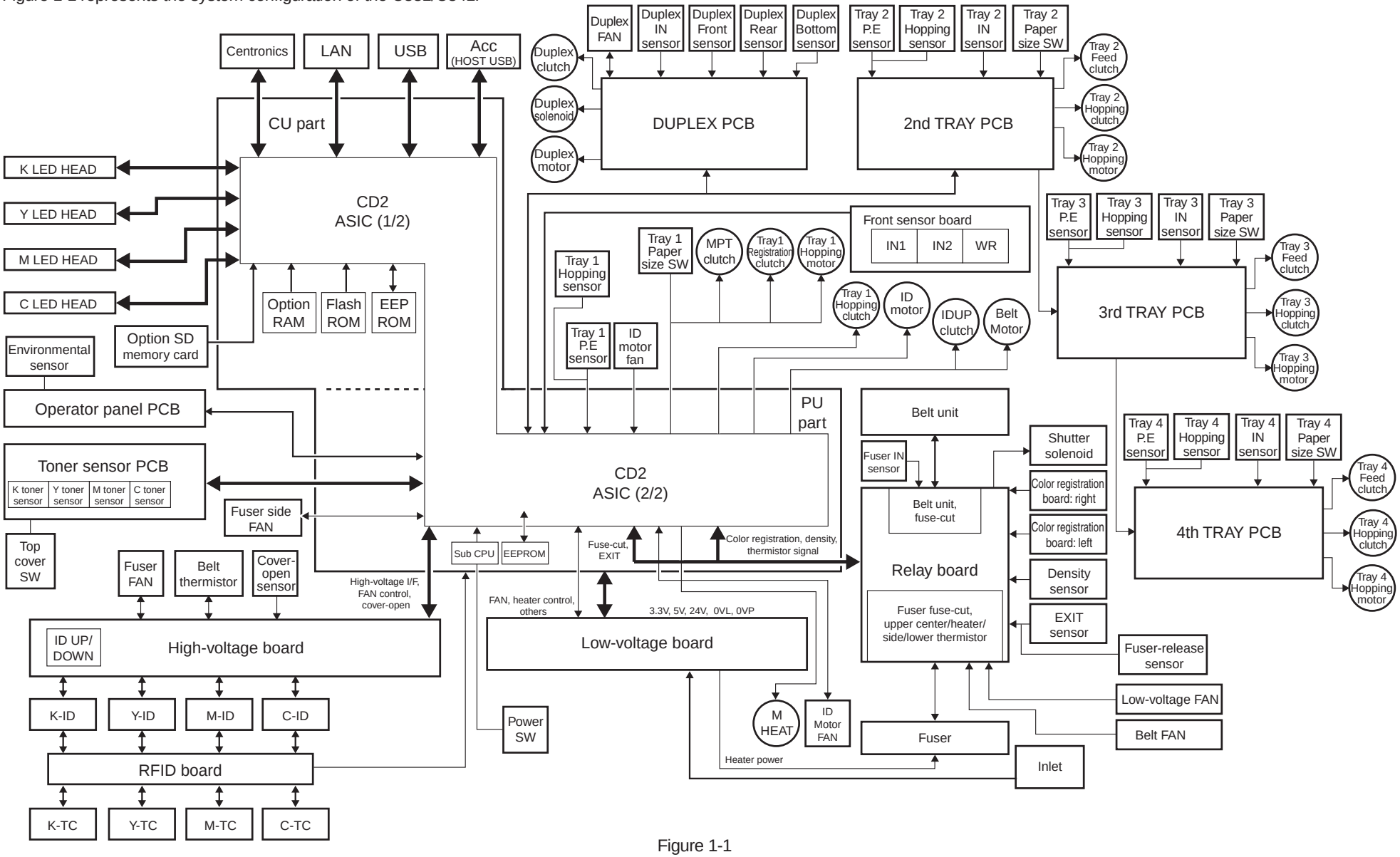


Figure 1-1

1.2 Printer configuration

The internal part of the C831/C841 printer is composed of the following sections:

- Electrophotographic processing section
- Paper paths
- Controller (a combination CU/PU board)
- Operator panel
- Power supplies (high-voltage power supply/low-voltage power supply)

Figure 1-2 represents the configuration of the printer.

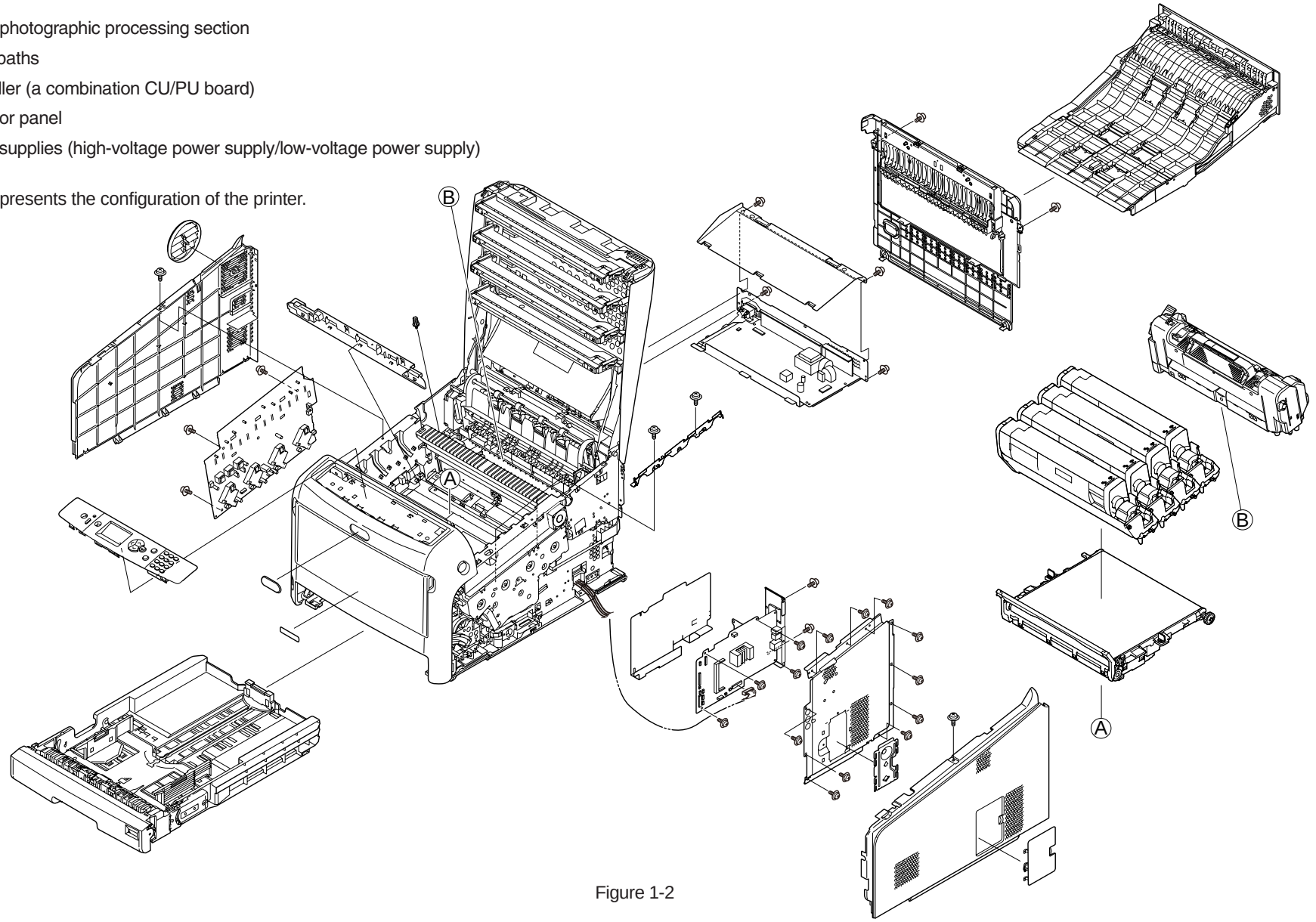
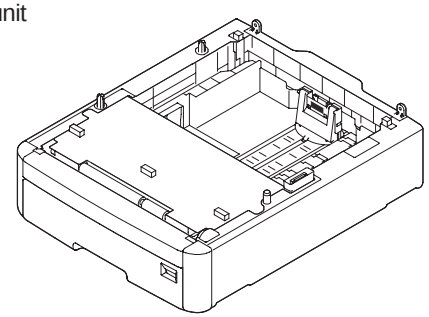


Figure 1-2

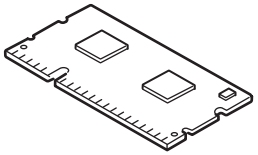
1.3 Composition of optional items

The following optional items are available for the C831/C841/ES8431/ES8441 printer:

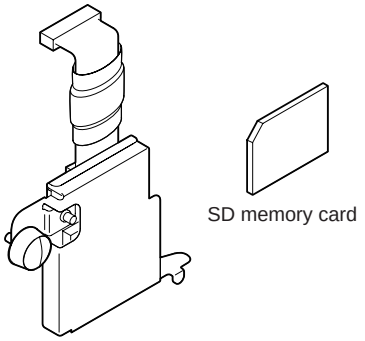
(1) Additional tray unit



(2) Additional RAM



(3) SD memory card kit



(4) Duplex-Unit

(5) Card authentication kit H1E (for OEL)

1.4 Specifications

Classification	Item	Specification(s)	
		C831/ES8431	C841/ES8441
Dimension	Width	449mm	
	Depth	552mm	
	Height	360mm	
	Weight	Approx. 40 kg	
Line length	Line length	A4 LEF	
Print speed	Engine speed (A4 LEF)	35PPM (color/mono)	
Print start	First print time	9.5 sec. (color/mono) (A4 LEF)	
	Warm-up time	From power on: 32 seconds (at room temperature 25°C, rated voltage) From power save mode: 27 seconds (at room temperature 25°C, rated voltage)	
	Low-noise mode	Unavailable	
Resolution	LED head	600dpi	1200dpi
	Maximum input resolution	600 × 1,200 dpi	1,200 × 1,200 dpi
	Output resolution	True 600 × 1200 dpi True 600 × 600 dpi 600 × 600 dpi 2 bit	True 1,200 × 1,200 dpi True 600 × 600 dpi
	Gradation	600 dpi, four gradations	1,200 dpi, two gradations
	Toner save mode	Toner saving by decreasing brightness	
CPU	Core	PowerPC464FP	
	Clock	800MHz	
	Bus width	128bit	
RAM	Resident	256 MB (768 MB max.)	
ROM	Program + font	64MB	

Classification	Item	Specification(s)	
		C831/ES8431	C841/ES8441
Power consumption	Power input	110 - 127 VAC (Range 99 - 140 VAC) 220 - 240 VAC (Range 198 - 264 VAC)	
	Off mode	0.15W or less	
	Sleep mode	1.0W or less	
	Power save mode	12W or less	
	Idle	100W (average)	
	Normal operation	700W (differs depending on the use environment)	
	Peak	1,400W	
Operating environment (temperature)	Operating	10°C to 32°C, 17°C to 27°C (temperature for full-color print quality guaranteed)	
	Non-operating	0°C to 43°C, power off	
	Storage (one year max.)	-10°C to 43°C, with drums and toner cartridges	
	Transportation (one month max.)	-29°C to 50°C, with drums but no toner cartridges	
	Transportation (one month max.)	-29°C to 50°C, with drums and toner cartridges	
Operating environment (humidity)	Operating	20% to 80%, 50% to 70% (humidity for full-color print quality guaranteed) Maximum wet-bulb temperature: 25°C	
	Non-operating	10% to 90%, maximum wet-bulb temperature: 26.8°C, power-off	
	Storage	10% to 90%, maximum wet-bulb temperature: 35°C	
	Transportation	10% to 90%, maximum wet-bulb temperature: 40°C	

Classification	Item	Specification(s)	
		C831/ES8431	C841/ES8441
Service life	Printer life	600,000 pages (A4 LEF), five years	
	Print duty (M=L/12, A=L/12/5)	Max. 50,000 pages/month Average 10,000 pages/month	
	MTBF (2.3% duty)	Not applicable	
	MPBF	100,000 pages	
	MTTR	Within 20 minutes	
	Toner life (based on ISO/IEC 19798)	Starter toner: 2,500 pages (black/color)	
		Standard: 10,000 pages (black/color) 1st new drum: Standard: Approx. 9,000 pages	
	Image drum life	30,000 pages (3 pages/job) 18,000 pages (1 page/job) 44,000 pages (when printed continuously) Drum counter automatic reset	
	Transfer belt life	80,000 pages (A4 LEF, 3 pages/job), counter automatic reset	
	Fuser unit life	100,000 pages (A4), counter automatic reset	
Operation noise	Operating	52 dBA (ISO 7779 Front) (without any optional unit)	
	Standby	32 dBA (ISO 7779 Front)	
	Power save mode	Background level	
Paper handling	Tray capacity (1st tray)	Legal/universal cassette: 300 sheets (80g/m^2)	
	Tray capacity (2nd/3rd/4th tray)	Legal/universal cassette (option): 530 sheets (80g/m^2)	
	Tray capacity (manual/auto)	Standard multipurpose tray: 100 sheets (80g/m^2) or 10 envelopes	
	Paper ejection	250 sheets (80g/m^2) to the face down stacker, 100 sheets (80g/m^2) to the face-up stacker	
	Duplex	Standard (C831n/C841n: Option)	

Classification	Item	Specification(s)	
		C831/ES8431	C841/ES8441
Paper size		A3, A4 [SEF/LEF], A5 [SEF/LEF], A6*, B4, B5 [SEF/LEF], Letter [SEF/LEF], Legal (13/13.5/14 inches), Tabloid, Executive, 16K (184×260mm, 196×270mm, 197×273mm [SEF/LEF]), 8K (260×368mm, 270×390mm, 273×394mm), Statement, Envelope (Com-10, DL, C5, C4), postcard**, double-postcard**, Custom***, Japanese envelope (Choukei 3, Choukei 4, Choukei 40, Youkei 0, Youkei 4, Kakugata 2, Kakugata 3)**, Index card, Banner, B6 half. *: A6 size paper cannot be printed from trays 2, 3 or 4. **: Postcards, double-postcards, and envelopes can be printed only from the MPT. ***: As for Custom, the available size differs depending on trays.	
Minimum paper size	Tray 1	105 × 148mm/A6	
	Tray 2, Tray 3, Tray 4 (options)	148 × 182mm	
	MPT	64 × 90mm	
Media weight	Tray 1	64 g/m^2 to 220 g/m^2	
	Tray 2, Tray 3, Tray 4 (options)	64 g/m^2 to 176 g/m^2	
	MPT	64 g/m^2 to 256 g/m^2	
Operator panel	LCD	Graphic panel with 128 × 64 dots, no display of paper size	
	LED (color)	3 LEDs (green × 2, dark amber × 1)	
	Button	18 buttons • Ten-key pad • Power Save button (green) • Operational buttons (7 buttons: ON LINE/CANCEL/ENTER/▲/▼/◀/HELP)	

Classification	Item	Specification(s)	
		C831/ES8431	C841/ES8441
Status switch/ sensor	Paper out	Provided	
	Paper low	Not provided	
	Toner low	Provided (Y, M, C, K)	
	Top/front open	Provided	
	Fuser temperature	Provided	
	Paper size	Provided (manual setting)	
	Stacker full	Not provided	
Communication interface	Standard (on-board)	• High-speed USB • Ethernet • Host USB • Accessory port (for an optional IC card authentication kit)	
	Option	Centronics interface (factory option)	
Emulation	Standard	PCL 6 (PCL5c, PCL XL3.0)/XPS/IBM5577/ Direct PDF Printing, PostScript 3 (Clone)	
	Emulation switch	Automatic	
Font	Bit-map font	Provided	
	Scalable font	Provided	
	Barcode	Provided	
	OCR-A/B	Provided	

Classification	Item	Specification(s)	
		C831/ES8431	C841/ES8441
Option (removable)	RAM	256/512MB DIMM	
	User-installable SD memory card kit	16 GB (OKI genuine product)	
	Tray configuration	Tray 2/ Tray 3/ Tray 4	
	Cassette	Universal (530 sheets, 80g/m^2)	
	Duplex Unit	C831n/C841n: Option C831dn/ES8431/C841dn/ES8441: Standard	
	Long-sheet supporter	Provided	
	Base on casters	Provided	
	Others	• Banner tray (for POP market) • Card authentication kit	
Factory setting	OEL	PCL + PS model (supports only PCL6, 600 dpi LED Head model)	PCL + PS model (supports all PDLs, 1,200 dpi LED Head model)
Other	USB-IF logo	Provided	
	Windows logo	Provided	
	Operation with UPS or inverter	Proper operation by use of a UPS (uninterruptible power supply) or an inverter is not guaranteed. Do not use a UPS or an inverter.	

1.5 Interface specifications

1.5.1 USB interface specifications

1.5.1.1 USB interface overview

(1) Basic specifications

USB (Hi-Speed USB supported)

(2) Transmission mode

Full speed (Max. 12 Mbps ± 0.25%)

High speed (Max. 480 Mbps ± 0.05%)

(3) Power control

Self-powered device

1.5.1.2 USB interface connectors and cables

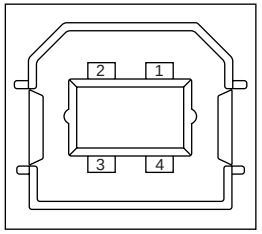
(1) Connector

- Printer side: B-receptacle (female)

  Upstream port

  Product equivalent to UBR24-4K5C00 (Made by ACON)

Connector pin arrangement



- Cable side: B-plug (male)

(2) Cables

Length: USB 2.0 cables no more than five meters long (two meters or less recommended)

(Shielded USB 2.0 cables shall be used.)

1.5.1.3 USB interface signals

	Signal name	Function
1	Vbus	Power (+5V)
2	D-	For data transfer
3	D+	For data transfer
4	GND	Signal ground
Shell	Shield	

1.5.2 Network interface specifications

1.5.2.1 Network interface overview

Basic specifications

TCP/IP spec. Network layer

ARP, IP, ICMP, IPv6

Transport layer

TCP, UDP

Application layer

LPR, Port9100, FTP, HTTP, HTTPS, IPP, SNMPv1/v3, TELNET, DHCP/BOOTP, DNS, DDNS, WINS, UPnP, Bonjour, SNTP, SMTP, POP, Windows Rally (WSD Print, LLTD)

NetBEUI: SMB, NetBIOS

NetWare: Remote printer mode (maximum eight print servers)

Print server mode (maximum eight file servers, 32 queues)

Support of encrypted passwords (in print server mode)

NetWare 6J/5J/4.1J (NDS, bindery)

SNMP

EtherTalk: ELAP, AARP, DDP, AEP, NBP, ZIP, RTMP, ATP, PAP

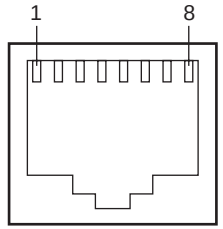
IEEE 802.1X: EAP-TLS, PEAP

1.5.2.2 Connector and cable of network interface

(1) Connector

100BASE-TX/10 BASE-T (automatically switched, not usable simultaneously)

Connector pins arrangement



(2) Cable

Non-shield twisted-pair cable with RJ-45 connector (Category 5 recommended)

1.5.2.3 Network interface signals

Pin No.	Signal name	Direction	Function
1	TXD+	FROM PRINTER	Transmitting data +
2	TXD-	FROM PRINTER	Transmitting data -
3	RXD+	TO PRINTER	Receiving data+
4	—	—	Not in use
5	—	—	Not in use
6	RXD-	TO PRINTER	Receiving data-
7	—	—	Not in use
8	—	—	Not in use

1.5.3 Parallel interface specifications (only for models with a Centronics interface)

1.5.3.1 Parallel interface overview

Item	Details
Supported modes	Compatible mode, nibble mode, ECP mode
Data bit length	Compatible mode: 8 bit, Nibble mode: 4 bit, ECP mode: 9 bit

1.5.3.2 Connector and cable of parallel interface

(1) Connector

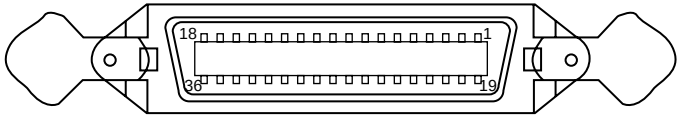
Printer: 36-pole connector (female)

Product equivalent to 57LE-40360-12 (D56) (DDK Ltd.)

Cable: 36-pole connector (male)

Product equivalent to 57FE-30360-20N (D8) (DDK Ltd.)

Pin arrangement on the interface cable side



(2) Cable

Use a cable of 1.8 m or less.

(Use a shielded twisted-pair cable for noise prevention.)

1.5.3.3 Parallel interface levels

Low level: 0.0V to +0.8V

High level: +2.4V to +5.0V

1.5.4 ACC interface specifications

1.5.4.1 ACC interface overview

(1) Basic specifications

USB (only ODC-approved card readers/writers)

(2) Transmission mode

Low speed (Max. 1.5 Mbps ± 1.5%)

(3) Supply current

Max. 500mA

1.5.4.2 ACC interface connector and cable

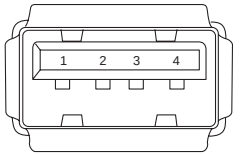
(1) Connector

- Printer side: USB A-receptacle (female)

  Downstream port

  Product equivalent to DUSBARA42-T11A (DDK Ltd.)
- Cable side: USB A-plug (male)

Connector pin arrangement



(2) Cable

Length: The cable supplied with a card reader shall be used.

(Do not place a hub between a card reader and the printer.)

1.5.4.3 ACC interface signals

	Signal name	Function
1	Vbus	Power (+5V)
2	D-	For data transfer
3	D+	For data transfer
4	GND	Signal ground
Shell	Shield	

2. DESCRIPTION OF OPERATION

2.1 Electrophotographic process mechanism.....2-2
2.2 Printing process.....2-5
2.3 Low-voltage Power Supply 2-15
2.4 Top Cover Opening and Closing Detection Switch.....2-16

2.1 Electrophotographic process mechanism

(1) Electrophotographic process

The electrophotographic process is explained briefly below:

1. Charging

   A voltage is applied to the CH roller to electrically charge the surface of the OPC drum.

2. Exposure

   The LED head radiates light onto the charged OPC drum in accordance with the image signal. The electric charge of the radiated part of the OPC drum surface attenuates depending on the intensity of the light, thus forming an electrostatic latent image on the OPC drum surface.

3. Development

   Charged toner adheres to the electrostatic latent image of the OPC drum by electrostatic power, and forms a visible image on the OPC drum surface.

4. Transfer

   Paper is placed over the OPC drum surface and an electric charge is applied to it from the backside by the transfer roller, so that the toner image is transferred to the paper.

5. Drum cleaning

   The drum cleaning blade removes toner remaining on the OPC drum after the transfer.

6. Belt cleaning

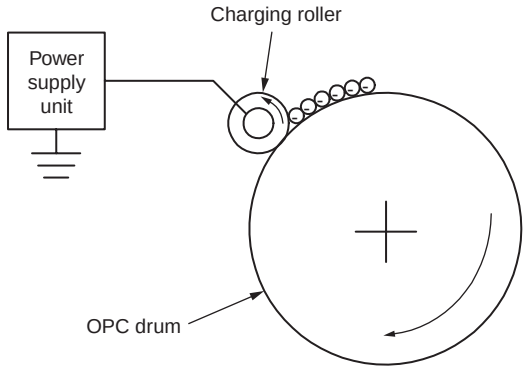
   The belt cleaning blade removes toner remaining on the belt.

7. Fusing

   Heat and pressure are applied to the toner image on the paper to promote its fusion.

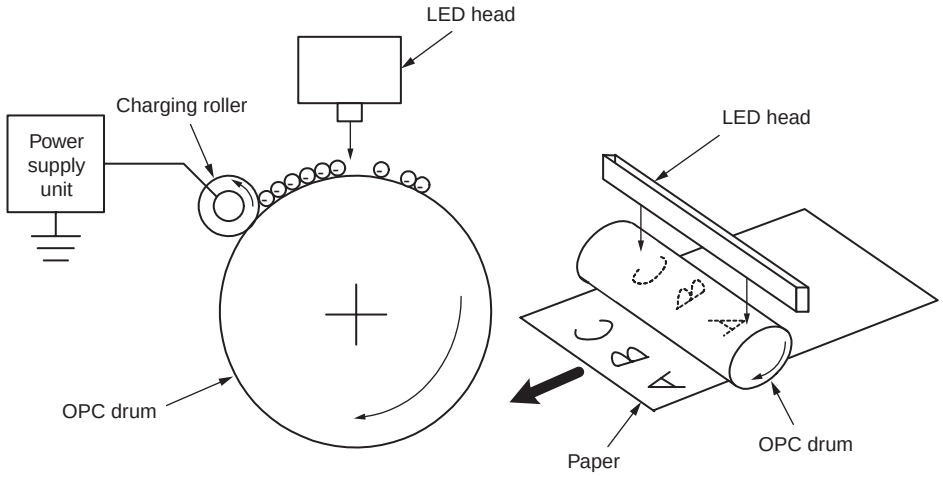
(2) Charging

A voltage is applied to the charging roller, which is placed in contact with the OPC drum surface, to charge the OPC drum surface.



(3) Exposure

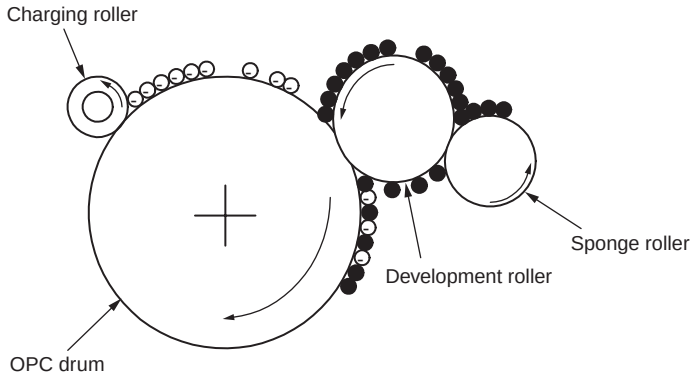
The light emitted from the LED head is radiated onto the charged surface of the OPC drum. The charge of the radiated part of the OPC drum attenuates according to the intensity of the light, forming an electrostatic latent image on the OPC drum surface.



(4) Development

Toner adheres to the electrostatic latent image on the drum surface, thereby turning the electrostatic latent image into a toner image.

1. The sponge roller allows the toner to stick to the development roller.

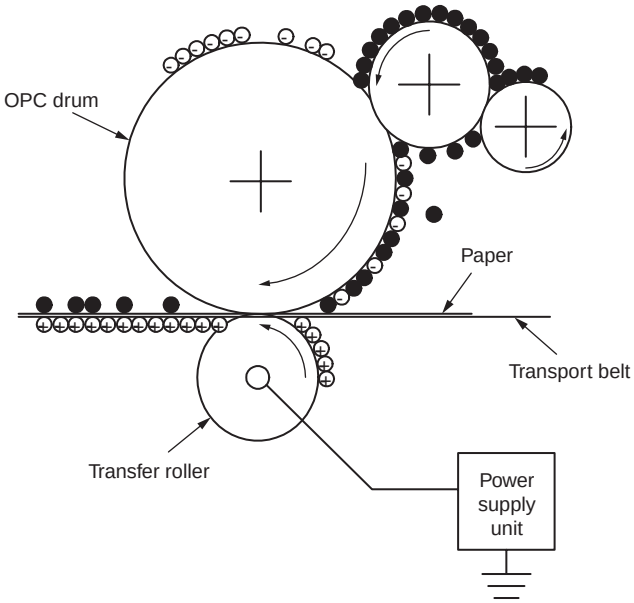


2. The electrostatic latent image on the OPC drum surface is turned into a visible image by the toner.

(5) Transfer

A sheet of paper is placed over the OPC drum surface, and an electric charge is given to the paper from its backside by the transfer roller.

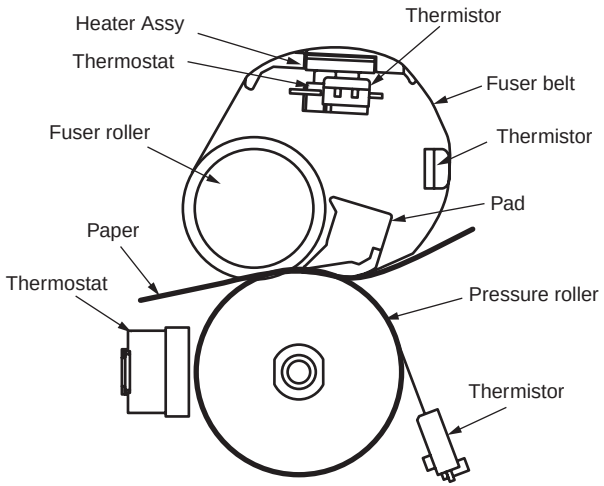
When a high voltage is applied to the transfer roller from the power source, the charge induced on the transfer roller moves on to the surface of the paper through the contact part between the transfer roller and the paper, the toner being attracted to the paper surface from the OPC drum surface.



(6) Fusing

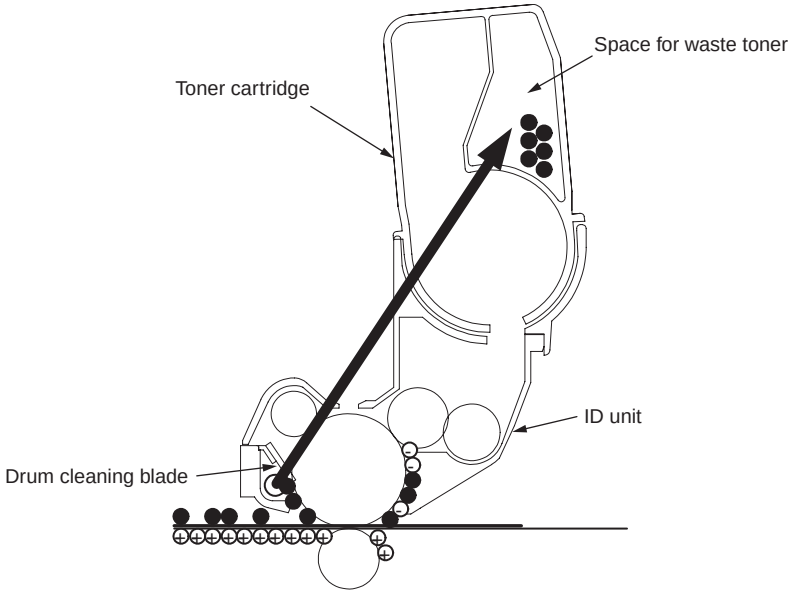
The toner image transferred on the paper is fused on the paper by heat and pressure when the paper passes through the fuser belt unit (the fuser roller, pat and fuser belt) and backup roller.

The fuser belt unit is heated by 1200W internal heater, and the backup roller is heated by a 500W internal halogen lamp. The fuser temperature is controlled by the temperature detected by the thermistor that is contacted with the inside of the fuser belt and the temperature that is detected with the thermistor ground on the backup roller surface. There is also a thermostat for safety purposes. When the heat or backup roller temperature rises above a certain temperature, the thermostat opens and shuts down the power supplied to the heater and halogen lamp. The backup roller unit is pressed against the heater with a press spring on both sides.



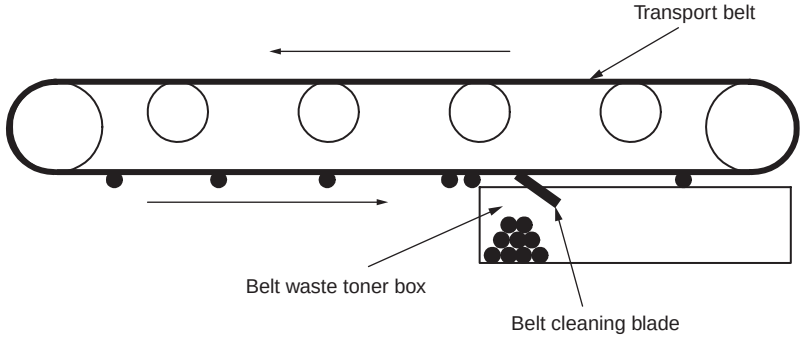
(7) Drum cleaning

Unfixed toner remaining on the OPC drum is removed by the drum cleaning blade and collected into the waste toner area of the toner cartridge.



(8) Belt cleaning

Toner remaining on the transfer belt is scraped off by the belt cleaning blade and collected into the waste toner box of the transfer belt unit.

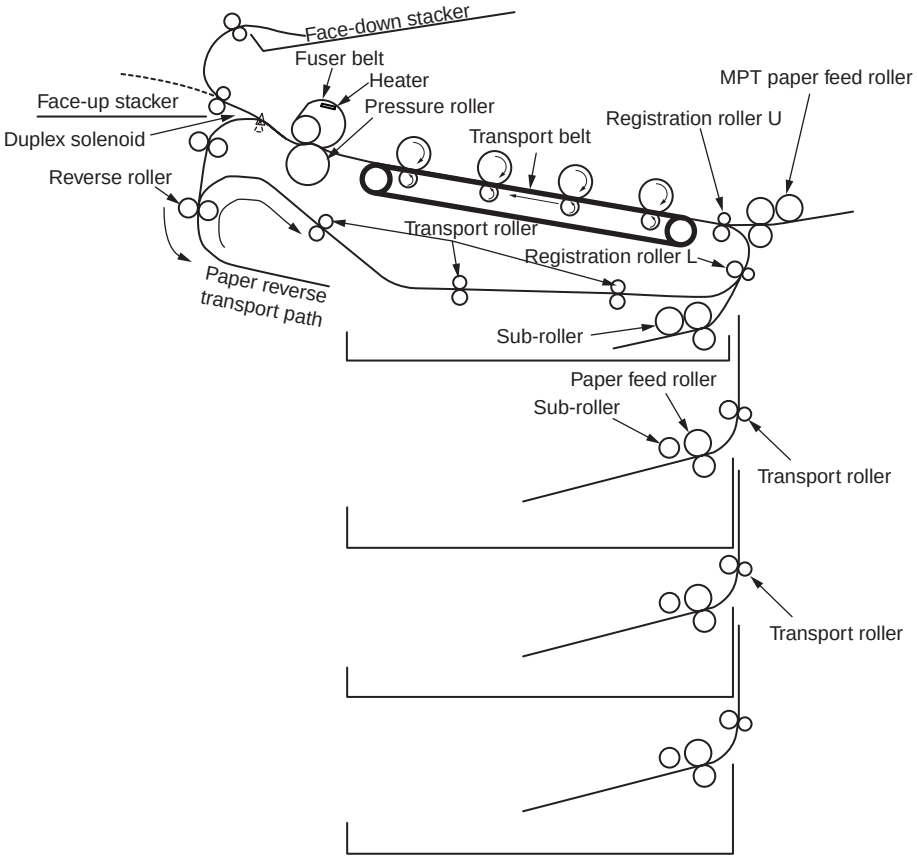


2.2 Printing process

The paper fed from Tray 1 or Tray 2, 3 or 4 is carried by the paper feed roller, the registration roller L/U, and the transport roller. When the paper is fed from the MPT, it is carried by the MPT paper feed roller and the registration roller U. Then, an unfixed toner image is created on the paper transported onto the belt sequentially through the electrophotographic process of KYMC. Thereafter, the image is fixed under heat and pressure as the paper goes through the fuser unit. After the image has been fixed, the paper is ejected to a face-up stacker or to a face-down stacker, according to the outputting method selected by opening or closing of the face-up stacker.

While the above refers to the one-sided print operation of the printer, its operation in two sided print will be explained below.

When two-sided print is conducted, the paper that has passed through the fuser unit following first one-sided print is sucked into the Duplex unit by the duplex solenoid. After entering the paper reverse transport path, the paper is carried from there to the inside of the Duplex unit by the inverting operation of the reverse roller. Then, after passed through the Duplex unit by the transport roller that is located on the transport path inside the Duplex unit, the paper is fed along the paper feed route of the Duplex unit to eventually merge the same route that comes from the tray. From here on, the same operation as that of one-sided print of paper fed from the tray takes place.



(1) Paper fed from 1st Tray

1. As illustrated in Figure 2-1, when the hopping clutch is ON, the hopping motor rotates (counterclockwise), transporting the paper until the paper entrance 1 sensor comes ON. (When the hopping clutch is ON, the paper feed roller is driven.)
2. After causing the paper entrance 1 sensor to come ON, the paper is further carried over a certain distance to finally hit the registration roller L. (This corrects skew of the paper.)
3. As shown in Figure 2-2, the registration clutch is turned ON, the registration roller L rotates to transfer the paper. (When the hopping clutch is turned OFF in a few seconds after the registration roller L is driven.)

<Paper Feed>

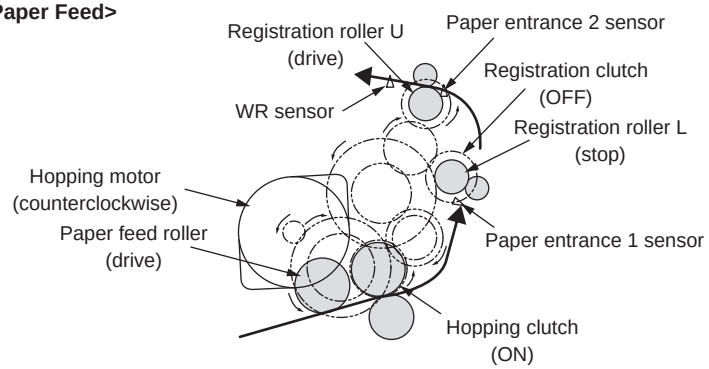


Figure 2-1

<Transfer by Registration>

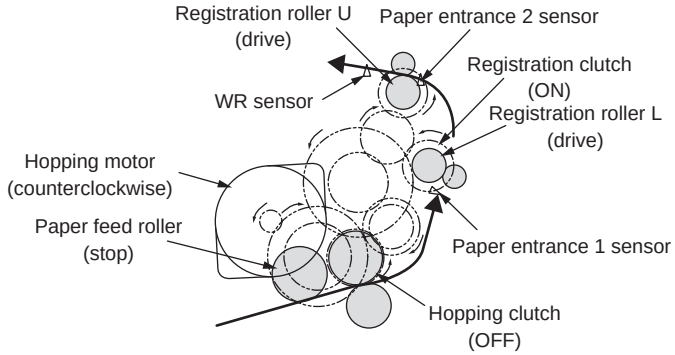


Figure 2-2

(2) Paper feed from MPT

1. As illustrated in Figure 2-3, when the MPT clutch is ON, the hopping motor rotates (counterclockwise), transporting the paper until the paper entrance 2 sensor comes ON. (The hopping motor runs counterclockwise, and the front roller is driven when the MTP clutch comes ON.)
2. After causing the paper entrance 2 sensor to come ON, the paper is further carried over a certain distance to finally hit the registration roller U. (This corrects skew of the paper.)
3. As shown in Figure 2-4, after the hopping motor stops, the hopping motor rotates (clockwise) to let the registration roller U transport the paper. (the MPT clutch is turned OFF in a few second after the registration roller U is driven.)

<MPT Paper Feed>

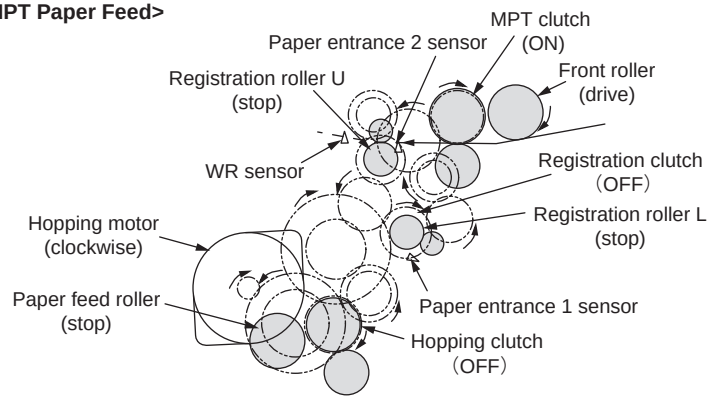


Figure 2-3

<MPT Registration Transfer>

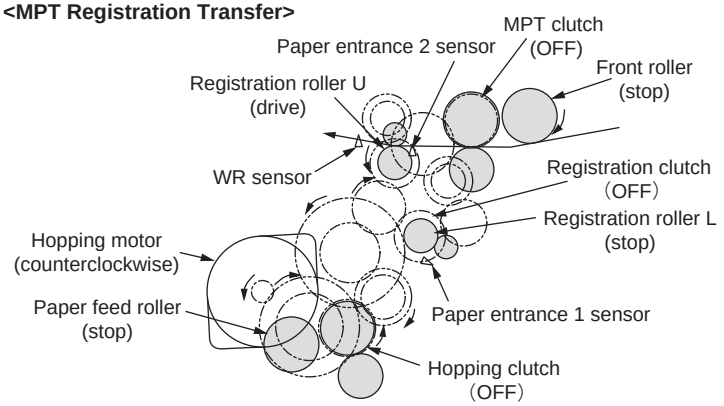


Figure 2-4

(3) Transport belt

1. As the transport belt motor rotates in the direction of the arrow, the transport belt is driven. The belt unit consists of one transport roller placed immediately underneath each color drum, with a transport belt inserted in between them.

   As the specified voltage is applied, the transport belt and the transport rollers carry the paper on the transport belt to the fuser unit as transferring the toner images present on each color drum to the paper.

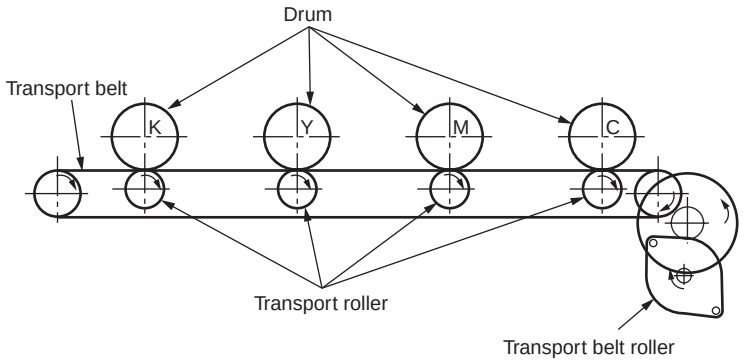


Figure 2-5

(4) Up/down-motions of ID units

1. The up/down-motions of the ID units take place driven by driving of the hopping motor and the lift-up clutch.
2. Figure 2-6 shows the motions of the different ID units when the printer is operated for color print. As the hopping motor rotates (clockwise) and the lift-up clutch is ON, the lift-up link slides to the left, causing the ID units to come down, as can be seen in Figure 2-6. Namely, the printer is readied for color print.
3. Figure 2-7 shows the motions of the different ID units when the printer is operated for monochrome print. As the hopping motor rotates (counterclockwise) and the lift-up clutch is ON, the lift-up link slides to the right, causing the ID units to go up, except for the K-ID unit, as can be seen in Figure 2-7. Namely, the printer is readied for monochrome print.

ID unit operations during color printing

C-ID unit	Down
M-ID unit	Down
Y-ID unit	Down
K-ID unit	Down

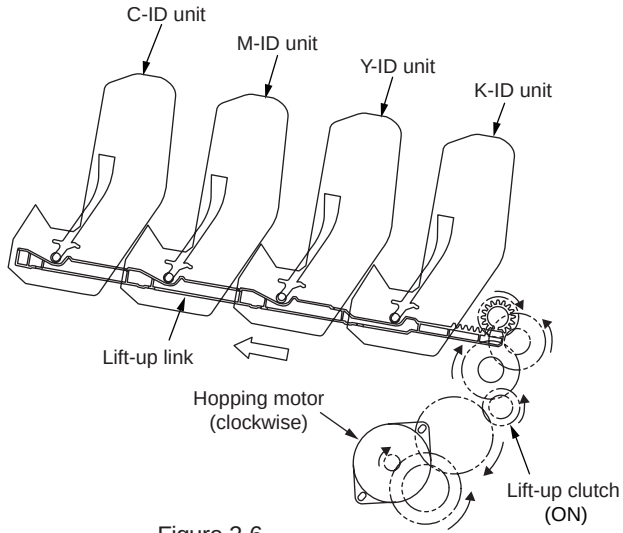


Figure 2-6

ID unit operations during monochrome printing

C-ID unit	Lift up
M-ID unit	Lift up
Y-ID unit	Lift up
K-ID unit	Down

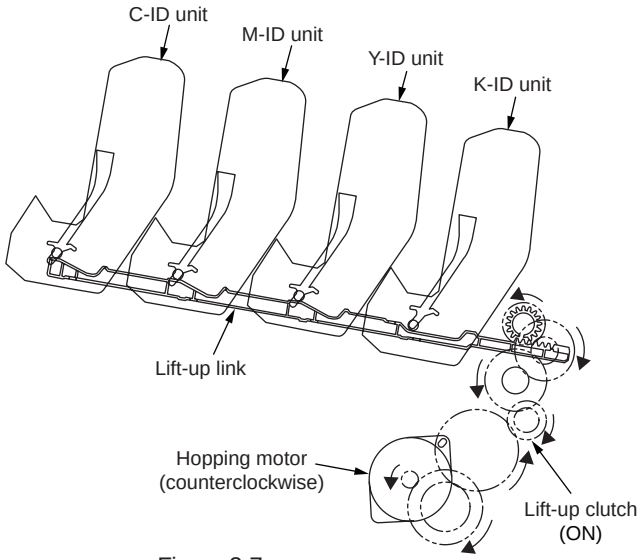


Figure 2-7

(5) Fuser unit and paper ejection

1. As illustrated in Figure 2-8, the fuser unit and the eject roller are driven by the DC motor. As the fuser motor rotates (counterclockwise), the Fuser roller rotates. This roller fixes toner images by heat and pressure.
2. At the same time, the eject rollers rotate and eject printouts.

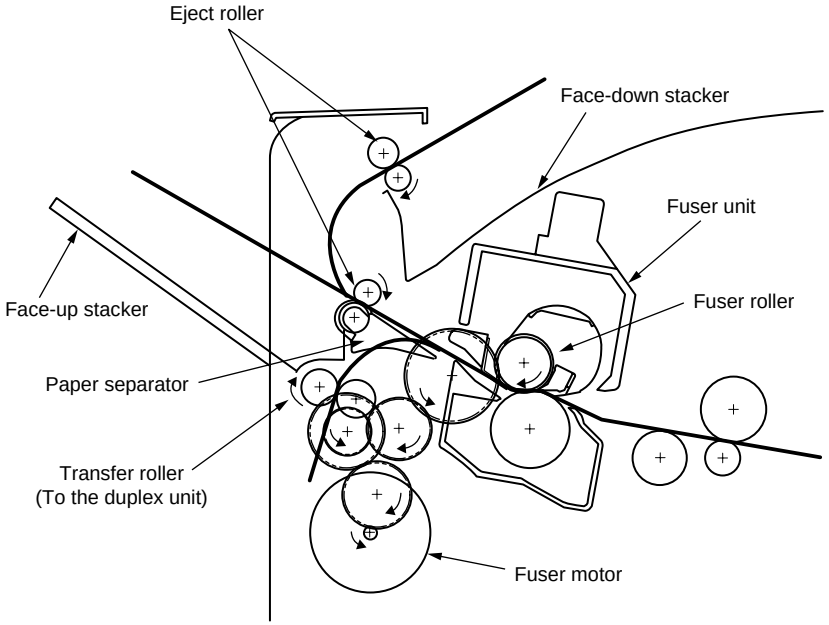


Figure 2-8

(6) Cover-opening motion of the color registration sensor and the density sensor

1. As illustrated in Figure 2-9, when the solenoid is energized, the link lever moves, causing the cover of the color registration sensor and the density sensor to open.
2. As the solenoid is de-energized, the spring pushes the cover, causing the cover of the color registration sensor and the density sensor to close.

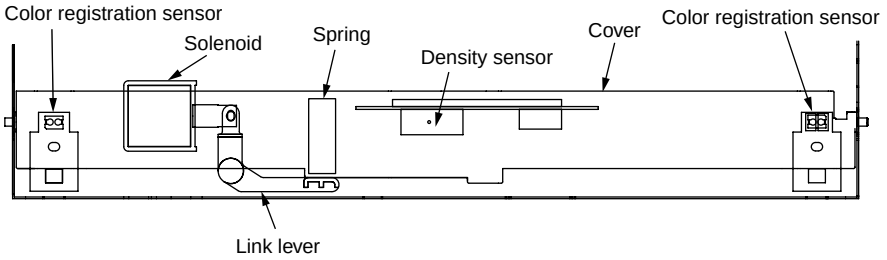


Figure 2-9

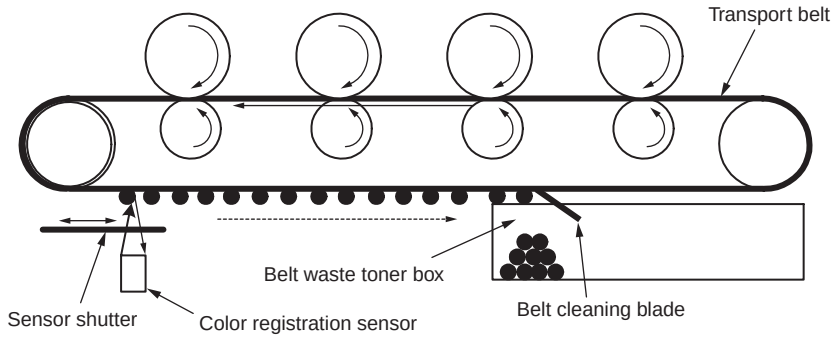
Outline of color registration correction

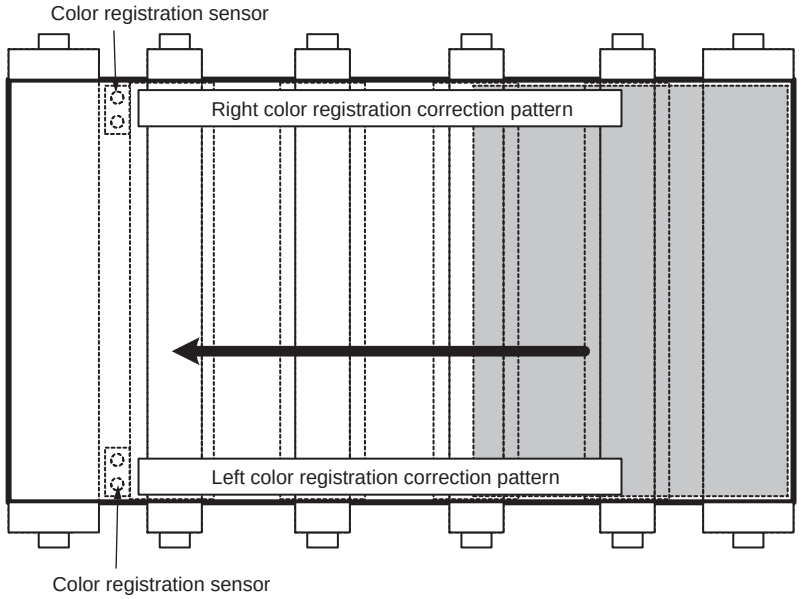
The color registration is corrected by reading correction patterns that are printed on the belt with the color registration sensors located inside the sensor shutter under the belt unit. These sensors are used to detect and correct color registration.

Automatic start timing of color registration correction

- At power-on after power-off by holding down the power button.
- At power-on after unplugging and plugging in the power cable.
- When the cover is closed after the top cover is open.

A correction error may be issued due to an inadequate toner amount of the pattern generated, a sensor stained with toner, deficient opening/closing of the shutter, or for other reasons. However, even if an error is issued, it is not indicated on the operator panel. Therefore, forcible color registration correction will have to be performed in the self-diagnostic mode (section 6.3.2.6) to check the error indication.





Error checking methods and remedial methods

The color registration correction test function among the other self-diagnostic functions is employed to check errors. (Section 6.3.2.6)

Remedial methods against different errors

- CALIBRATION (L or R), DYNAMICRANGE (L or R)

  Check 1: If the above indication appears, check the connected state of the sensor cable (FFC).

  If the connected state is found abnormal, restore it to the normal state.

  Check 2: Check to see whether the sensor surface is stained with toner, paper dust or any other foreign matter.

  If it is found stained, wipe it clean.

  Check 3: Check to see whether the sensor shutter opens and closes normally, by the MOTOR & CLUTCH TEST of the self-diagnostic function. If the shutter operates imperfectly, replace the shutter unit.

  If no problem was found by the checks 1 through 3, there is a problem with the circuit.

  Replace each of the color registration sensor PCBs (PRC PCB), the relay board (P6Z PCB), the PU board (PU PCB) and the cable one by one and check that no error will occur again.

- (Y or M or C) LEFT, (Y or M or C) RIGHT, (Y or M or C) HORIZONTAL

  Check 4: If the above indication appears, check to see whether the toner is running short, based on an NG-issuing color.

  Replace the toner cartridge, as needed.

Outline of density correction

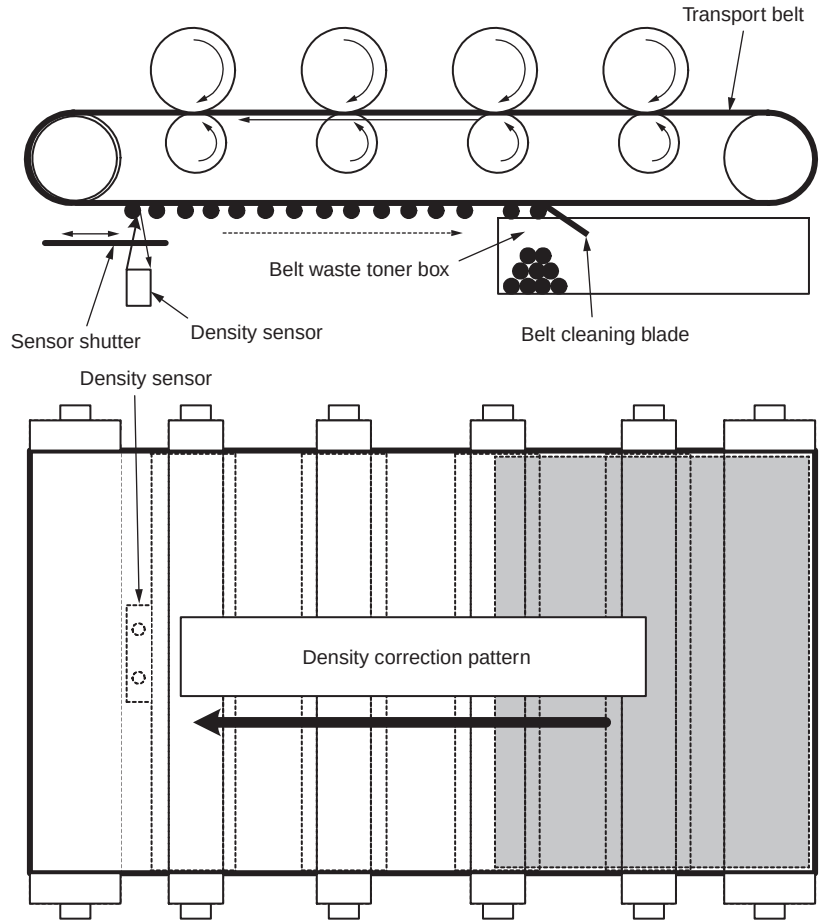
The density is corrected by reading the correction pattern that is printed on the belt with the density sensor located inside the sensor shutter under the belt unit.

Automatic start timing of density correction:

- When the consumables are replaced
- When the environment is drastically changed from the time when the power was turned on last time.
- When the environment is drastically changed from the time when printing operation was performed last time after leaving the machine for more than 6 hours.

A correction error may be issued due to an inadequate toner amount of the pattern generated, a sensor stained with toner, deficient opening/closing of the shutter, or for other reasons.

However, even if an error is issued, it is not indicated on the operator panel. Therefore, forcible density correction will have to be performed in the self-diagnostic mode (section 5.3.2.7) to check the error indication.



Error checking methods and remedies

The density correction test function among the other self-diagnostic functions is employed to check errors. (Section 5.3.2.7)

Remedial methods against different errors

- CALIBRATION ERR, DENS SENSOR ERR

  Check 1: If the above indication appears, check the connected state of the sensor cable.

  If the connected state is found abnormal, restore it to the normal state.

  Check 2: Check to see whether the sensor surface is stained with toner, paper dust or any other foreign matter.

  If it is found stained, wipe it clean.

  If no problem was found by the checks 1 and 2, there is a problem with the circuit.

  Replace each of the DENS SENSOR, the relay board (P6Z PCB), the PU board (PU PCB) and the cable one by one and check that no error will occur again.

- DENS SHUTTER ERR

  Check 3: Check to see whether the sensor shutter opens and closes normally, by the MOTOR & CLUTCH TEST of the self-diagnostic function. If the shutter operates imperfectly, replace the shutter unit.

- DENS ID ERR

  Check 4: Take out the ID units and examine them to see if the drum surface has any abnormal toner smudge.

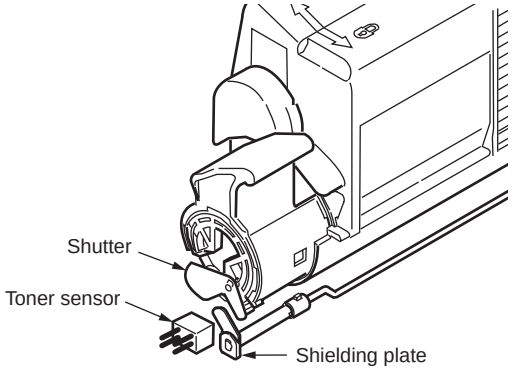
  Replace the LED head (out-of-focus), or replace any ID units with any abnormality.

  To test-operate a new ID unit, use the Fuse Keep Mode of the maintenance menu.

Principle of toner sensor detection

Toner LOW is detected by the toner sensor (Reflection sensor) installed inside the printer. The shielding plate is mounted inside the ID and rotates in synchronization with toner agitation.

Moreover, the ID has a shutter fitted. The shutter is synchronized with the operation lever of the toner cartridge, and the toner sensor can detect that the toner cartridge has been loaded properly. Detection may not take place normally, and a toner sensor error may be issued, if the shield plate or toner sensor is stained with toner, or if the ID unit and toner sensor do not remain exactly opposite to each other in their positions.



Principle of the toner counter

After image data is developed to binary data that the printer can print, the LSI counts the data as a number of print dots. The amount of toner consumed is calculated from that count value, and the remaining amount of toner is thus indicated. As opposed to this, the toner LOW detection by the toner sensor is implemented when the toner amount remaining inside the ID unit physically decreases to below a certain level.

Principles of ID, belt, and fuser counters

ID counter: One count represents the value that results from dividing the amount of rotation of the drum by three when three A4-size sheets are printed continuously.

Belt counter: One count represents the value that results from dividing the amount of rotation of the belt by three when three A4-size sheets are printed continuously.

Fuser counter: One count is registered when paper is shorter than the length of Legal 13-inch paper. When paper is longer than that, the count number is determined by the number of times the Legal 13-inch paper length is exceeded. (Rounding up of decimal fractions)

Counter specifications

	Total page count	MPT page count	Tray 1 page count	Tray 2 page count	Tray 3 page count	Tray 4 page count	Color page count	Monochrome page count
Description	Total number of prints	Number of print media hopped from MPT	Number of print media hopped from Tray 1	Number of print media hopped from Tray 2	Number of print media hopped from Tray 3	Number of print media hopped from Tray 4	Total number of color prints	Total number of monochrome prints
Count method: A4-basis or size independence	Count up after passing the writing sensor	Count up if MPF (MPT) hopping is finished successfully	Count up if Tray 1 hopping is finished successfully	Count up if Tray 2 hopping is finished successfully	Count up if Tray 3 hopping is finished successfully	Count up if Tray 4 hopping is finished successfully	The number of print media passing the fuser in color mode is counted when each job is finished. (*1) The value is counted on an A4/Letter basis. Refer to A4/Letter conversion table (on the next page).	The number of print media passing the fuser in monochrome mode is counted when each job is finished. (*1) Printing speed for color mode may be applied to monochrome mode. The value is counted on an A4/Letter basis. Refer to A4/Letter conversion table (on the next page).
Operation when paper has jammed	Printed pages are not counted when a paper feed (hopping) jam or a feed jam (380) occurs. Printed pages are counted when any jam except the said jams occurs. Since the total number of prints is counted up when the front end of print media passes the writing sensor, a feed jam (380) is also included into the limits for counted according to its jam type.						Printed pages are not counted if paper jams before passing the fuser. They are counted if prints jam after passing the fuser.	
Operation for Duplex	Front/back count (+2)	Only front count (+1)					The count increases by two. If a color page and a monochrome page exist in a pair of two pages, the color page count increases by one and the monochrome page count increases by one. If color pages exist in a pair of two pages, the color page count increases by two. If monochrome pages exist in a pair of two pages, the monochrome page count increases by two.	
Reset condition	None	None					At the time of execution of Format Flash ROM on the system maintenance menu.	
Value storage destination	PU	PU	PU	PU	PU	PU	CU	CU
Menu/MenuMap output	○	○	○	○	○	○	○	○
EngineMenuMap output	○	○ (*2)	○ (*2)	○ (*2)	○ (*2)	○ (*2)	–	–

*1 The count is updated every four pages or at the completion of the job, but the count is not updated if the power is turned off when printing any page of page 1 to 3 of a job having more than four pages.

*2 EngineMenuMap outputs Engine Menu Print (the first page) and Engine EEPROM Dump Print (the last page), and the number of sheets of paper fed from each tray is described only in the latter one (Dump page only).

A4/Letter conversion table

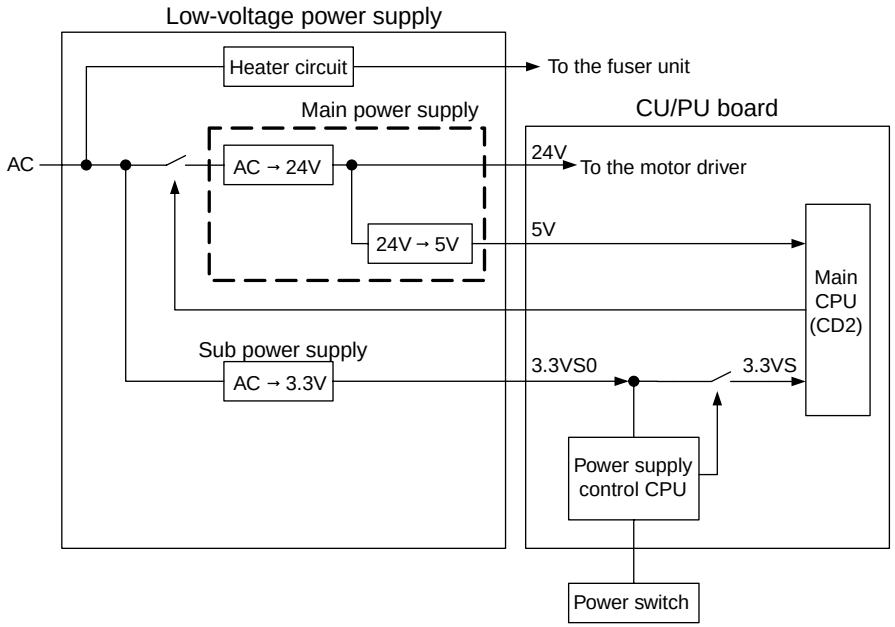
Each count should increase, in relation to every sheet of paper, by the values in the table below.

Paper size	Simplex	Duplex
LETTER	1	2
EXECUTIVE	1	2
LEGAL14	1	2
LEGAL13.5	1	2
LEGAL13	1	2
TABLOID	2	4
A3	2	4
A4	1	2
A5	1	2
A6	1	2
B4	2	4
B5	1	2
B6	1	2
COM-9	1	2
COM-10	1	2
MONARCH	1	2
DL	1	2
C5	1	2
C4	1	2
HAGAKI	1	2
OUFUKU-HAGAKI	1	2
CUSTOM (LENGTH ≤ 210mm)	1	2
CUSTOM (210 < LENGTH < 900mm)	2	4
CUSTOM (900mm ≤ LENGTH)	4	8

Paper size	Simplex	Duplex
ENVELOPE1 (Nagagata #3)	1	2
ENVELOPE2 (Nagagata #4)	1	2
ENVELOPE9 (Nagagata #40)	1	2
ENVELOPE3 (Yougata #4)	1	2
ENVELOPE4 (Envelope A4)	1	2
ENVELOPE5 (Kakugata #2)	2	4
ENVELOPE6 (Kakugata #3)	1	2
ENVELOPE8 (Yougata #0)	1	2
INDEXCARD	1	2
China 8K (270 × 390mm)	2	4
China 8K (273 × 394mm)	2	4
China 8K (260 × 368mm)	2	4
China 16K (197 × 273mm)	1	2
China 16K (195 × 270mm)	1	2
China 16K (184 × 260mm)	1	2
Statement (139.7 × 215.9mm)	1	2
Banner [~1,321mm (~52")]	~ 4	~ 8
B6 Half	1	2

2.3 Low-voltage Power Supply

2.3.1 Operation



The low-voltage power supply has two kinds of power supply , which is main power supply (5V, 24V) and sub power supply (3.3VS0).

The main power supply (24V, 5V) is turned on and off by the main CPU (CD2) of the CU/PU board.

The sub-power supply (3.3VS0) is turned on when plugging the power cable into the socket.

Therefore, the maintenance works around the board should be performed after the LED on the CU/PU board is off by unplugging the power cable.

Turning ON and OFF of 3.3VS to the main CPU is performed by the power supply control CPU.

2.3.2 Power-supply Voltage in Each Mode

The output voltage value of the low-voltage power supply is different in each operation mode as shown in the following table.

When measuring the output voltage value of the low-voltage power supply, the judgment of validity should be performed based on the following table.

Operation mode	output voltage value of the low-voltage power supply			Power-supply voltage value in the CU/PU board
	24V line	5V line	3.3VS0 line	3.3VS line
In operation, and Standby	24V	5V	3.3V	3.3V
Power save	16~18V	5V	3.3V	3.3V
Sleep	OFF	OFF	3.3V	3.3V
OFF	OFF	OFF	3.3V	OFF

2.3.3 Thermistor for Temperature Alarm

The low-voltage power supply implements the thermistor for temperature alarm.

When the temperature of the low-voltage power supply is abnormal, Service Call SC 166-01, 02, 03, or 04 is displayed.

For details and handling methods of each service call, refer to the section 8 Troubleshooting Procedure, Service Call Error List.

2.4 Top Cover Opening and Closing Detection Switch

This printer is equipped with a front cover opening/closing detection switch and a top cover opening/closing detection switch.

The top cover opening/closing detection switch is effective when the power cable is plugged into the socket, regardless of the power on or off.

When opening and closing the top cover during the operation, standby, or power save mode, the machine performs color registration correction immediately. When opening and closing the top cover during the sleep mode, or power-off, the machine performs color registration correction when recovering from the sleep mode or the power is turned ON. Note that initial handling takes longer than usual.

3. INSTALLATION

3.1 Cautions, and do's and don'ts 3-2
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3.3 Printer installation instructions.....3-4
3.4 List of components and accessories 3-5
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3.6 Printing of the configuration report 3-22
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3.8 Checking of paper used by the user.....3-25

3.1 Cautions, and do's and don'ts

⚠Warning

- Do not install the printer in any high-temperature location or a near heat source.
- Do not install the printer in a location where chemical reaction may occur (laboratory and the like).
- Do not install the printer in the proximity of inflammable solvents, such as alcohol and paint thinner.
- Do not install the printer within reach of children.
- Do not install the printer on an unstable surface (e.g., on a rickety bench or on a slanting place).
- Do not install the printer in a location with moisture or heavy dust, or in direct sun.
- Do not install the printer in an environment with sea wind or corrosive gas.
- Do not install the printer in a location with heavy vibration.
- In the event that the printer is inadvertently dropped or its cover is damaged, remove the power plug from the power outlet and contact the customer information center.
  Such mishap could lead to an electric shock, fire or injury.
- Do not connect any power cord, printer cable or grounding wire in any other manner than the way specified in the manual. Failure to observe the above could result in fire.
- Do not stick in an object into the vent hole.
  Such action could lead to an electric shock, fire or injury.
- Do not place a glass filled with water or the like on the printer.
  Such action could lead to an electric shock or fire.
- When the printer cover is opened, be careful not to touch the fuser unit.
  It may cause burns.
- Do not throw the toner cartridges or the image drum cartridges into fire.
  Dust explosion could cause burns.
- Do not use a highly combustible spray near the printer.
  It may cause a fire because the printer contains parts that get extremely hot.
- In the event that the cover becomes unusually hot, emits smoke, bad smell, or abnormal noise, remove the power plug from the power outlet and contact the customer information center.
  It may lead a fire.

⚠Warning

- If water or any other liquid enters the inside of the printer, remove the power plug from the power outlet and contact Customer Center.
  Fire could break out.
- If someone drops foreign objects such as a clip in the printer, remove the power plug from the outlet and take out the foreign objects.
  It may cause an electric shock, fire, or injury.
- Do not operate or disassemble the printer in any other manner than the way specified in the manual.
  Failure to observe this warning could result in an electric shock, fire or injury.

⚠Caution

- Do not install the printer in a location where its vent hole is blocked.
- Do not install the printer directly on a shag carpet or rug.
- Do not install the printer in a sealed room or other location with poor ventilation or permeability.
- Make sure to ventilate sufficiently when continuously using the printer in a small room for a long time.
- Install the printer away from a strong magnetic field or noise source.
- Install the printer away from a monitor or TV.
- To move the printer, hold both sides of the printer.
- This printer, which weighs approximately 40 kg, should be lifted by two or more people.
- While the printer power is on or the printer is printing, do not come close to the paper exit. Such action could lead to injury.

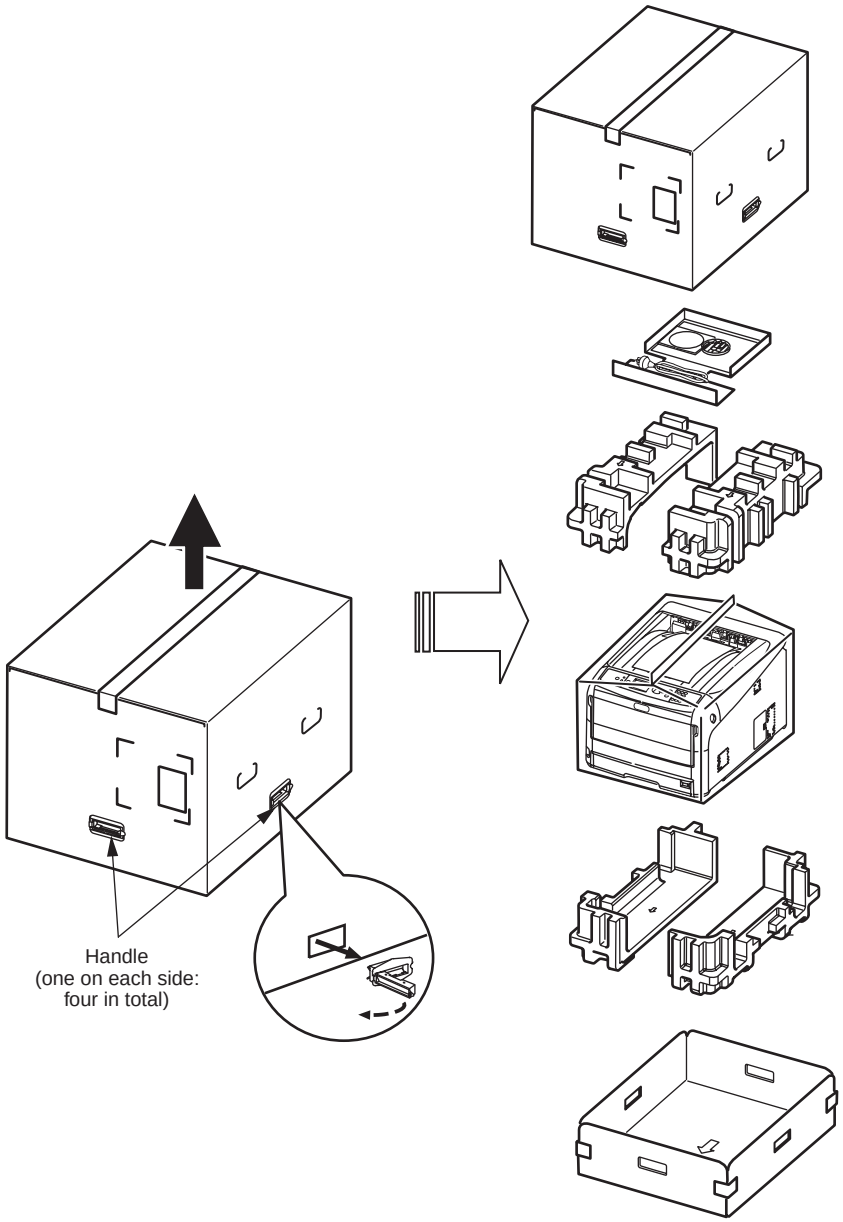
When the precautionary notes concerning the installation and operation are explained, the user should be referred to the precautionary notes given in the user's manual. Especially, give thorough explanation on the power cord and the grounding wire.

3.2 Unpacking procedure

⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 40 kg, it should be lifted by two or more people.

- Remove the four handles from the sides of the box, as illustrated below, and lift the corrugated fiberboard box.



3.3 Printer installation instructions

- Install the printer in a location where the following temperature and humidity are met:

  Ambient temperature: 10 - 32°C

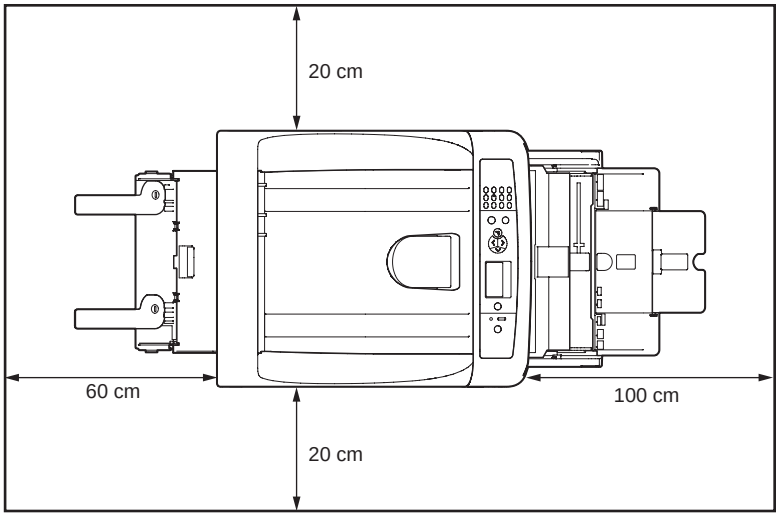
  Ambient humidity: 20 - 80 % RH (relative humidity)

  Maximum wet-bulb temperature: 25°C
- Exercise caution to avoid dew condensation.
- If the printer is installed in a location with ambient relative humidity below 30%, use a humidifier or antistatic mat.

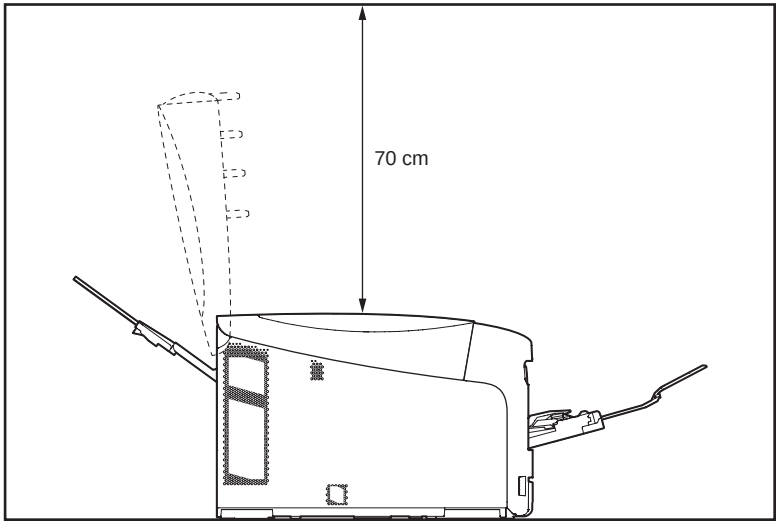
Installation space

- Place the printer on a flat desk large enough to accommodate its footings.
- Provide enough spaces around the printer.

Plan view



Side view



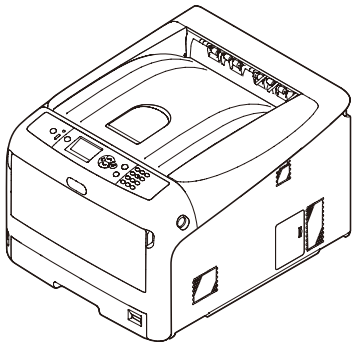
3.4 List of components and accessories

- Check to make sure that the components are free from damage, dirt or other irregularities in their appearance.
- Ensure that none of the accessories to the components is missing and that they are free from breakage or other flaw.
- If any irregularity is discovered, contact the user management section for instructions.

⚠Warning	Personal injury may occur.	⚠

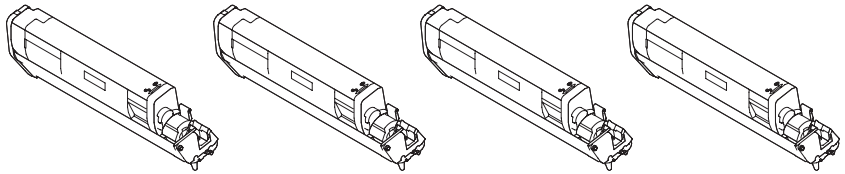
Since the printer weights approximately 40 kg, it should be lifted by two or more people.

☐ Printer (main unit)



☐ Four Image drums (one each of cyan, magenta, yellow, and black)

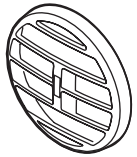
☐ Four Starter toner cartridges (one each of cyan, magenta, yellow, and black)



Inform the user that the toner cartridges and image drum cartridges can be separated one from the other.

Note! The starter toner cartridges are installed in the image drums.
The image drums are installed in the printer at the time of shipping.

☐ Louver for emission



☐ Printer software DVD-ROM

☐ AC cord

☐ Product warranty and customer support

Note! No printer cable is supplied with the printer.

3.5 Assembly procedure

3.5.1 Assembly of the printer main unit

Unpacking

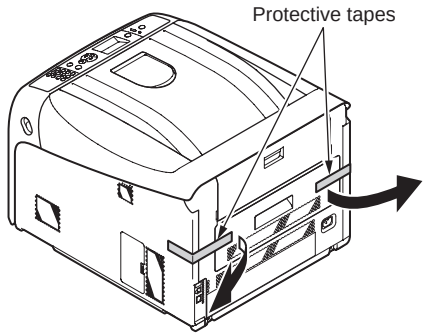
⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 40 kg, it should be lifted by two or more people.

Note! • If consumables or maintenance units other than appended items are installed first, the life count may not be appropriately displayed, or the appended items may not be used afterward. Therefore, make sure to use consumables or maintenance units supplied with the printer first.
- The image drum (green cylinder part) is very sensitive to scratches, therefore, special care should be taken on handling.
- Do not expose the image drum cartridges to direct sunlight or strong light (approx. 1500 lux or above). Even under room light, do not leave them exposed for five minutes or longer.
- Keep the packaging boxes and cushioning materials since they are necessary for transporting the printer.

(1) Remove the package, and remove all cushioning materials and plastic bags.

(2) Remove two protective tapes on the back side of the printer.

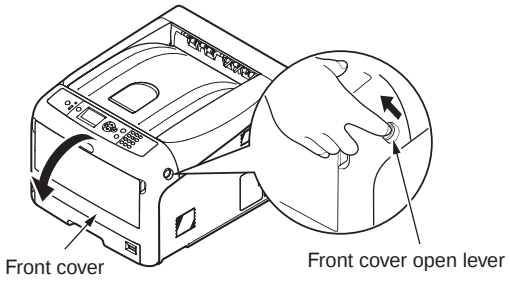


Ex: dn model

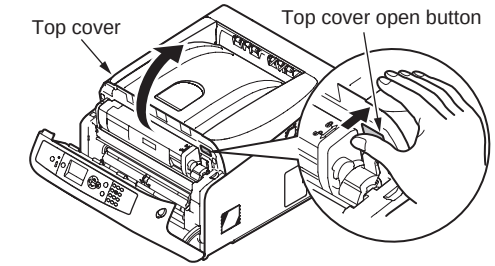
Installing consumables

(1) Put your finger in the depressed area on the right side of the printer to pull the front cover open lever, and then, pull the front cover to open.

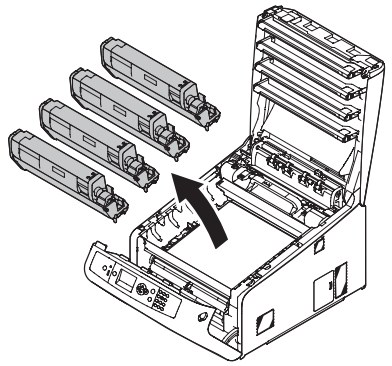
Note! Open the front cover quietly. Opening it swiftly may open the MP tray.



(2) Press the top cover open button to open the top cover.

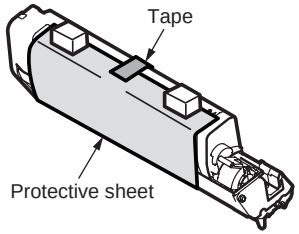


(3) Take out the image drums (four drums).

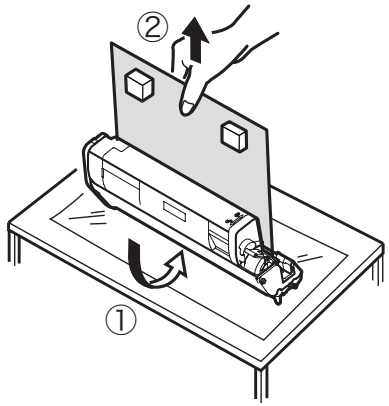


(4) Remove the protective sheet from each of four image drums.

a) Put the image drum cartridge on newspaper or something on the flat table, remove the tape holding the protective sheet, and open the sheet.

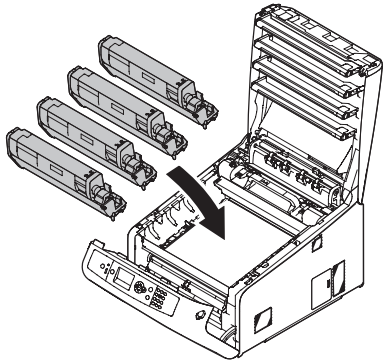


b) Pull the protective sheet out in the direction of the arrow.



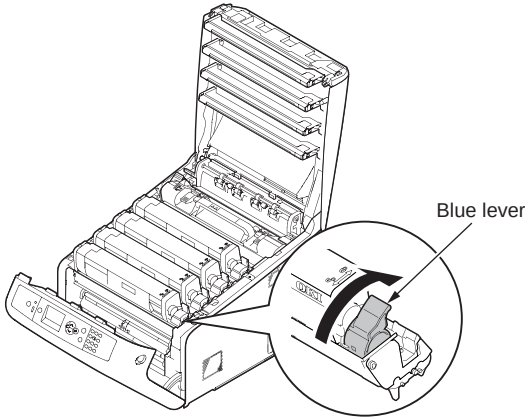
Note! Do not turn the lock lever of the toner cartridge here.

(5) Install the image drums (4 drums) in the printer again.

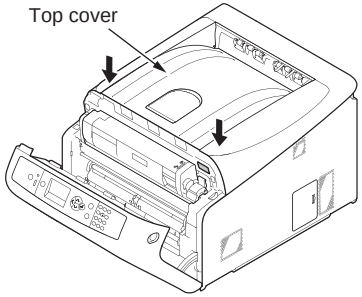


(6) Turn the blue levers of the toner cartridges in the direction of the arrow until they click.

Turn all levers of four toner cartridges.

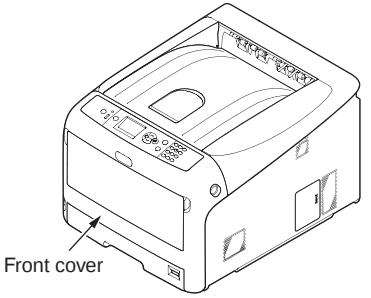


(7) Close the top cover, and push both sides certainly.



(8) Close the front cover.

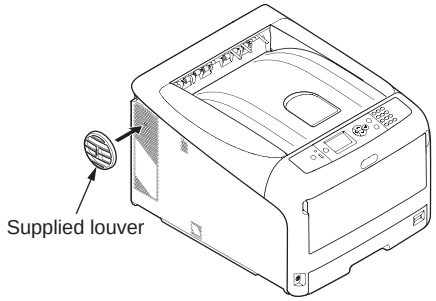
Note! • Unless the top cover is closed, the front cover cannot be closed completely.
• If error messages of FRONT COVER OPEN/ TOP COVER OPEN are not cleared, check that the front cover and top covers are certainly closed.



Installing accessories

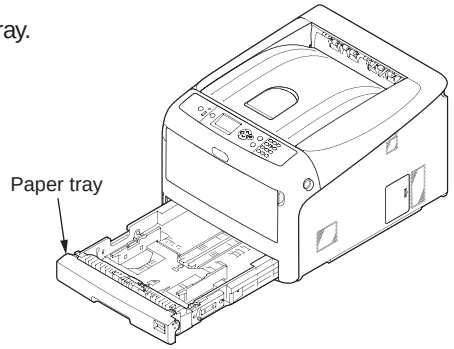
If you are concerned about direction of the wind from the vent hole of the printer, attach the supplied louver.

(1) Attach the supplied louver to the vent hole on the side of the printer.



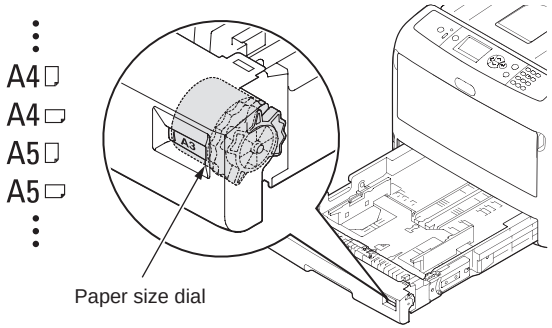
Loading paper in the paper tray

(1) Pull out the paper tray.

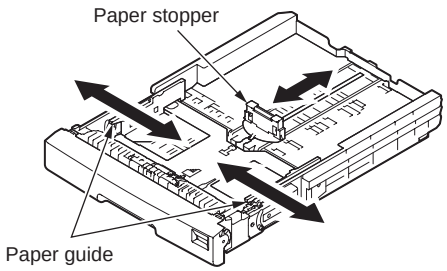


(2) Set the paper size dial to the paper size to be loaded.

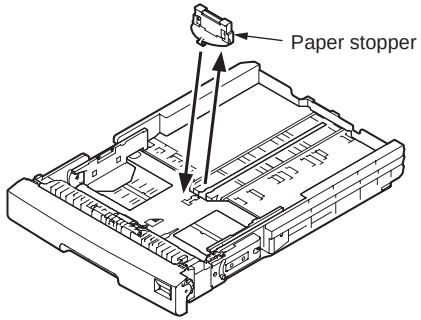
When loading A4-size paper as portrait, set the dial to [A4].



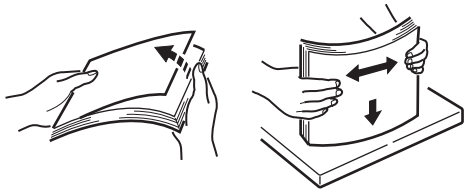
(3) Adjust the paper stopper and paper guide to the size of the paper being loaded.



Note! When loading A6 size paper, move the paper stopper toward you to remove it. Then attach it to the position shown.

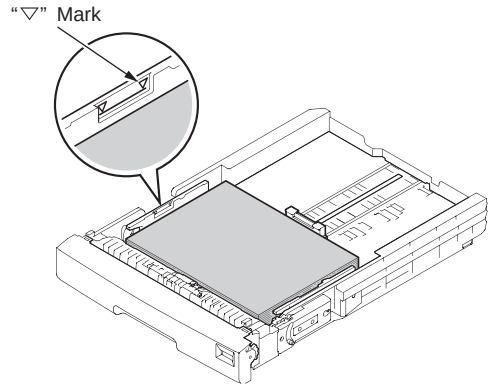


(4) Fan the edges of paper stack and align the edges of the stack on a level surface.



(5) Load the paper with the print side facing down.

Note! Do not allow the level of paper to pass the "▽" mark of the paper guide (300 sheets of 80g/m^2 paper).



(6) Hold the paper with the paper guide.

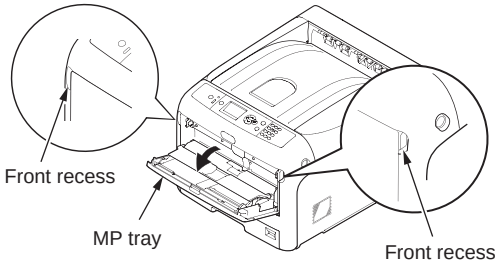
(7) Check if a size of loaded paper matches the setting of paper size dial.

(8) Return the paper tray to the printer.

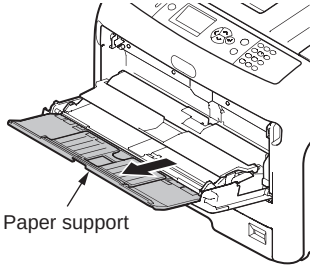
Memo When loading a size which is not displayed on the dial, set the dial to "Other", and then, set the paper size on the operator panel.

Loading paper in the MP tray

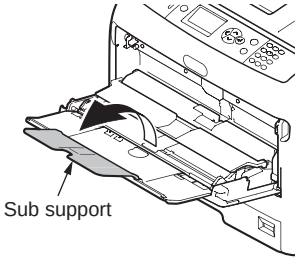
(1) Put your finger in the front recesses on the front, and pull the MP tray to open.



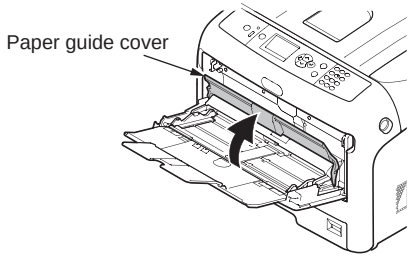
(2) Hold the center on the paper support, and pull it.



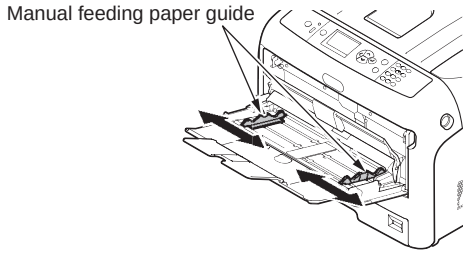
(3) Open the sub support.



(4) Lift the paper guide cover.

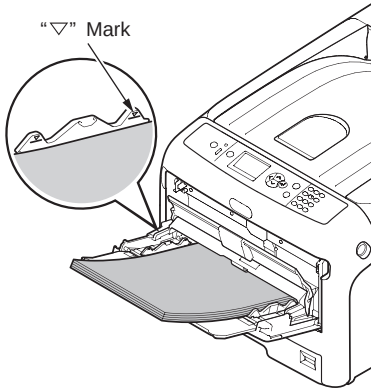


(5) Move the manual feeding paper guide to the paper width to be loaded.

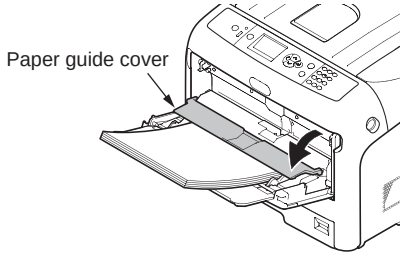


(6) Load the paper with the print side up.

Note! Do not set the paper exceeding the "▽" mark.



(7) Put the paper guide cover down.



3.5.2 Connection of the AC cord

Power supply conditions

- Observe the following conditions:
  Current: 110 - 127 VAC (Range 99 - 140 VAC)
  220 - 240 VAC (Range 198 - 264 VAC)
  Frequency: 50/60 Hz ± 2%
- If the available power is unstable, use a voltage regulator.
- The maximum power consumption of this printer is 1,400W. Ensure that the power supply is sufficient to operate this printer.
- We do not guarantee operation where an uninterruptible power system (UPS) or inverter is used. Do not use an uninterruptible power system (UPS) or inverter.

⚠Warning	There is a risk of getting an electric shock and/or causing fire.	

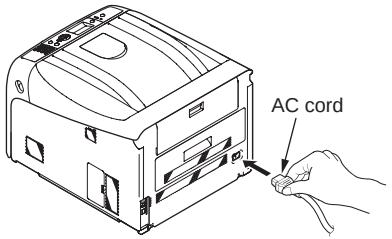
- Be sure to turn off the power supply switch when attaching or removing the AC cable and earth wire.
- Be sure to connect an earth wire to the grounding terminal of exclusive use.
- Please do not connect with the ground of a water pipe, a gas pipe, and a telephone wire, and a lightning rod by any means.
- Make sure to connect with the ground terminal before connecting the power cord to the power supply plug.
- Be sure to plug in and unplug the AC cable while holding on to the power supply plug.
- Insert the AC cable plug completely into the wall socket securely.
- Do not touch the power cord, or printer, if your hands are wet.
- Install a power cord in the place which is not stepped on, and do not place a thing on a power cord.
- Do not use the cord tied in a bundle.
- Please do not use the damaged power cord.
- Do not use multi-outlet adapters.
- Do not connect this printer and other electric products to the same wall socket. If it connects simultaneously with an air conditioner, copier, shredder, etc. Especially, a printer may incorrect-operate by the electric noise. When you connect with the same wall socket unavoidably, please use a commercial noise filter or a commercial noise cut transformer.
- Use the attached power cord and insert it directory with the ground terminal. Do not use the power cord for other product for the printer.
- Do not use an extension cord. When you use it unavoidably, use the thing more than rated 15 A.
- Use of an extended code may not operate a printer normally by AC voltage descent.
- During printing, do not shut off a power supply or do not pull out a power supply plug.
- When you use it neither for consecutive holidays nor a travel for a long time, pull out a power cord.
- Do not use attached power cord to the other products.

About the connections of the power cord and grounding wire, the user should be given thorough explanation on the basis of the user's manual.

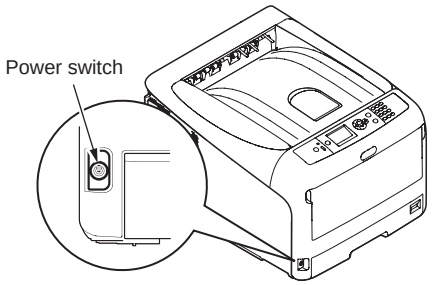
Connecting the AC cord

(1) Insert the AC cord into the printer.

(2) Plug the AC cord into the socket.



(3) Press the power switch for about 1 second to turn on the printer.



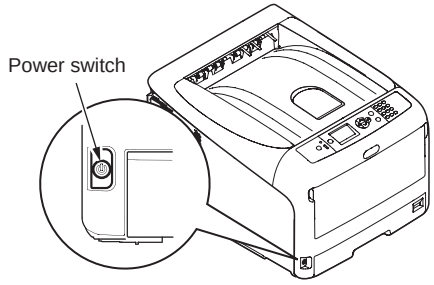
When the printer is turned on, the LED lamp of the power switch is also turned on.

When the printer is ready to print, "Ready to Print" is displayed on the liquid-crystal panel.

Turning off the power

(1) Press the power switch for about 1 second.

The message of “Shutting down... Please Wait for a while. The power is automatically turned off.” is displayed on the operator panel, and the LED lamp of the power switch blinks at intervals of one second. Then, the power of the printer is automatically turned off, and the LED lamp of the power switch is also turned off.



Note! It may take 5 minutes to turn off the power.

Memo You can turn off the power forcibly by holding down the power switch for more than 5 seconds. This operation is to shut down the power forcibly; therefore, data and files in printing cannot be secured. Use the operation only when trouble occurs.

No use for a long time

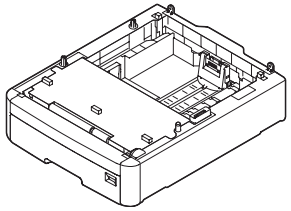
When the printer is not used for a long time due to consecutive holidays or when on vacation, or when changing or attaching parts in repair or maintenance, unplug the AC cord.

Note!
- The printer will not be functionally impaired even if left unplugged for a long time (more than 4 weeks).
- Even in the power-off status, when the AC cord is connected, electricity is consumed. (0.15W or less(230V))

3.5.3 Installation and recognition confirmation of options

(1) Installation of an additional tray unit

An additional tray unit is intended for increasing the amount of paper that can be loaded in the printer, and three additional tray units can be installed to the printer. An additional tray holds 550 sheets of 64 kg paper, allowing the printer to print up to 2080 sheets continuously when used with a standard paper cassette and a multi-purpose tray together. After the installation, you need to the set the printer driver. (For more information, refer to “Case where options are added”.)



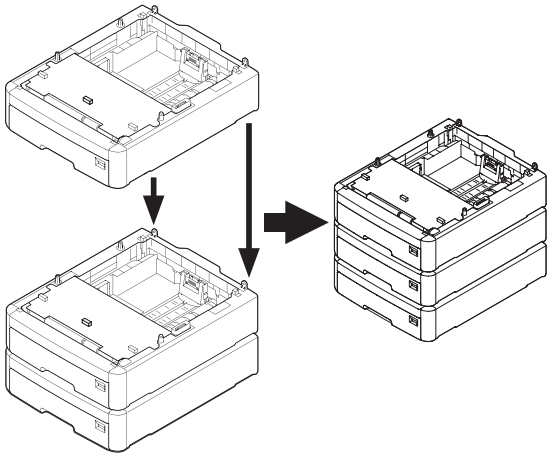
⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 40 kg, it should be lifted by two or more people.

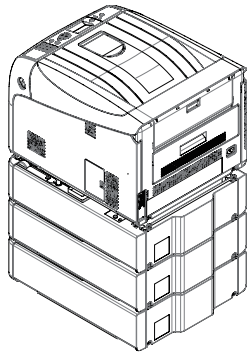
1. Turn off the printer and disconnect the AC cord, Ethernet or USB cable.

   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.

2. Place an additional tray one by one so that the back side of each tray can be fit.



3. Softly place the printer unit on the additional trays so that can the back side of the printer unit fit the back sides of the additional trays.



4. Connect the AC cord, Ethernet or USB cable to the printer and turn the power ON.

Note! If [SERVICE CALL 182: ERROR 183: ERROR 184: ERROR] appears, remove the installed tray unit and reinstall it to the printer.

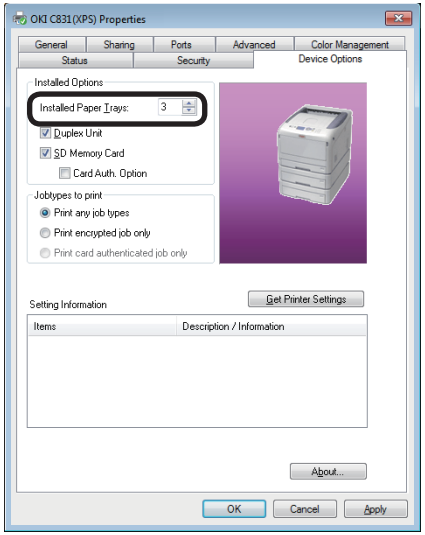
5. Set the number of trays in the printer driver.

Setting should be made in the printer driver to have the printer recognize every added tray.

If the printer driver hasn't been set up, set up the printer driver by referring to the relevant user's manual (Setup) and then perform the following setup.

Note! Administrator privileges on the computer are required.

Settings for Windows PCL printer driver



❶ Click [Start] and select [Devices and Printers].

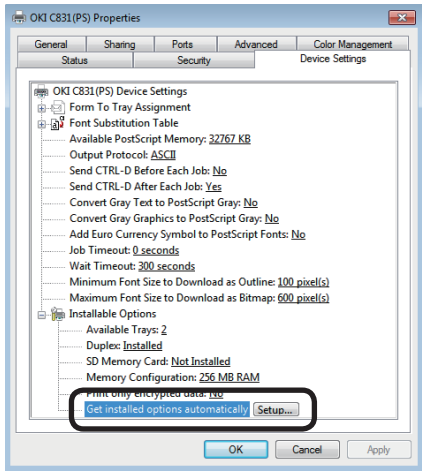
❷ Right-click the icon of OKI C831 to select [Properties] (if multiple printer drivers have been installed, select [OKI C831 (PCL)]).

❸ Select the [Device Options] tab.

❹ For the network connection, select [Get Printer Settings]. For USB connection, enter the number of trays except the multipurpose tray in [Installed Paper Trays].

❺ Click [OK].

Settings for Windows PS printer driver



❶ Click [Start] and select [Devices and Printers].

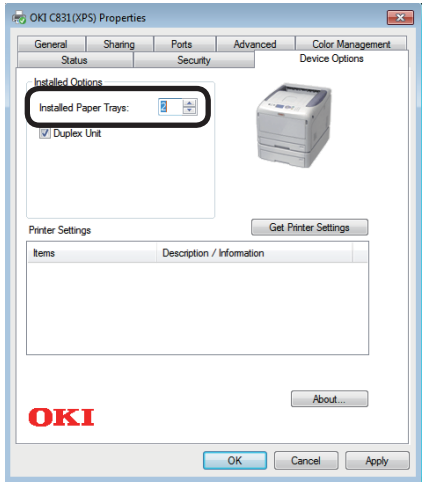
❷ Right-click the icon of OKI C831 (PS) to select [Properties] (if multiple printer drivers have been installed, select [OKI C831 (PS)]).

❸ Select the [Device Options] tab.

❹ For network connection, Select [Get installed options automatically] in [Installable Options] and click [Setup]. For USB connection, select an appropriate value in [Available Trays] of [Installable Options].

❺ Click [OK].

Settings for Windows XPS printer driver



❶ Click [Start] and select [Devices and Printers].

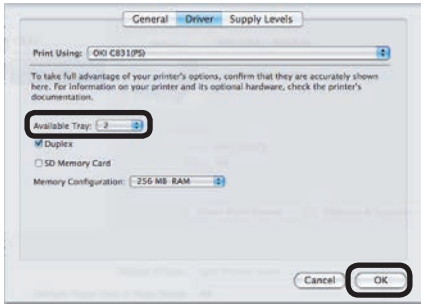
❷ Right-click the icon of OKI C831 to select [Properties] (if multiple printer drivers have been installed, select [OKI C831 (XPS)]).

❸ Select the [Device Options] tab.

❹ For the network connection, select [Get Printer Settings]. For USB connection, enter the number of trays except the multipurpose tray in [Installed Paper Trays].

❺ Click [OK].

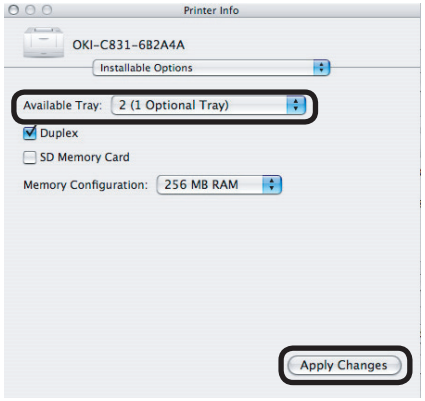
Settings for Mac OS X PS printer driver (Mac OS X 10.5 to 10.6)



1. Select [System Preference] from the Apple Menu.
2. Click [Print & Fax].
3. Select a printer and click [Options & Supplies].
4. Select the [Driver] tab.
5. Select an appropriate value in [Available Trays] and click [OK].

Settings for Mac OS X PS printer driver (Mac OS X 10.3.9 to 10.4.11)

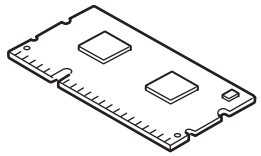
The following procedure uses the example of Mac OS X 10.4.11.



1. Select [Utilities] from [GO] menu and double click [Printer Setup Utility].
2. Select the printer to click [Show Info].
3. Select [Installable Options] from the pop-up menu under the printer name.
4. Select an appropriate value in [Available Trays], and then, click [Apply Changes].
5. Close the Printer Information.

(2) Installation of an additional RAM

To increase memory capacity of the printer, for insufficient memory error, and errors in making collated sets of copies, install an additional RAM. 256 MB and 512MB are available.



Additional RAM

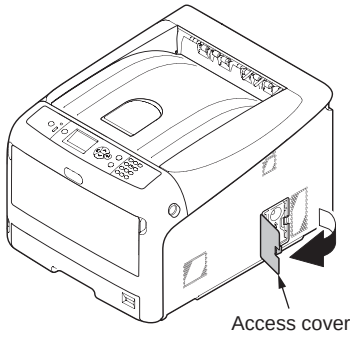
Note! • Proper operation by use of an unspecified product cannot be guaranteed. Be sure to use Oki product.
• Even in the power-off status, when the AC cord is connected, a part of the circuit is operated, therefore, make sure to unplug the cable.
• Components may be damaged by static electricity. Make sure to remove the static electricity charged on human body by touching metals by hand before works.

Memo Additional RAM of 256 MB or more is recommended for long-sheet printing.

1. Turn off the printer and disconnect the AC cord, Ethernet or USB cable.

   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.

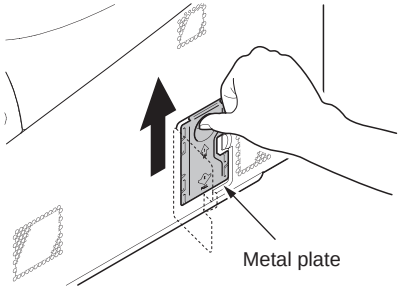
2. Open the access cover on the right side of the printer.



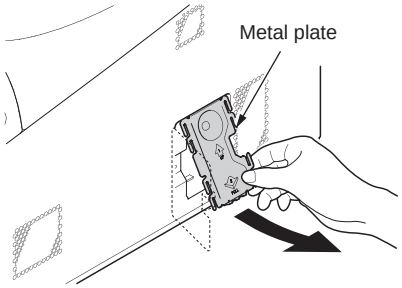
Access cover

3. Slide the metal plate up to remove it.

Note! If the SD memory card socket has been installed, remove the SD memory card.

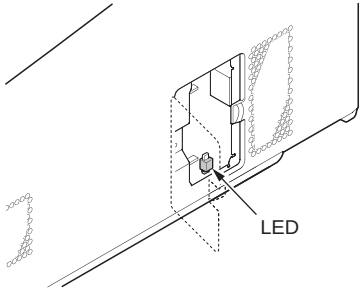


❶ Insert your finger into the depressed area of the metal plate to slide it up.



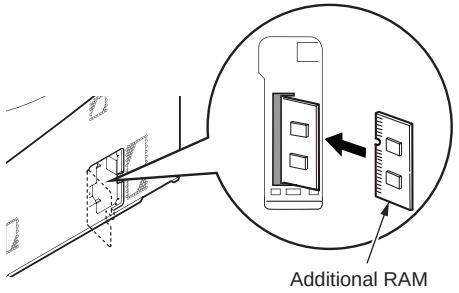
❷ Hold the bottom of the metal plate and pull the plate in front.

4. Check that the LED shown by the arrow is turned off. If not, wait until it is turned off.

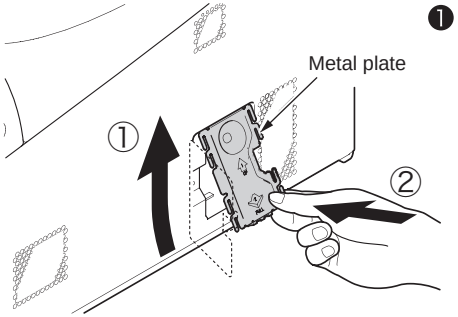


5. Insert an additional RAM in to the slot, and push the RAM against the printer to fit it firmly.

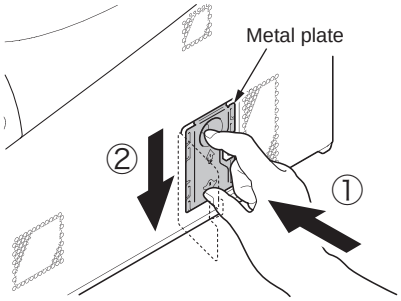
Note! Install the RAM by observing the correct orientation of it. The RAM has a notch in its edge so as to fit with the memory slot connector.



6. Install the metal plate.



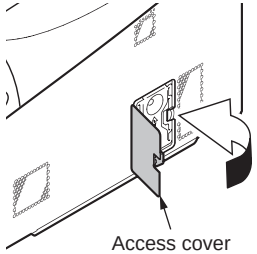
❶ Insert the top of the metal plate into the printer unit first, and install the metal plate.



❷ While holding the bottom of the metal plate, slide the plate down to fit it firmly.

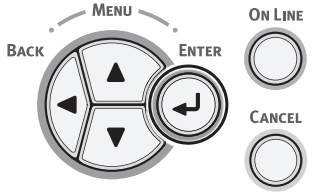
Note! If the SD memory card socket has been installed, install the SD memory card socket before installing the metal plate.

7. Close the access cover.

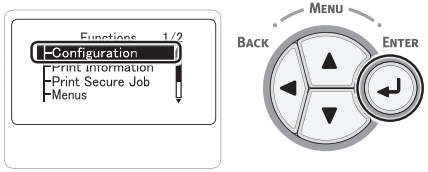


8. Connect the AC cord, Ethernet or USB cable to the printer and turn the power ON.

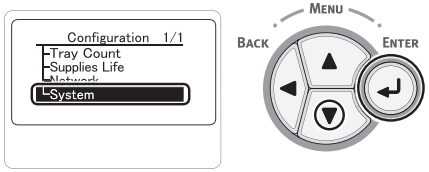
9. Set up with the operator panel.



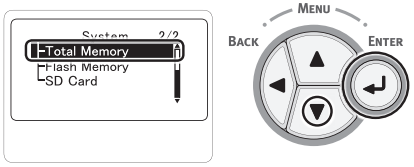
❶ Press the <ENTER> button



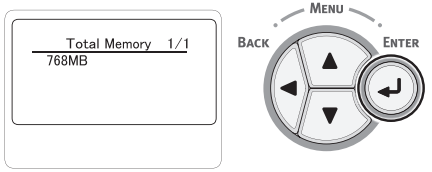
❷ Check that [Configuration] is selected and press the <ENTER> button.



❸ Press the scroll button several times to select [System] and press the <ENTER> button.



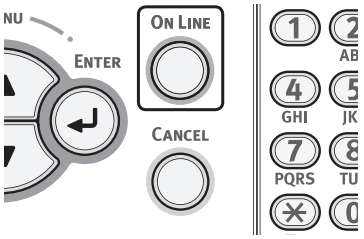
❹ Press the scroll button several times to select [Total Memory] and press the <ENTER> button.



❺ Check that the value of [Total Memory] has increased.

For memory expanded to 256 MB, it is [512 MB]; for memory expanded to 512 MB, it is [768 MB].

Note! If the value of [Total Memory] is not increased, turn the printer off and disconnect the AC cord, Ethernet cable/ USB cable, and then re-install the additional memory.



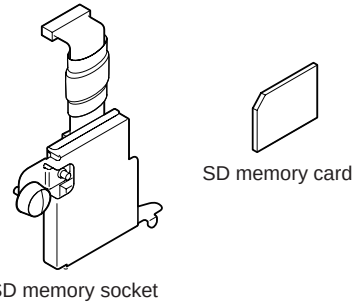
❻ Press the <ON LINE> button.

(3) Installation of SD Memory Card Kit

Note! Even in the power-off status, when the AC cord is connected, a part of the circuit is operated, therefore, make sure to unplug the cable.

If you wish to perform Storage Printing or Authenticated Printing, install the SD memory card kit.

Model name: SDC-B1



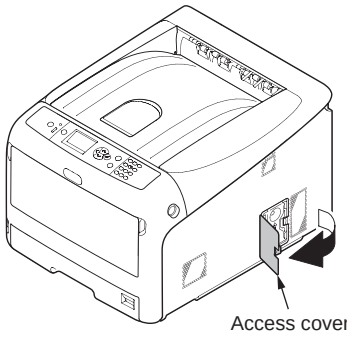
Memo The SD memory card comes with the SD memory socket.

Note!
- Proper operation by use of an unspecified product cannot be guaranteed. Be sure to use Oki product.
- Components may be damaged by static electricity. Make sure to remove the static electricity charged on human body by touching metals by hand before works.
- If the protect switch of the SD memory card for prevention of improper deletion is locked, the card cannot be used. Make sure to unlock the protect switch.

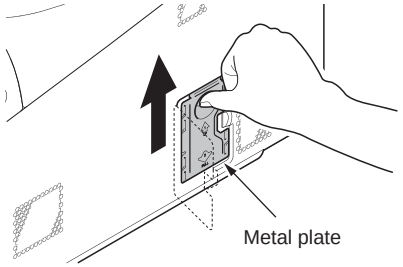
1. Turn off the printer and disconnect the AC cord, Ethernet or USB cable.

   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.

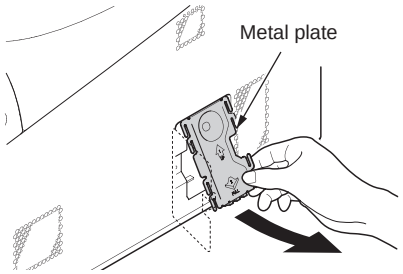
2. Open the access cover on the right side of the printer.



3. Slide the metal plate up to remove it.

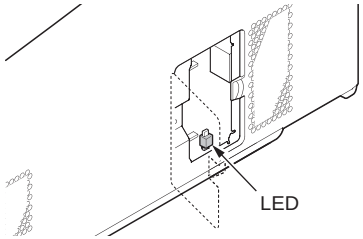


❶ Insert your finger into the depressed area of the metal plate to slide it up.

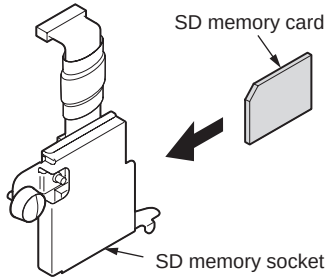


❷ Hold the bottom of the metal plate and pull the plate in front.

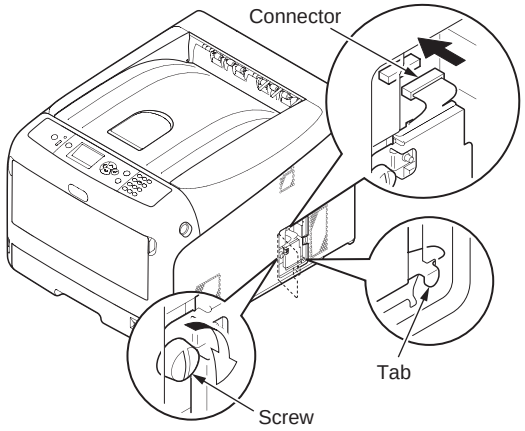
4. Check that the LED shown by the arrow is turned off. If not, wait until it is turned off.



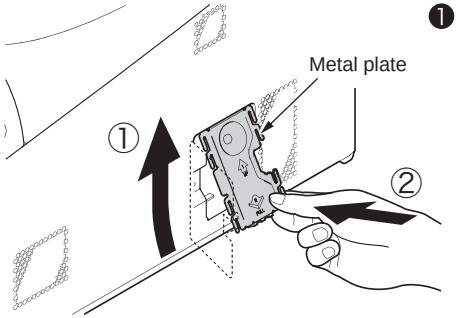
5. Install the SD memory card into the SD memory socket.



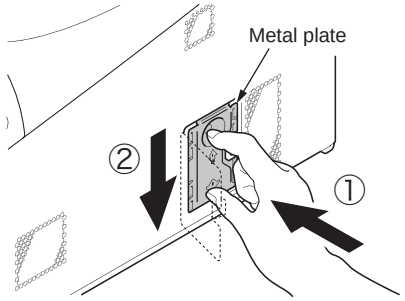
6. Fix the SD memory socket with the screw and tab of the SD memory socket into the printer, and then, attach the connector.



7. Install the metal plate.

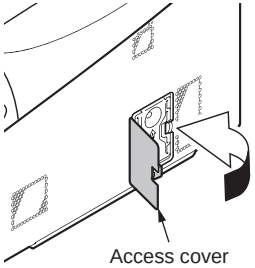


❶ Insert the top of the metal plate into the printer unit first, and install the metal plate.



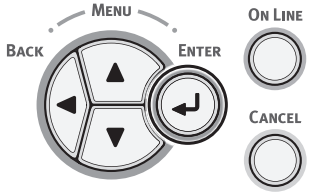
❷ While holding the bottom of the metal plate, slide the plate down to fit it firmly.

8. Close the access cover.

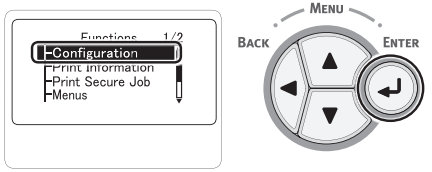


9. Connect the AC cord, Ethernet or USB cable to the printer and turn the power ON.

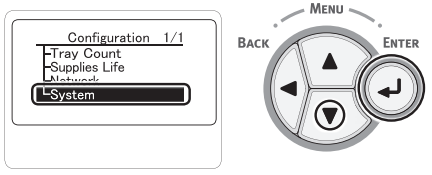
10. Set up with the operator panel.



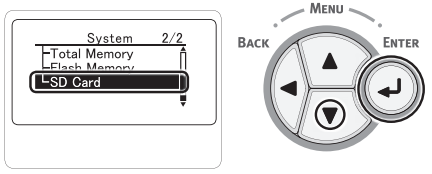
❶ Press the <ENTER> button



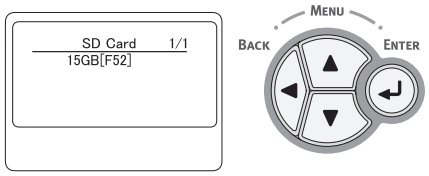
❷ Check that [Configuration] is selected, and then press the <ENTER> button.



❸ Press the scroll button several times to select [System] and press the <ENTER> button.

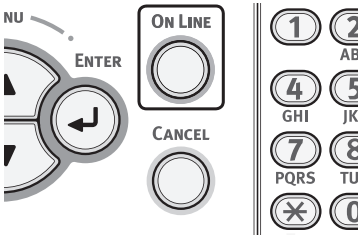


❹ Press the scroll button several times to select [SD Card] and press the <ENTER> button.



❺ Check that the value of [SD Card] is [16GB].

Note! • For [SD Card], [15GB] may be displayed in some cases, which is not an error.
• If the value in [SD Card] is not increased, turn the printer off and disconnect the AC cord, Ethernet cable/ USB cable, and then re-install the SD memory card.

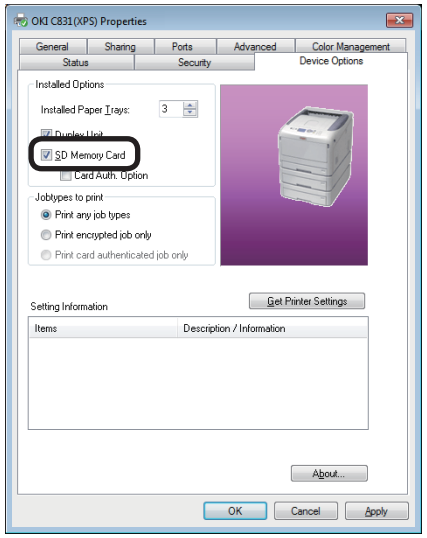


❻ Press the <ON LINE> button.

11. Set up [SD Memory Card] in the printer driver.

Note! • Administrator privileges on the computer are required.
• The SD Memory Card cannot be used with a Windows XPS driver.

Setting for Windows PCL Printer Driver



❶ Click [Start] and select [Devices and Printers].

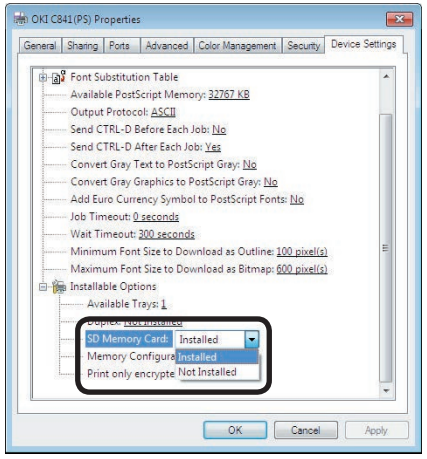
❷ Right-click the icon of OKI C831 to select [Properties] (if multiple printer drivers have been installed, select [OKI C831 (PCL)]).

❸ Select the [Device Options] tab.

❹ For the network connection, select [Get Printer Settings]. For USB connection, check the checkbox of [SD Memory Card].

❺ Click [OK].

Settings for Windows PS printer driver



❶ Click [Start] and select [Devices and Printers].

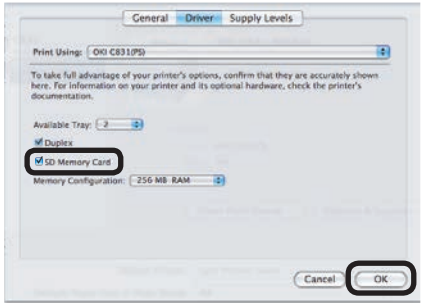
❷ Right-click the icon of OKI C831 (PS) to select [Properties] (if multiple printer drivers have been installed, select [OKI C831 (PS)]).

❸ Select the [Device Options] tab.

❹ For network connection, Select [Get Printer Settings] in [Installable Options] and click [Setup]. For USB connection, set the [SD Memory Card] of [Installable Options] to [Installed].

❺ Click [OK].

Settings for Mac OS X PS printer driver (Mac OS X 10.5 to 10.6)



❶ Select [System Preference] from the Apple Menu.

❷ Click [Print & Fax].

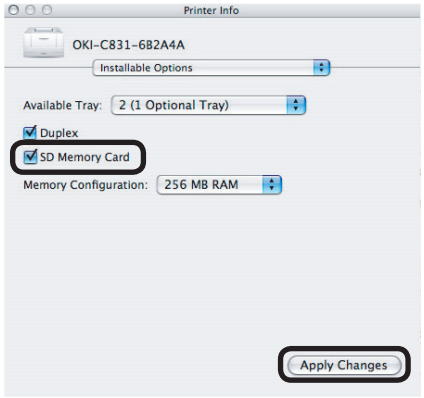
❸ Select a printer and click [Options & Supplies].

❹ Select the [Driver] tab.

❺ Check the checkbox of [SD Memory Card] and click [OK].

Settings for Mac OS X PS printer driver (Mac OS X 10.3.9 to 10.4.11)

The following procedure uses the example of Mac OS X 10.4.11.



❶ Select [Utilities] from [GO] menu and double click [Printer Setup Utility].

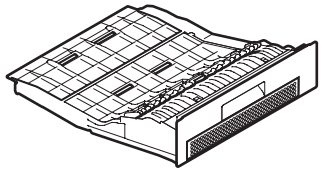
❷ Select the printer to click [Show Info].

❸ Select [Installable Options] from the pop-up menu under the printer name.

❹ Check the checkbox of [SD Memory Card], and then, click [Apply Changes].

❺ Close [Printer Information].

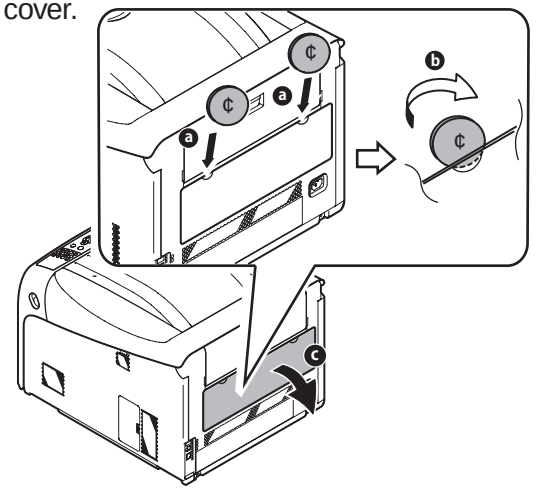
(4) Installation of the Duplex unit



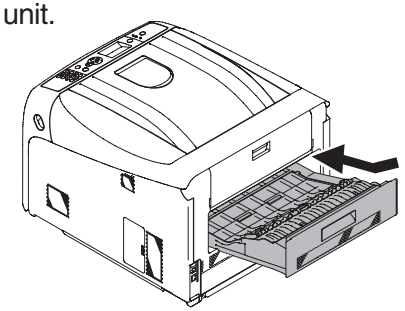
1. Turn off the printer and disconnect the AC cord, Ethernet or USB cable.

   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.

2. Remove the blank cover.



3. Insert the Duplex unit.



4. Connect the AC cord, Ethernet or USB cable to the printer and turn the power ON.

3.6 Printing of the configuration report

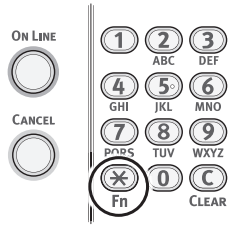
Check that the printer operates correctly.

You can check the status of installed printer options, menu settings of the printer, consumable usage, and so on.

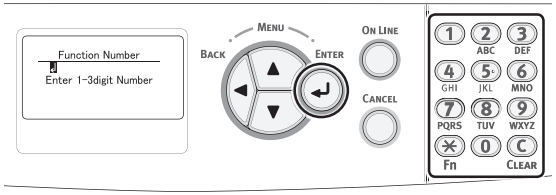
❶ Load A4 paper in Tray1.

❷ Check to make sure that [Ready to Print] is displayed on the panel.

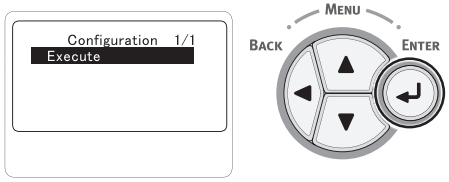
❸ Press the <Fn> key on the operator panel.



❹ Enter [1], [0], and [0] using the numerical keypad, and then, press <ENTER> button.



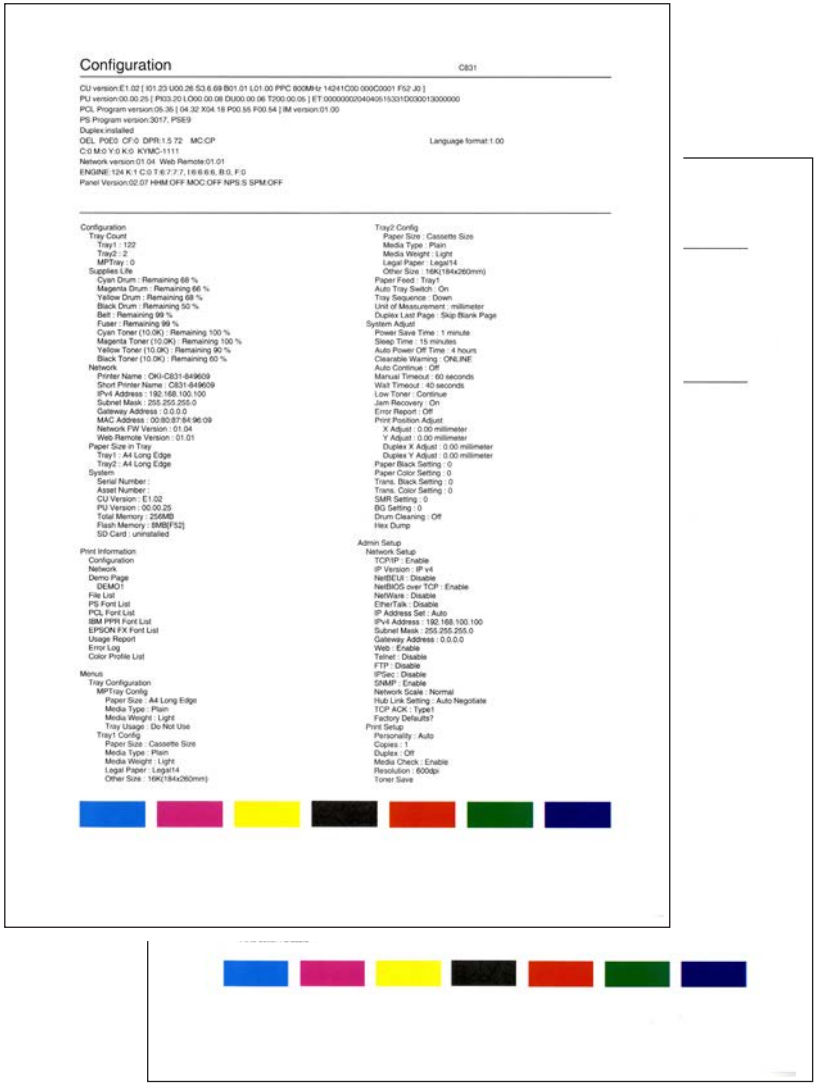
❺ [Execute to print] is selected, and press the <ENTER> button.



After the configuration report of the printer is printed, check that the added options are correctly displayed.

Memo Reports of each function and job lists can be printed. For more information, refer to “User’s Manual Advanced Edition”.

(Sample)



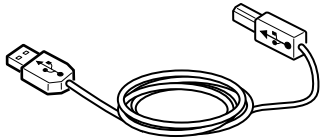
3.7 Connection methods

<USB connection>

Note! Refer to the user's manual for operating environment.

1. Preparing a USB cable

Note!
- No printer cable is supplied with the printer. Ask the user to prepare a printer cable.
- Ask the user to prepare a USB cable.
- When connection is to be made in "High-Speed" mode with a USB 2.0, use a Hi-Speed-ready USB 2.0 cable.
- A USB 2.0 cable to be used must be no more than five meters long. A USB cable of two meters or less is recommended.



2. Turning off the printer and the computer

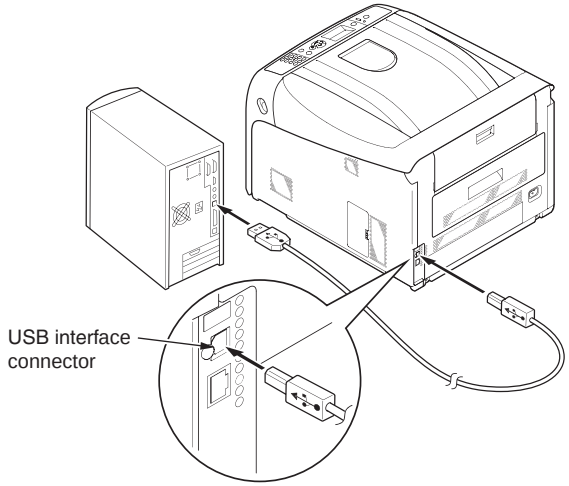
Memo Although a USB cable can be plugged in or unplugged with the computer and the printer switched on, for secure installation of the USB driver and the printer driver to be performed subsequently, the printer should be turned off.

3. Connecting the computer to the printer

(1) Plug the USB cable into the USB interface connector of the printer.

(2) Plug the USB cable into the USB interface connector of the computer.

Note! Be careful not to plug the USB cable into the network interface connector. Such wrong connection could cause malfunction.



Memo For the setup procedure of the printer driver, see the user's manual.

<Ethernet cable connection>

Note! Refer to the user's manual for operating environment.

1. Preparing an Ethernet cable

   Note! An Ethernet cable and a hub do not come with the printer. Ask the user to prepare an Ethernet cable (a Category 5 twisted pair cable, straight through) and a hub.

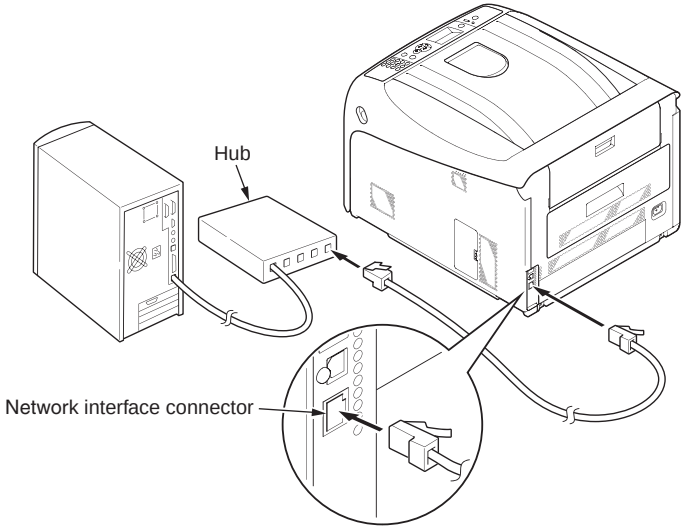
<Ethernet cable> <Hub>

2. Turning off the printer and the computer.

3. Connecting the computer to the printer

   (1) Plug the Ethernet cable into the network interface connector of the printer.

   (2) Plug the Ethernet cable into the hub.

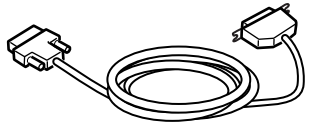


Memo For the setup procedure of the printer driver, see the user's manual.

<Parallel connection> (Models with Centronnics parallel interface only)

1. Preparing a parallel cable

   Note! A parallel cable does not come with the printer. Ask the user to prepare a parallel cable.

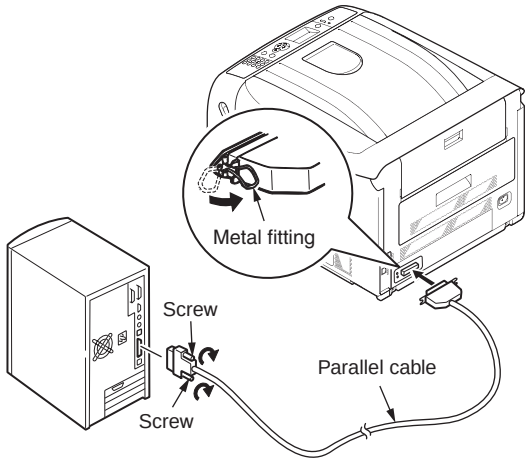


2. Turning off the printer and the computer.

3. Connecting the computer to the printer

   (1) Connect a parallel cable to the parallel interface connector of the printer and lock the cable with the metal fitting.

   (2) Connect the parallel cable to the parallel interface connector of the computer and tighten the cable clamp screws.



3.8 Checking of paper used by the user

Load the media used by the user in the printer, make media weight/media type settings, execute configuration/demo printing, and check the printout to make sure that no toner flakes off.

Type	Paper weight	Settings on the control panel		Setting*2 for [Media weight] of the printer driver
		Media weight (paper thickness)	Media type (paper type)*1	
Plain paper*3	64 to 82g/m^2	Light	Plain paper	Light
	83 to 90g/m^2	Medium Light		Medium Light
	91 to 105g/m^2	Medium		Medium
	106 to 128g/m^2	Heavy		Heavy
	129 to 188g/m^2	Ultra heavy 1		Ultra heavy 1
	189 to 220g/m^2	Ultra heavy 2		Ultra heavy 2
	221 to 256g/m^2	Ultra heavy 3		Ultra heavy 3
Postcard*4	-	-	-	-
Envelope*4	-	-	-	-
Label	0.1 to under 0.17 mm	Heavy	Label	Label 1
	0,17 to 0.2 mm	Ultra heavy 1		Label 2

*1: The factory default for the media type is [Plain Paper].

*2: Media weight and type can be set on the operator panel and in the printer driver. The settings in the printer driver take priority. Data is printed out in accordance with the setting on the operator panel when [Auto selection] is selected in [Feed tray] or [Printer setting] is selected in [Media weight].

*3: The weight of the paper supported for duplex print is 64-220g/m^2.

*4: It is not necessary to set media weight and type for postcards and envelopes.

Memo Print speed decelerates when [Heavy], [Ultra heavy] [Ultra heavy 1], [Ultra heavy 2], or [Ultra heavy 3] of media weight or any value other than plain paper setting value of media type is set.

4. REPLACEMENT OF PARTS

This chapter describes the procedures of the field replacement of parts, assemblies and units. The procedures are to detach them. Reverse the procedures to attach them.

The reference part numbers used in this manual (such as ① and ②) do not identical to the part numbers in the maintenance disassembly configuration diagram 44705901TL and the RSPL 44705901TR.

4.1 Notes on replacement of parts 4-2
4.2 Part replacement procedure 4-4

4.1 Notes on replacement of parts

(1) Prior to replacing a part, unplug the AC cord and the interface cable.

(a) Be sure to use the following procedure to unplug the AC cord:

① Turn off the printer, then the LED indicator goes out.

② Pull out the AC plug of the AC cord from the AC power source.

③ Unplug the AC cord and the interface cable.

⚠Warning	Electric shock hazard.	⚡

Be sure to unplug the AC cable as some circuits keep working while the power cable is connected even after the power is turned off.

When replacing the low-voltage power supply, due to potential electric shock, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

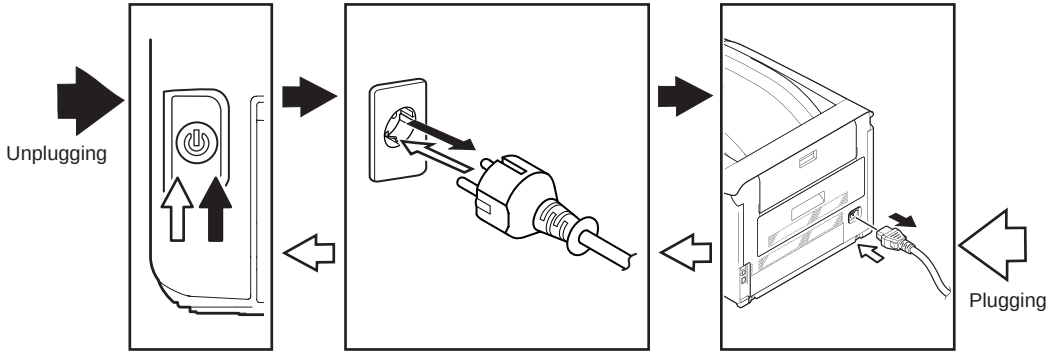
After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

(b) Be sure to use the following procedure to reconnect the printer:

① Connect the AC cord and the interface cable to the printer.

② Turn on the printer.

③ Turn on the printer, then the LED indicator lights up.



(2) Do not disassemble the printer so long as it operates properly.

(3) Minimize disassembly. Do not detach the parts not shown in the part replacement procedure.

(4) Use the replacement tools specified.

(5) Conduct disassembly in the order instructed, or part damage may occur.

(6) Removed small parts, such as screws or collars, should be tentatively installed in their original positions.

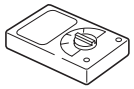
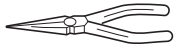
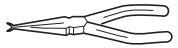
(7) Do not use static-prone gloves when handling integrated circuits (ICs) or circuit boards, including microprocessors, and ROM and RAM chips.

(8) Do not place printed-circuit boards (PCBs) directly on the printer or a floor.

Maintenance Tools:

Table 4-1-1 shows the tools necessary to replace printed-circuit boards and units.

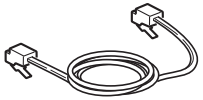
Table 4-1-1: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		No. 2-200 screwdriver with magnetic tip	1	3- to 5-mm screws	
2		Screwdriver No. 3-100	1		
3		Screwdriver No. 5-200	1		
4		Digital multimeter	1		
5		Pliers	1		
6		Handy vacuum cleaner (toner vacuum)	1		See note.
7		E-ring pliers	1	E-shaped ring removal	

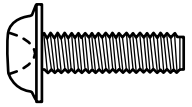
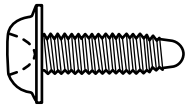
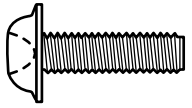
Note! Use a toner vacuum. Using a general-purpose vacuum may cause toner to catch fire.

Table 4-1-2 shows the tools necessary to use Maintenance Utility software.

Table 4-1-2: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		Notebook personal computer (with Maintenance Utility software installed)	1	3- to 5-mm screws	See section 5.2 for Maintenance Utility.
2		USB cable	1		
3		Ethernet cable (crossover cable)	1		

Screws in use:

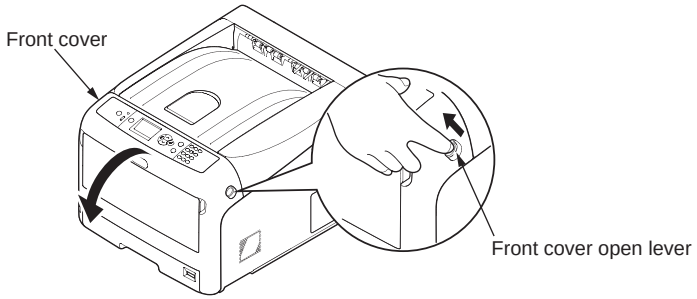
Shape	Designation
	Screw (silver)
	Round-head screw (black)
	Screw (black)

4.2 Part replacement procedure

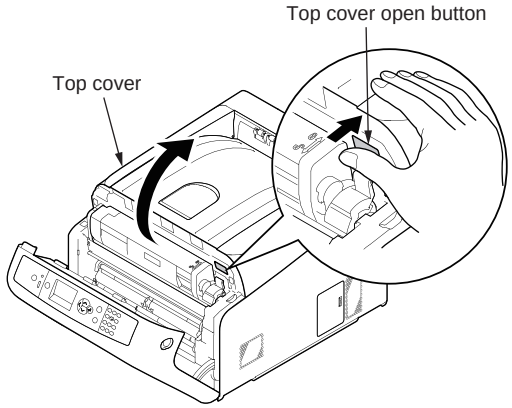
This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagram.

4.2.1 Belt unit

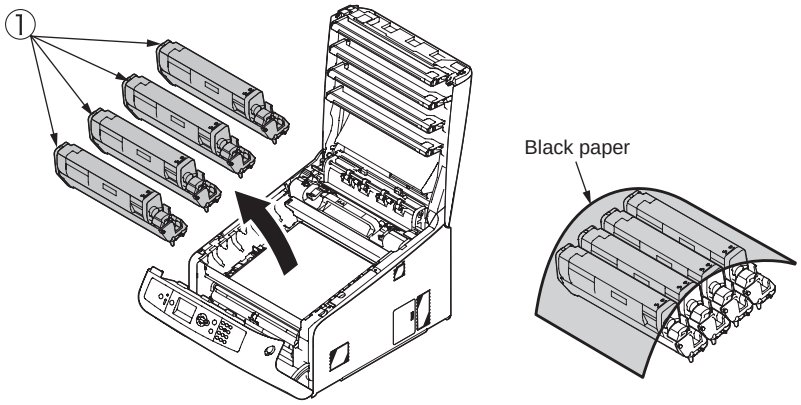
(1) Pull the front cover open lever to open the front cover forward.



(2) Press the top cover open button and open the top cover.

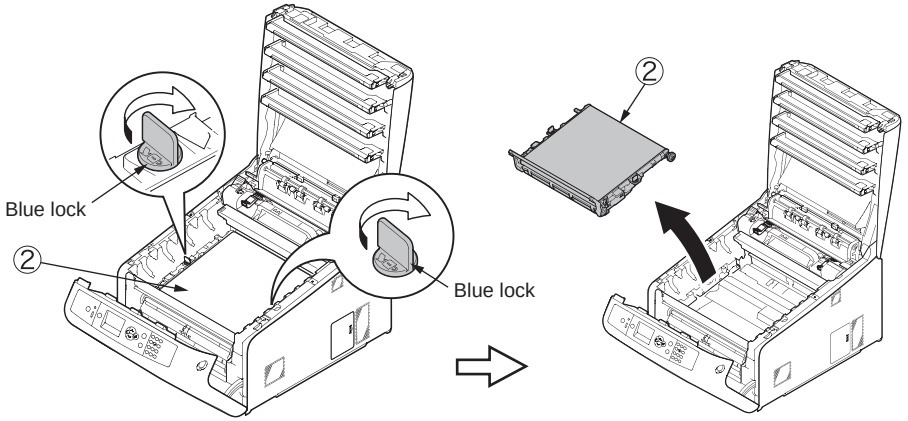


(3) Remove the four image drums ①.



Note! Cover the image drums with a piece of black paper.

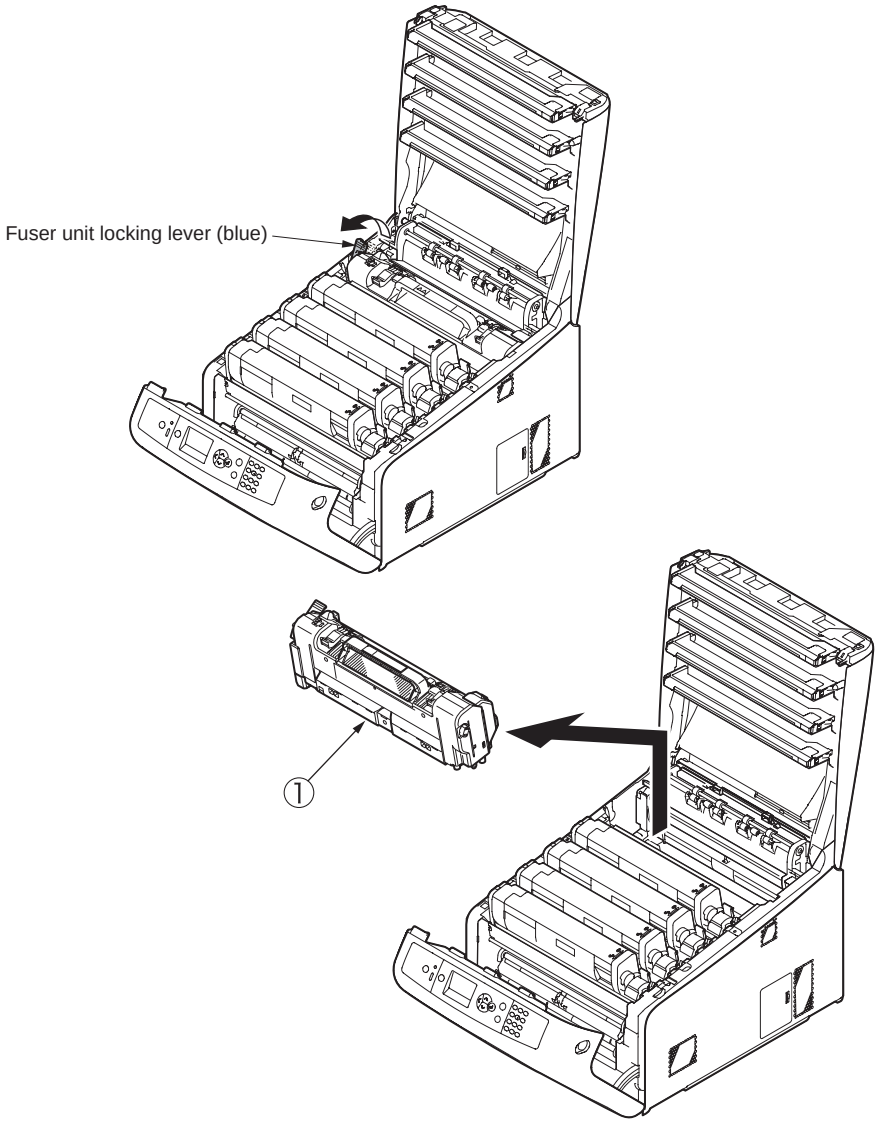
(4) Turn the two locks (blue) of the belt unit ② in the direction of the arrow, and remove the belt unit ② by holding the lever (blue).



4.2.2 Fuser unit

(1) Open the front cover and the top cover. (Refer to section 4.2.1 (1) and (2).)

(2) Pull the fuser unit locking lever (blue) in the direction of the arrow and detach the fuser unit ①.

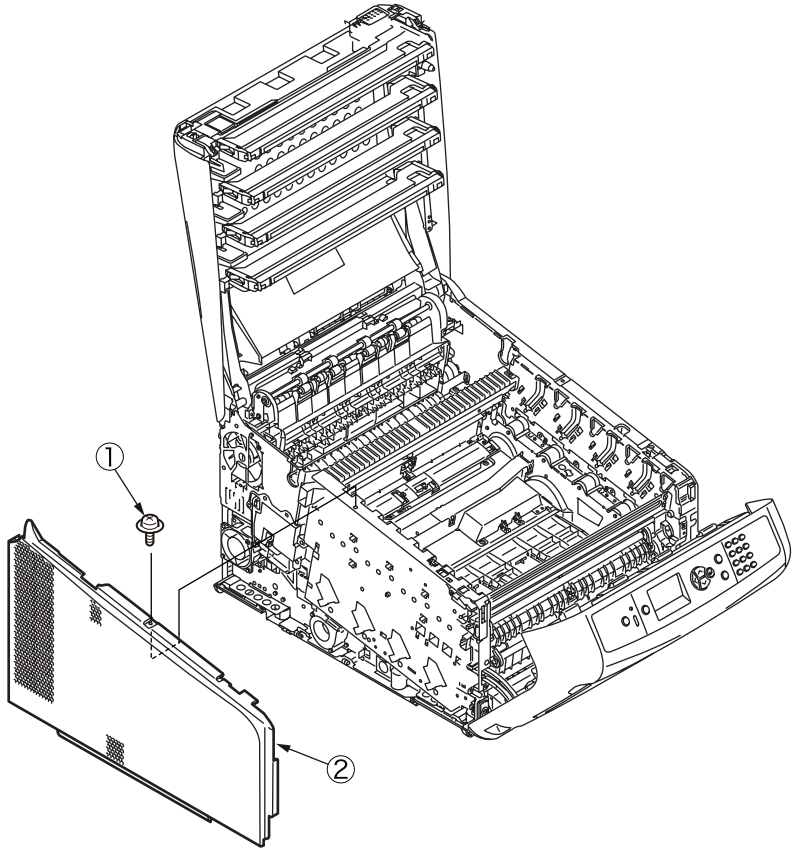


4.2.3 Cover side-L

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)

(2) Detach the fuser unit. (Refer to section 4.2.2.)

(3) Remove the screw (silver) ① and detach the cover side-L Assy. ②.



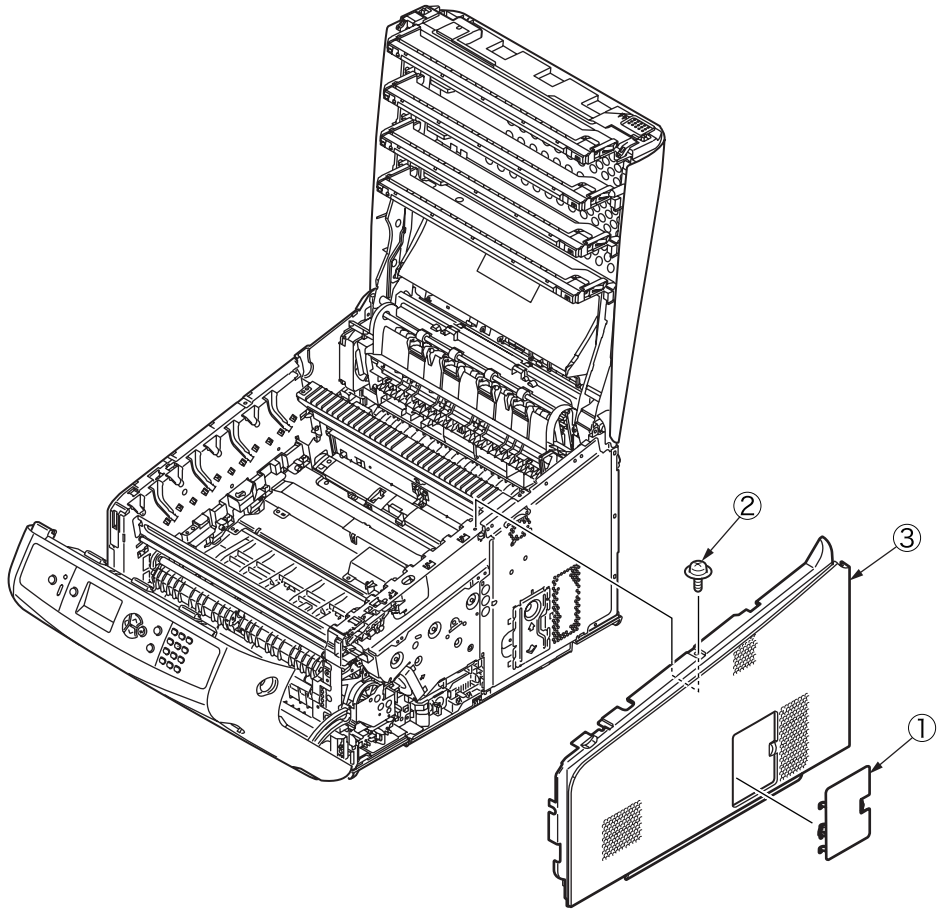
4.2.4 Cover side-R

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)

(2) Detach the fuser unit. (Refer to section 4.2.2.)

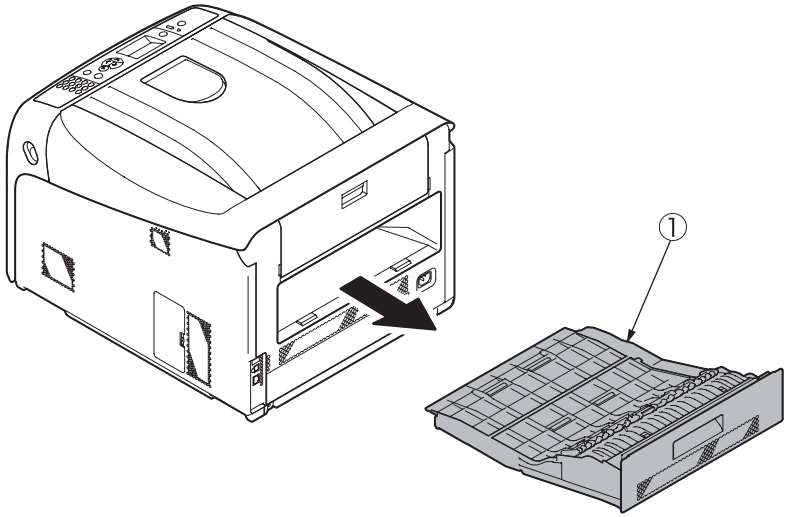
(3) Remove the cover side-R-Sub ①.

(4) Remove the screw (silver) ② and detach the cover side-R ③.



4.2.5 Rear cover Assy.

(1) If the duplex unit ① is installed, pull out it.

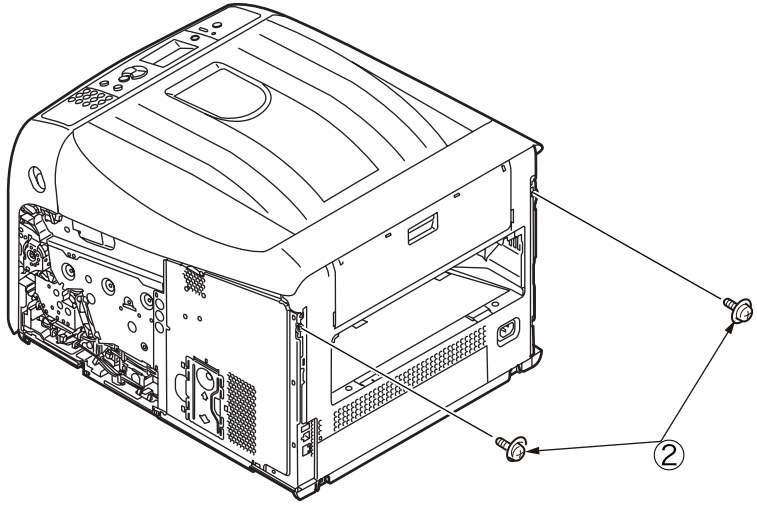


(2) Remove the belt unit. (Refer to section 4.2.1.)

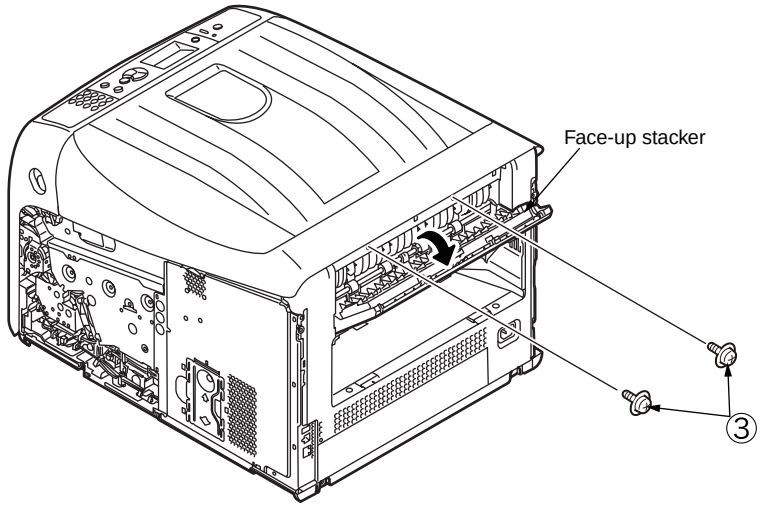
(3) Detach the cover side-L Assy. (Refer to section 4.2.3.)

(4) Detach the cover side-R. (Refer to section 4.2.4.)

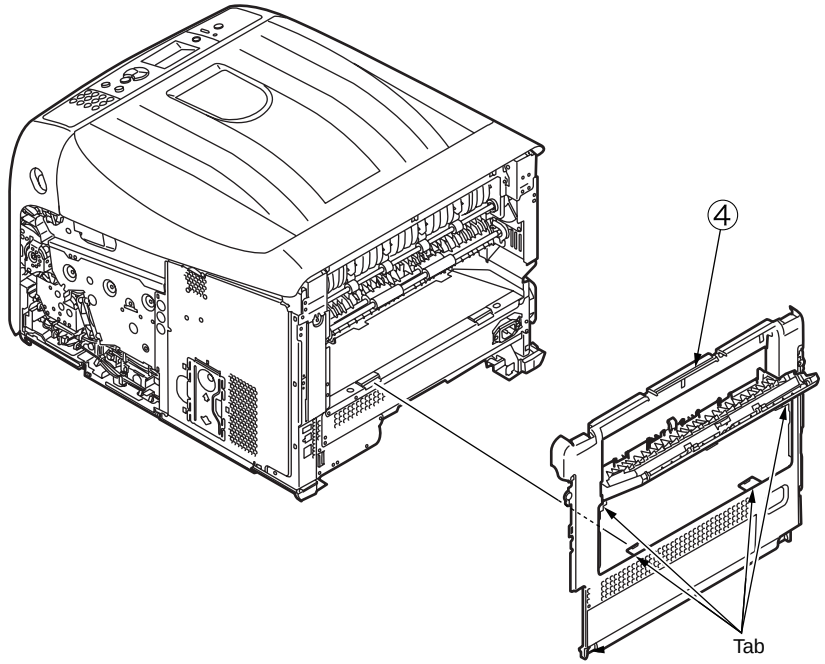
(5) Remove the two screws (silver) ②.



(6) Open the face-up stacker cover and remove the two screws (black) ③.



(7) Release the four tabs and detach the rear cover Assy. ④.



4.2.6 LED Assy.

(1) Open the front cover. (Refer to section 4.2.1 (1).)

(2) Open the top cover. (Refer to section 4.2.1 (2).)

(3) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)

(4) Remove the FFC cable, and as shown in figure (1), unhook the part A by applying force in the direction of the arrow and then the portion B to detach the LED Assy. ①.

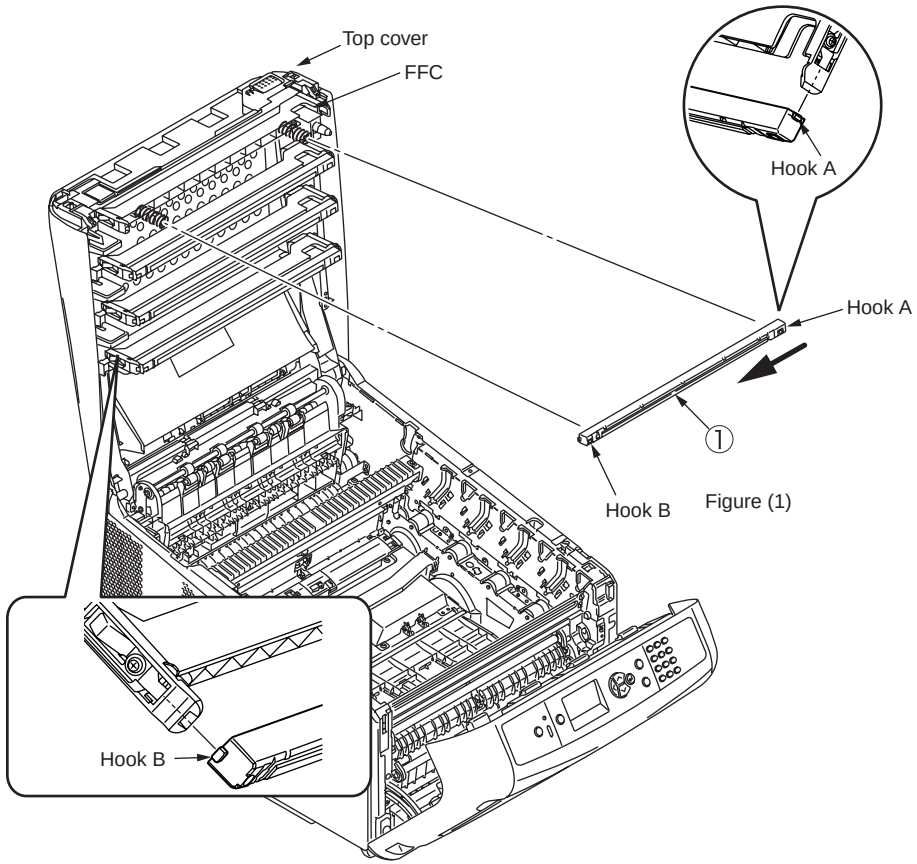


Figure (1)

4.2.7 Main board Assy. (board Assy-MEL)

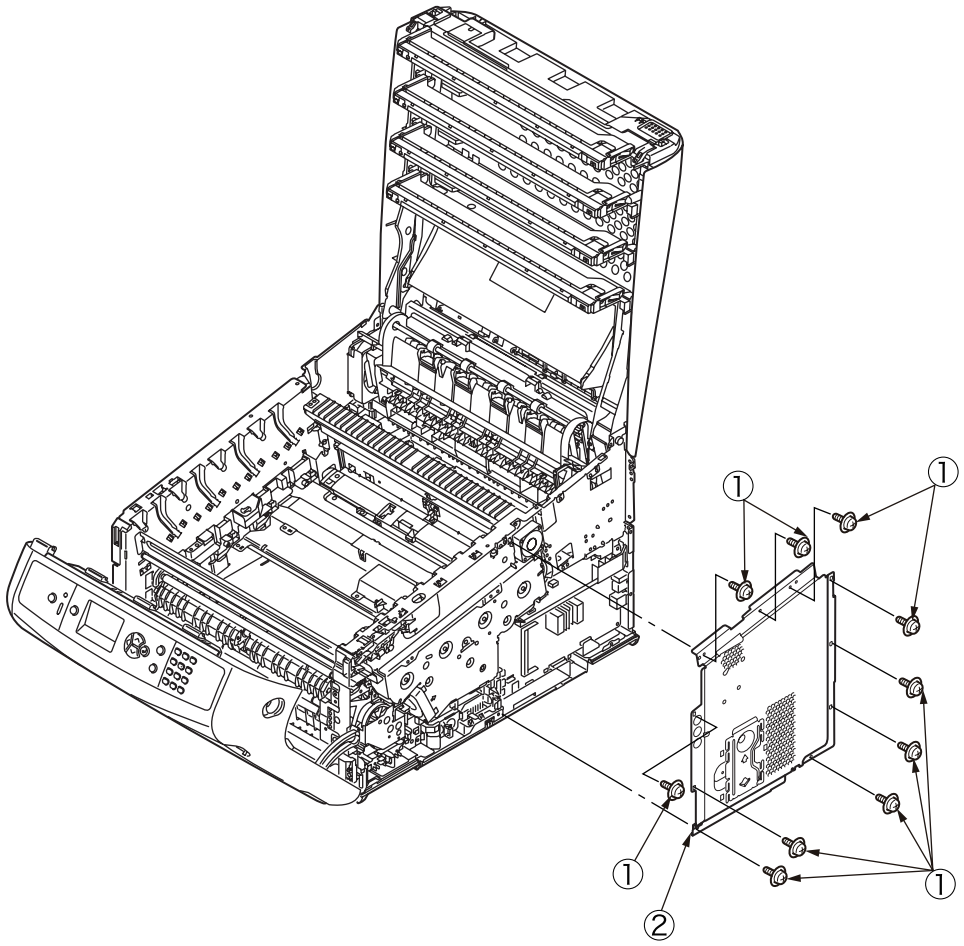
(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)

(2) Detach the cover side-L Assy. (Refer to section 4.2.3.)

(3) Detach the cover side-R. (Refer to section 4.2.4.)

(4) Detach the rear cover. (Refer to section 4.2.5.)

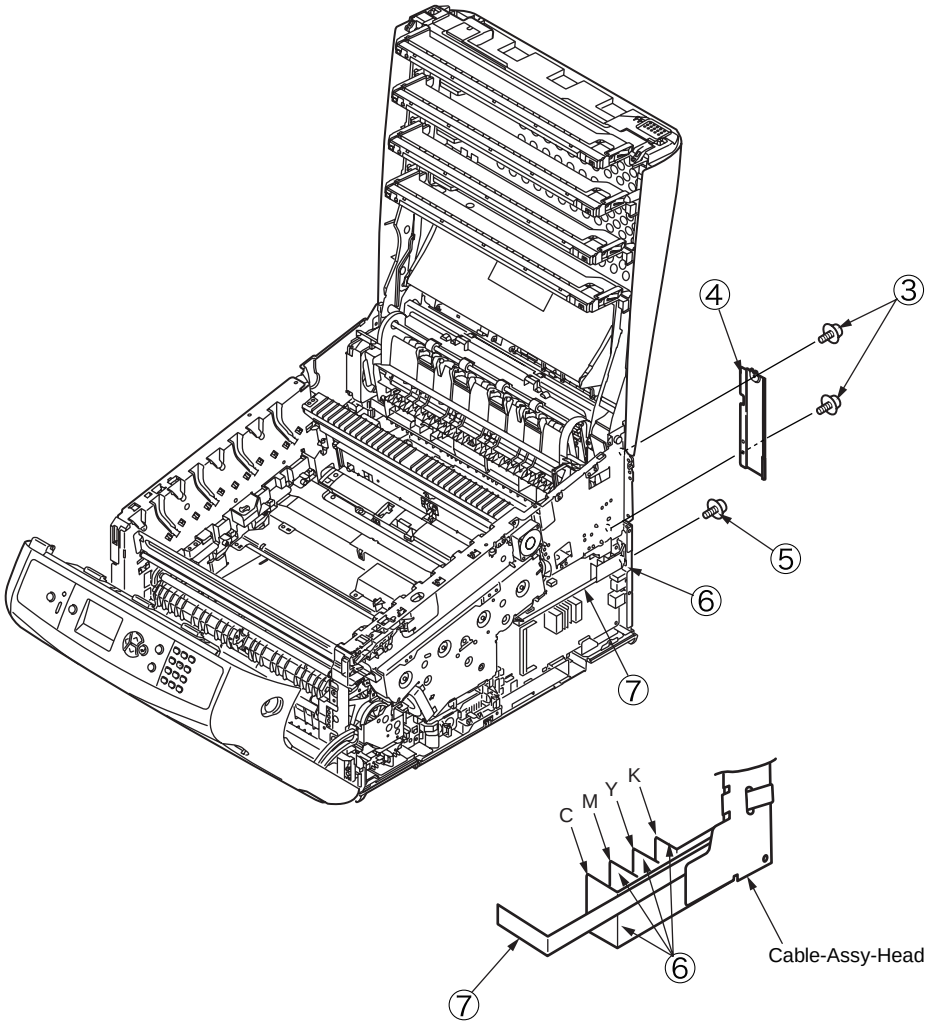
(5) Remove the ten screws (silver) ① and the plate shield ②.



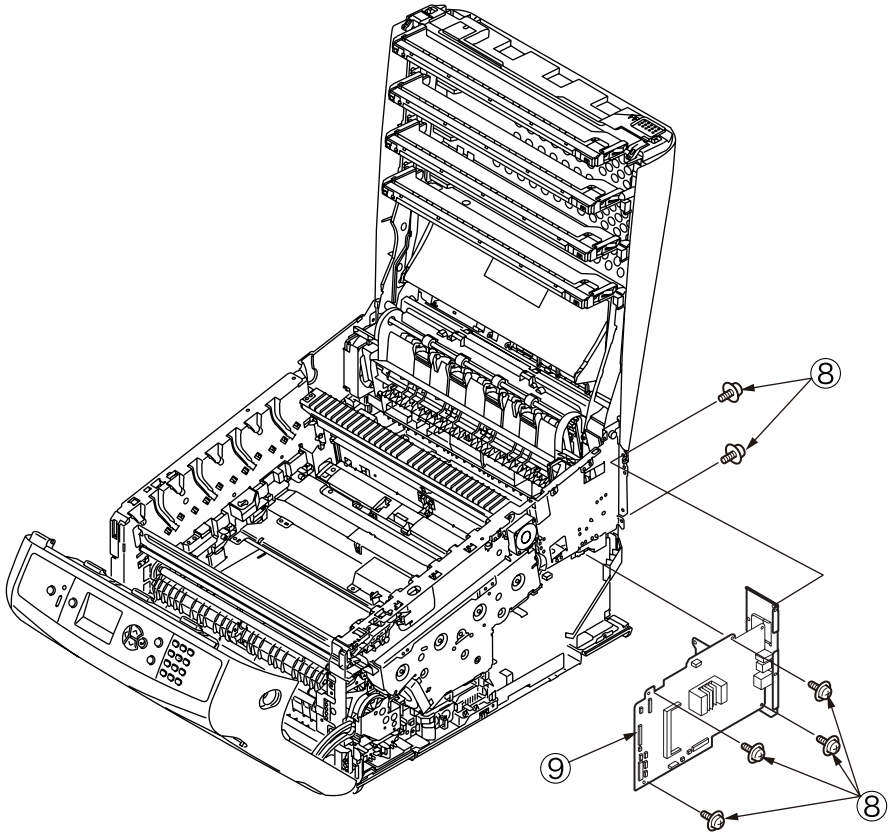
(6) Remove the two screws (silver) ③ and the plate FFC ④.

(7) Remove the screw (silver) ⑤, detach the Cable-Assy-Head, and disconnect the four head FFC cables ⑥ and the RFID-FFC cable ⑦.

(8) Disconnect each connector.



(9) Remove the six screws (silver) ⑧ and the board Assy-MEL ⑨.



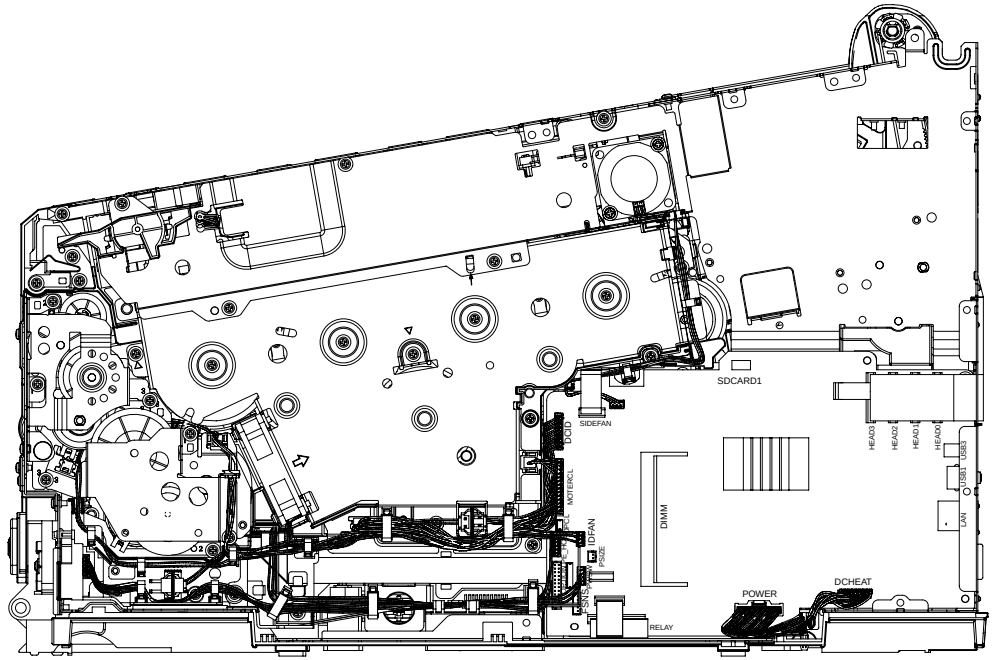


Figure 4-2-7-1 Main Board Assy., Cable Route Diagram

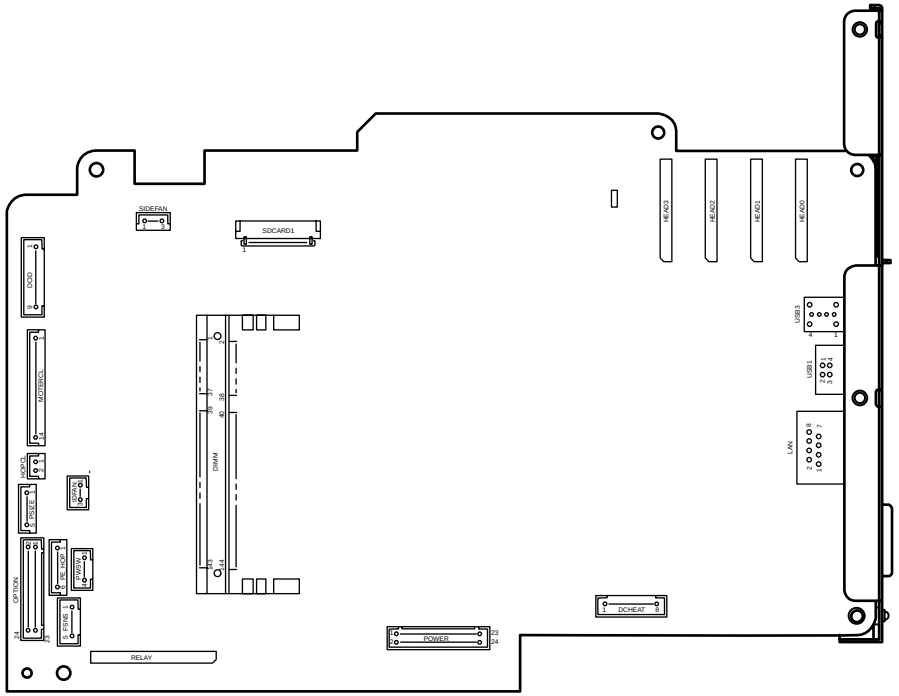
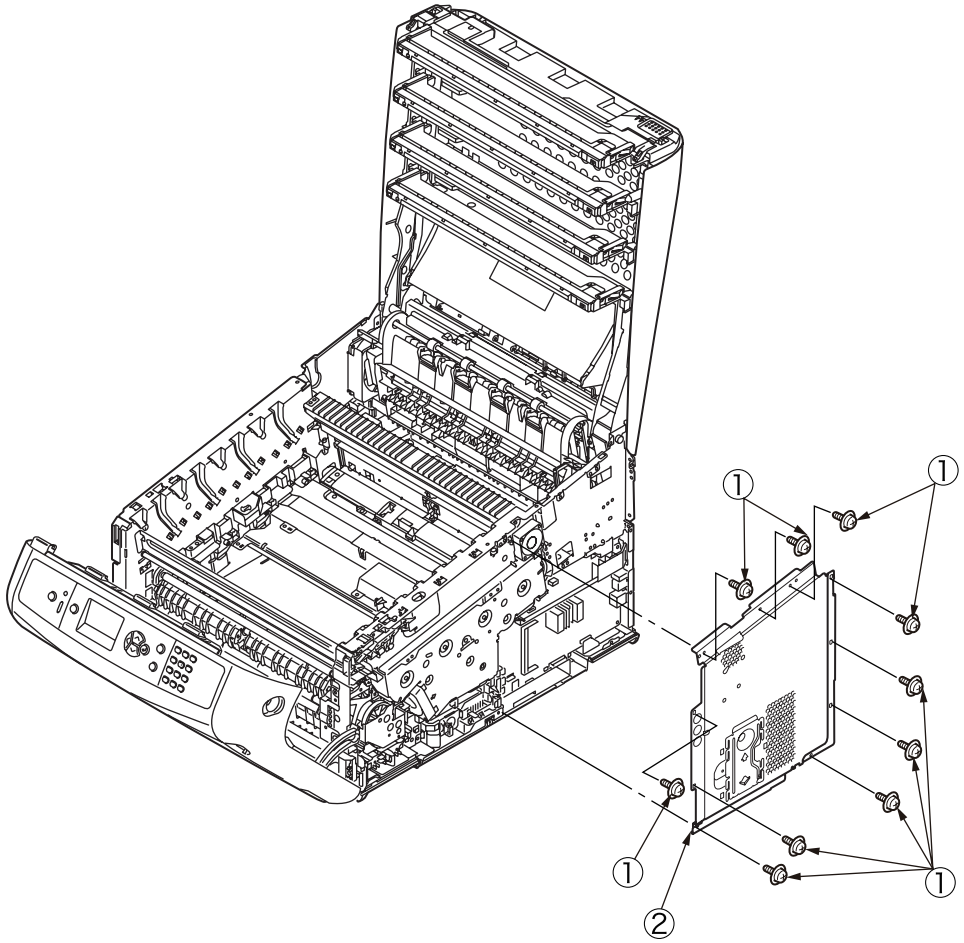


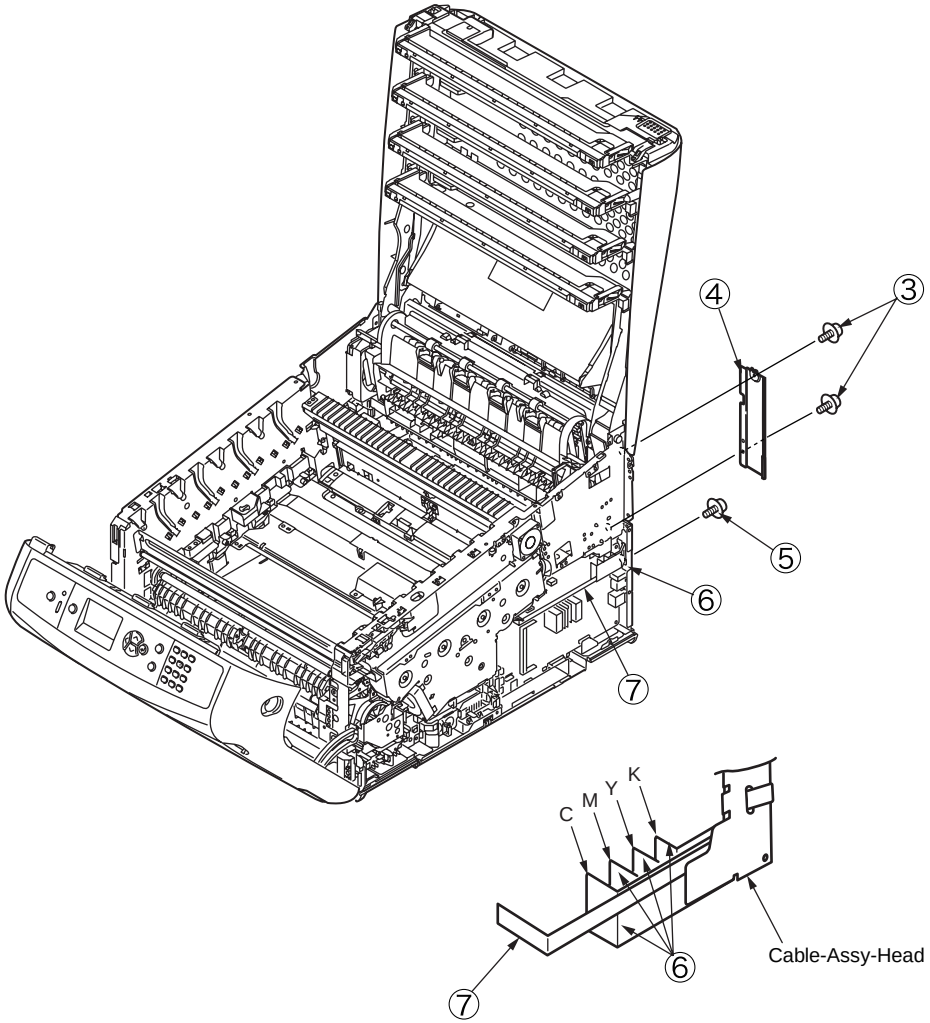
Figure 4-2-7-2 Main Board Assy., Outline Drawing

4.2.8 Top cover Assy.

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)
(2) Detach the cover side-L Assy. (Refer to section 4.2.3.)
(3) Detach the cover side-R. (Refer to section 4.2.4.)
(4) Detach the rear cover Assy. (Refer to section 4.2.5.)
(5) Remove the ten screws (silver) ① and the plate shield ②.

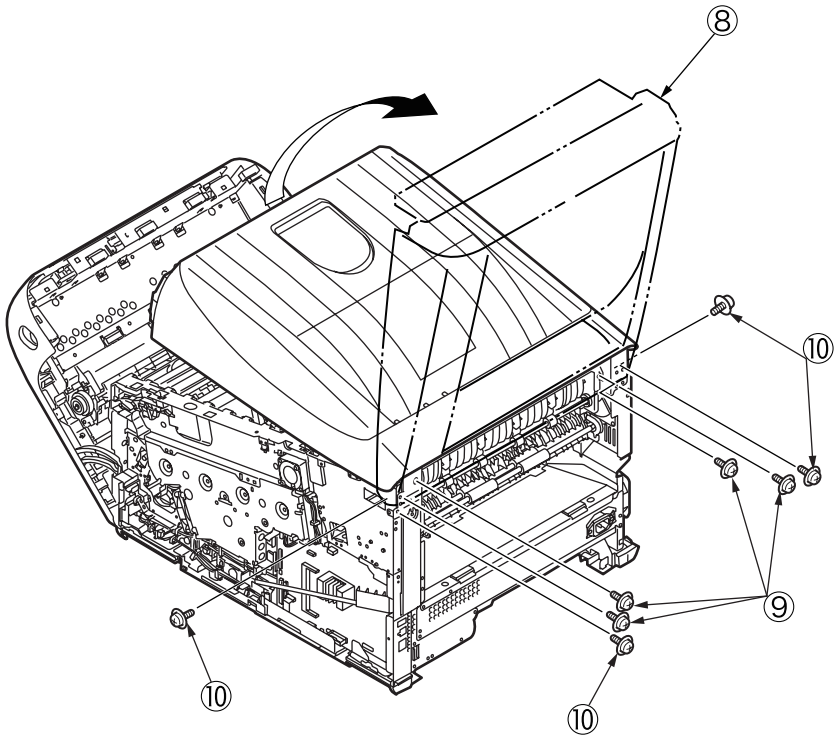


(6) Remove the two screws (silver) ③ and the plate FFC ④.
(7) Remove the screw (silver) ⑤, detach the Cable-Assy-Head, and disconnect the four head FFC cables ⑥ and the RFID-FFC cable ⑦.

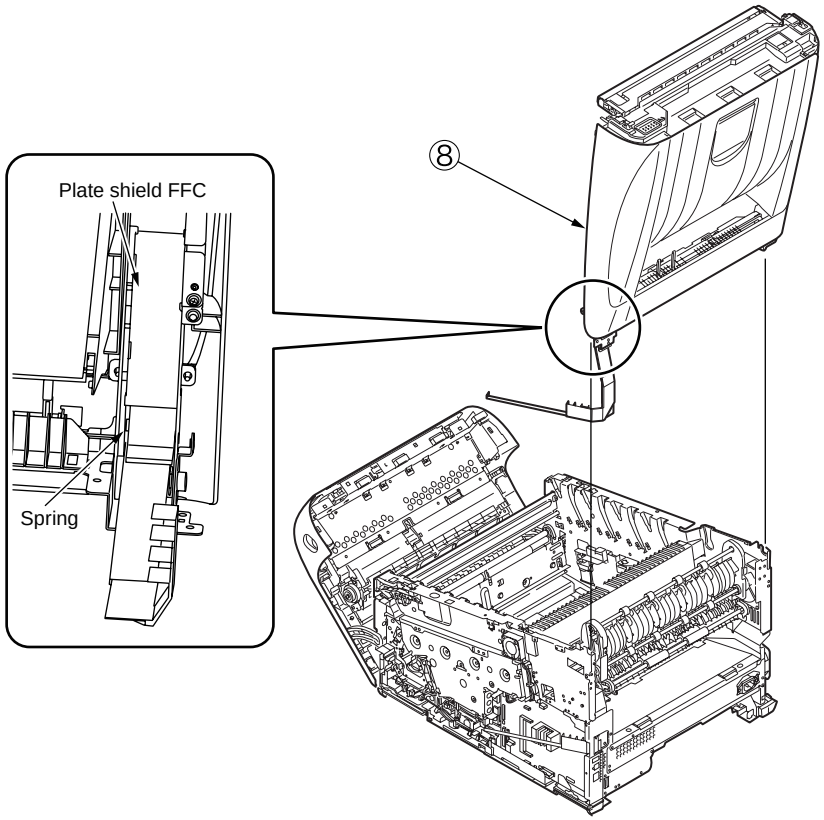


(8) Tilt the top cover Assy ⑧ and remove the four screws (silver) ⑨.

(9) Open the top cover Assy ⑧ fully again and remove the four screws (silver) ⑩.



(10) Hold the top cover Assy ⑧ and lift it to detach.



Notes on assembling:

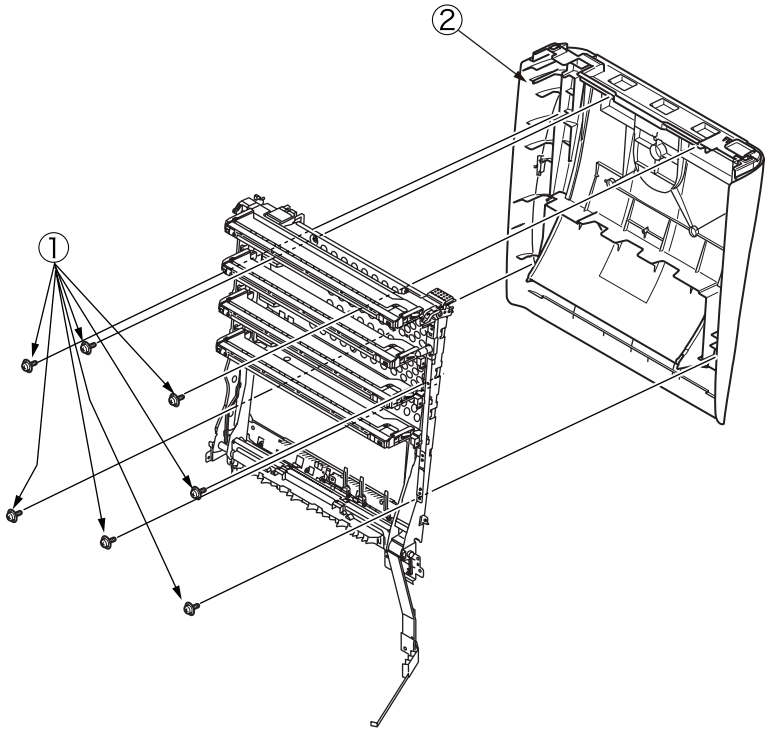
The plate shield FFC must be placed at the outer side of the spring.

4.2.9 600dpi/1200dpi Cable-Assy-Head

(1) Detach the top cover Assy. (Refer to section 4.2.8.)

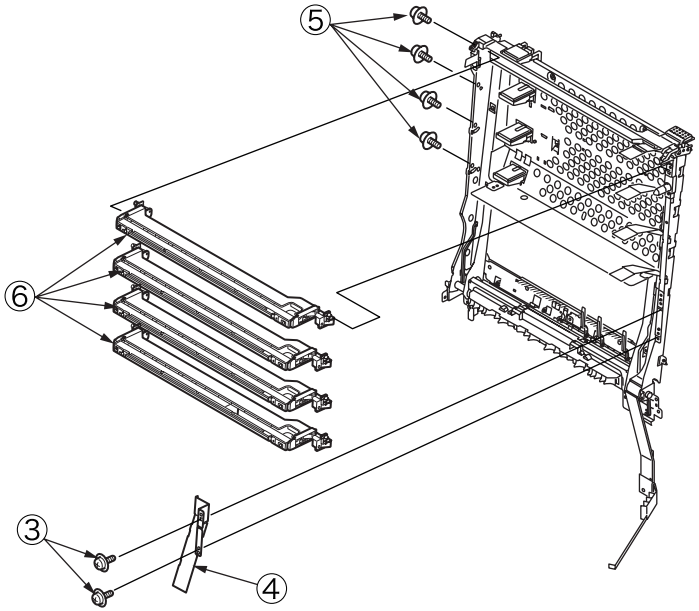
(2) Disconnect the head FFC from the connector of the LED head. (Refer to section 4.2.6.)

(3) Remove the seven screws (black) ① and detach the top cover ②.



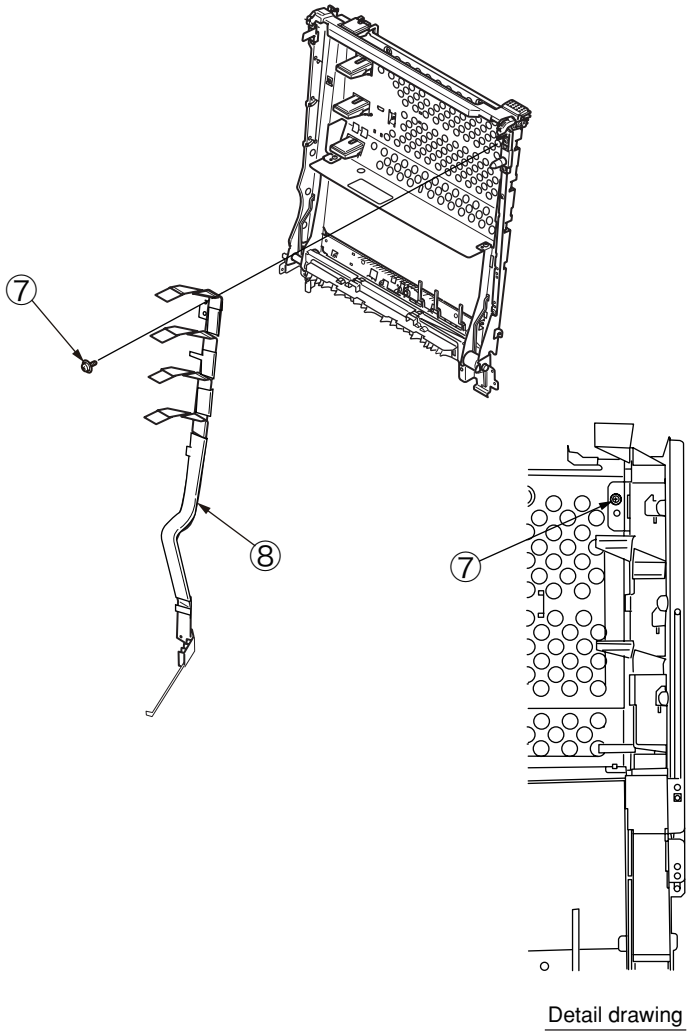
(4) Remove the two screws (silver) ③ and the plate shield FFC ④.

(5) Remove the four screws (black) ⑤ and the head holder Assy. ⑥.



<600dpi>

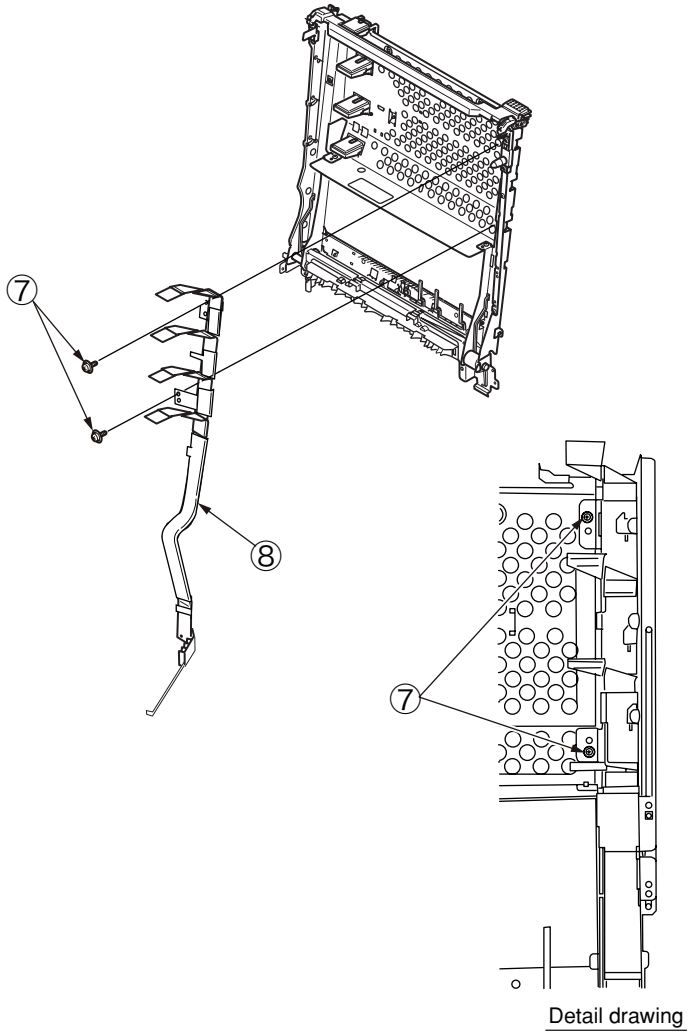
(6) Remove the screw (silver) ⑦ and the 600dpi Cable-Assy-Head ⑧.



Detail drawing

<1200dpi>

(6) Remove the two screws (silver) ⑦ and the 1200dpi Cable-Assy-Head ⑧.

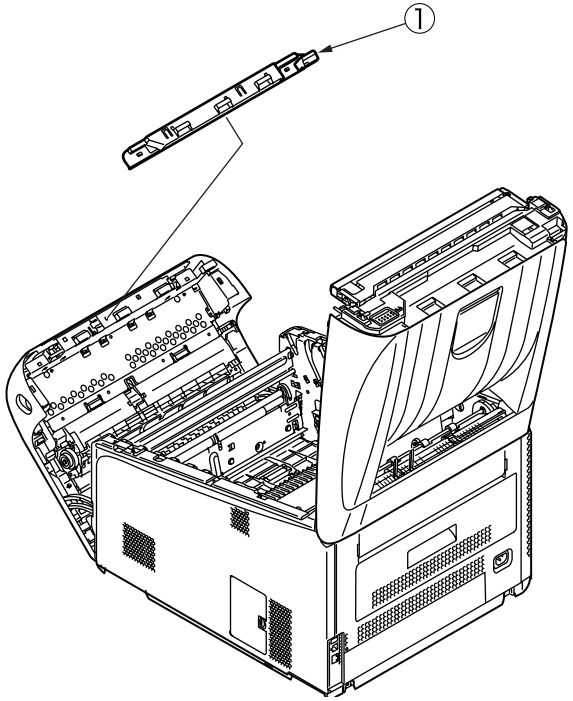


Detail drawing

4.2.10 Operator panel Assy.

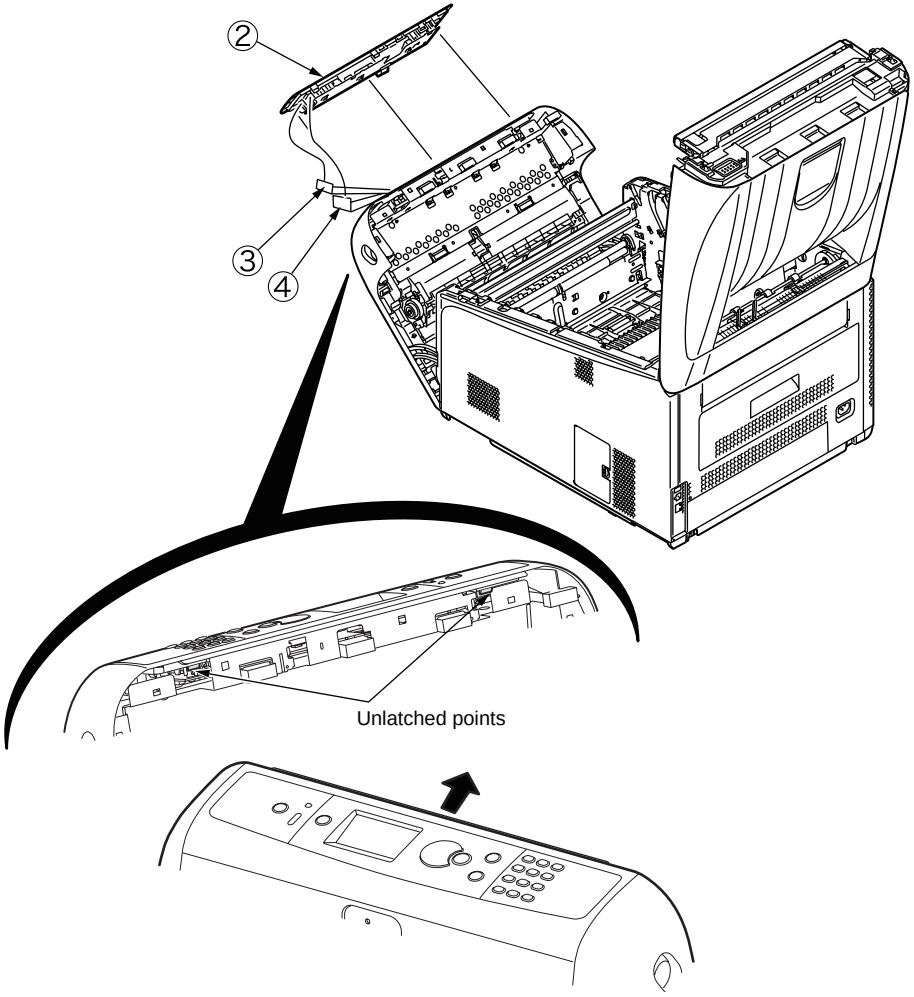
(1) Open the front cover.

(2) Remove the cover-gasket ①.



(3) Unlatch the operator panel Assy. at two points and remove the operator panel Assy. while bending the cover at the center outward.

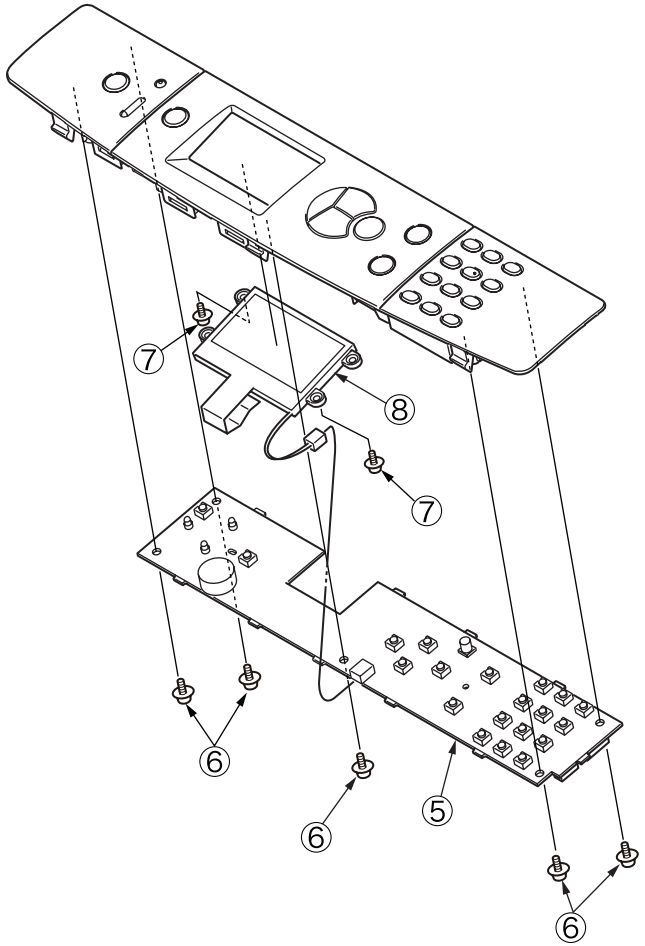
(4) Disconnect the operator panel FFC cable ③ and the environment sensor FFC cable ④.



(5) Disconnect the cable from the board ⑤ of the operator panel Assy. ②, remove the four screws ⑥ and detach the board ⑤.

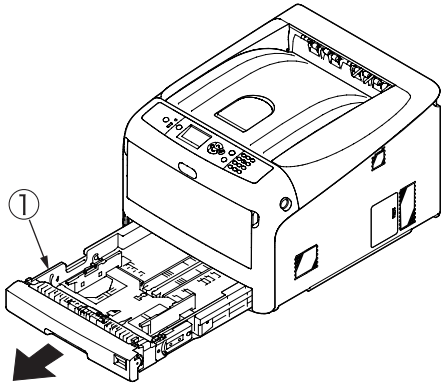
(6) Remove the two screws ⑦ and detach the LCD panel ⑧.

Memo To remove the environment sensor, refer to section 4.2.16.



4.2.11 Front cove Assy.

(1) Pull the cassette ① out of the printer.



(2) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)

(3) Detach the cover side-L Assy. (Refer to section 4.2.3.)

(4) Detach the cover side-R. (Refer to section 4.2.4.)

(5) Detach the rear cover Assy. (Refer to section 4.2.5.)

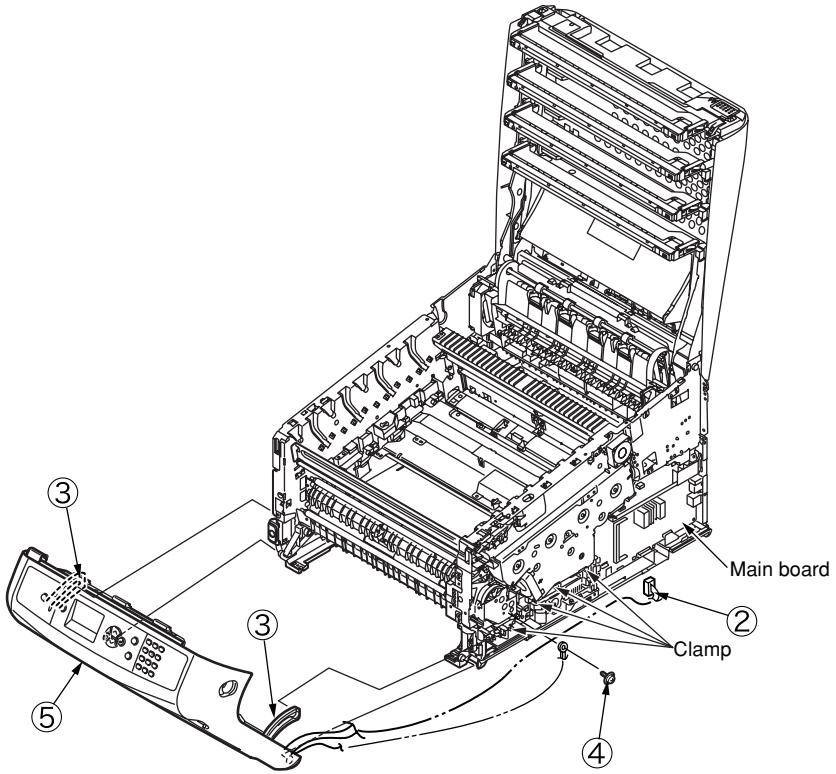
(6) Remove the ten screws (silver) and the plate shield.

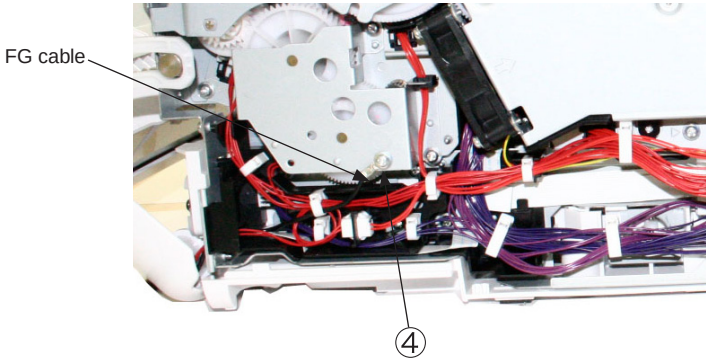
(7) Disconnect the operator panel FFC cable ② from the main board Assy., release the clamp that is holding the FFC cable ②, and disconnect the FFC cable ② from the main unit.

(8) Release the two stays ③.

(9) Remove the screw (silver) ④ that is securing the FG cable.

(10) Pull the support of the front covert Assy. ⑤ out of the post of the main unit and detach the front cover Assy. ⑤.





4.2.12 Guide Assy.-eject

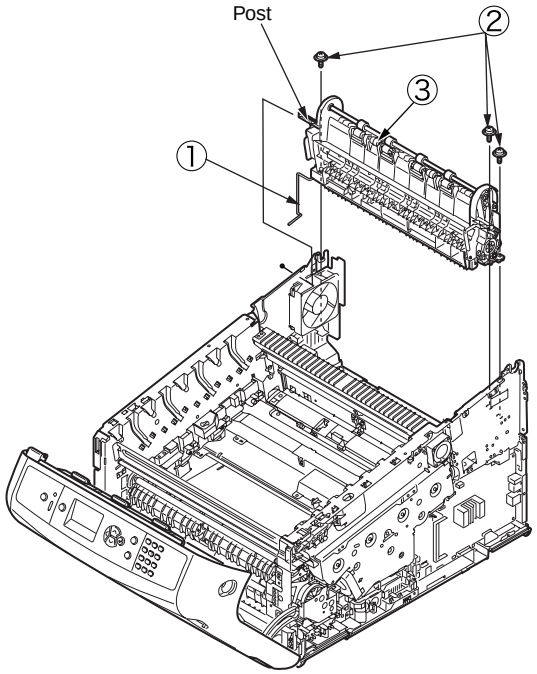
(1) Detach the top cover Assy. (Refer to section 4.2.8.)

(2) Disconnect the eject cable ①.

(3) Remove the three screws (silver) ②.

(4) Pull the post out of the side-L Assy. and detach the guide Assy.-eject ③.

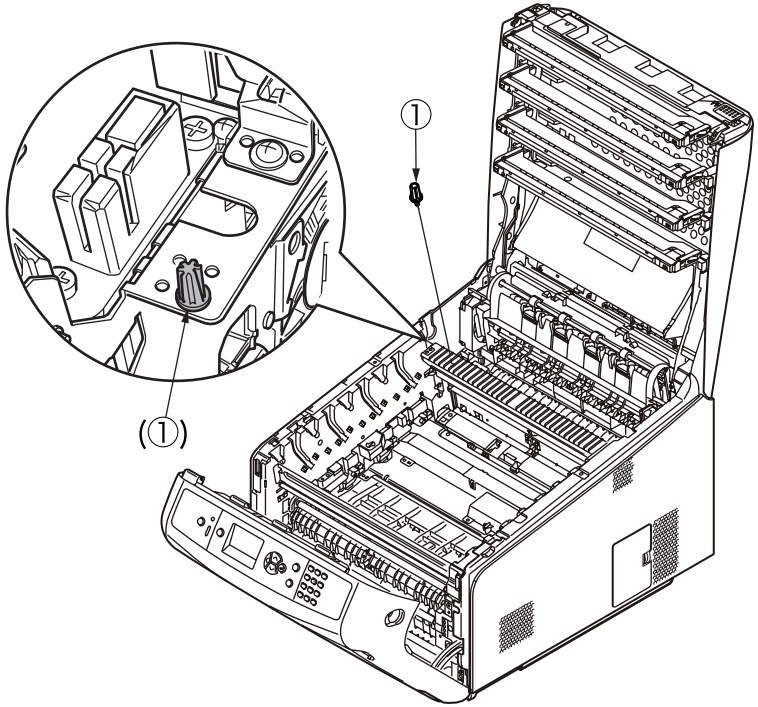
Note! Pay attention to the spacers of screws used for securing to the side-L Assy.



4.2.13 Post-fuser-lock

(1) Remove the fuser. (Refer to section 4.2.2.)

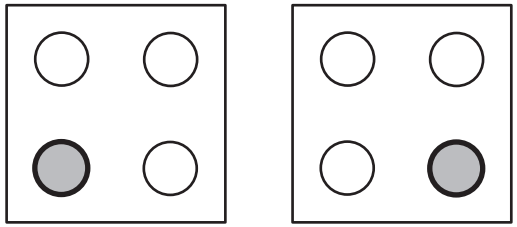
(2) Remove the post-fuser ①.



Notes on attaching:

Install the post-fuser ① with the following positions in mind.

Installation positions



For 100V/120V For 230V

4.2.14 Sensor Assy.-registration, relay board (P6Z), contact Assy., and fuser sensor Assy.

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)

(2) Detach the cover side-L Assy. (Refer to section 4.2.3.)

(3) Detach the cover side-R. (Refer to section 4.2.4.)

(4) Detach the rear cover Assy. (Refer to section 4.2.5.)

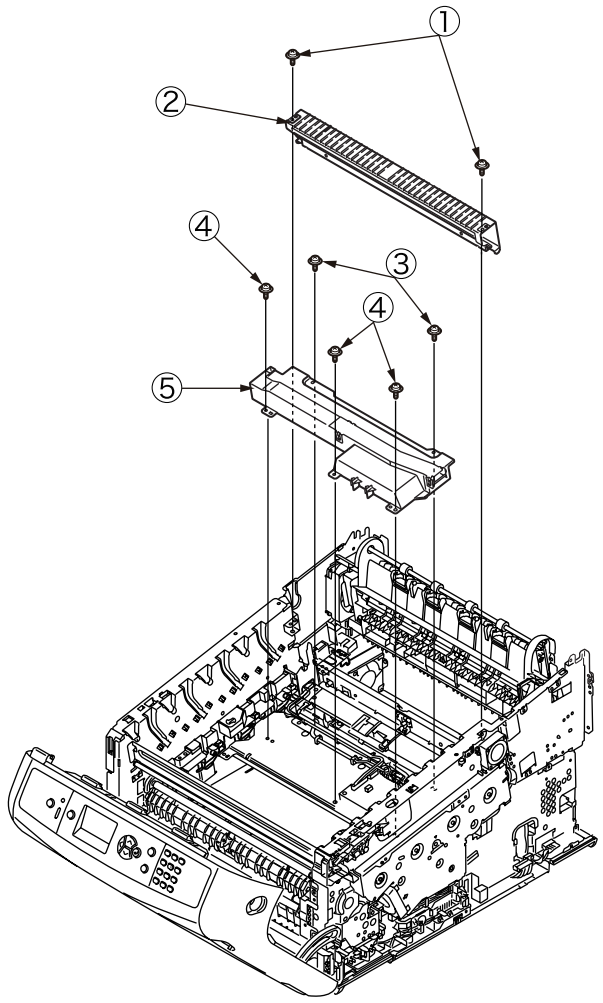
(5) Detach the top cover Assy. (Refer to 4.2.8)

(6) Remove the two screws (silver) ① and the plate beam FU ②.

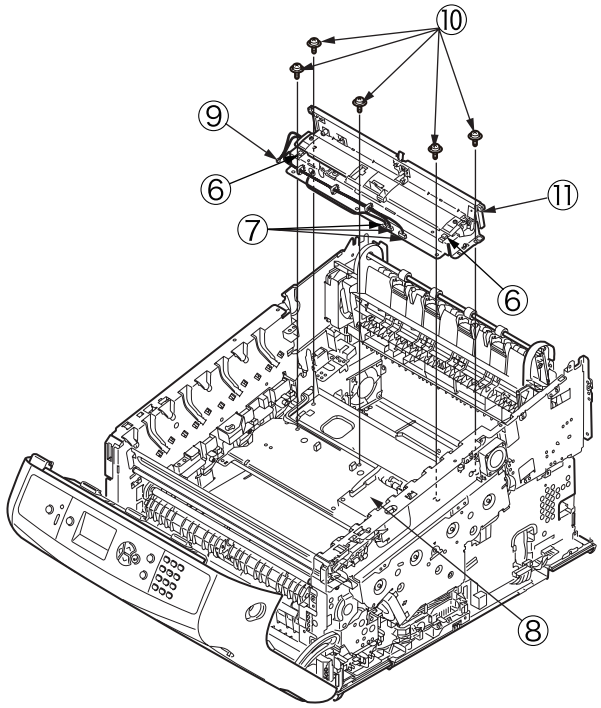
(7) Remove the two screws (silver) ③, the three round-head screws (black) ④ and the cover Assy.-registration ⑤.

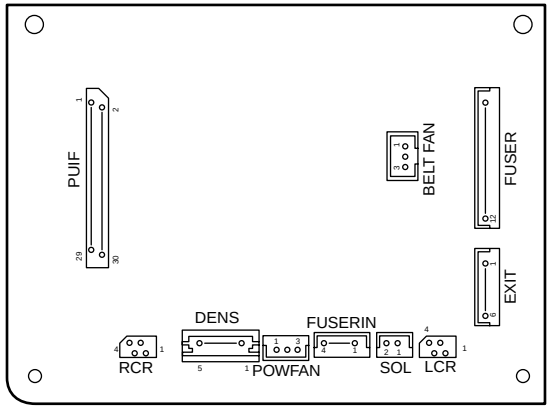
Notes on attaching:

The metal plate retaining the cover Assy.-registration ⑤ is only 0.6mm thick, therefore, tighten the screw carefully.



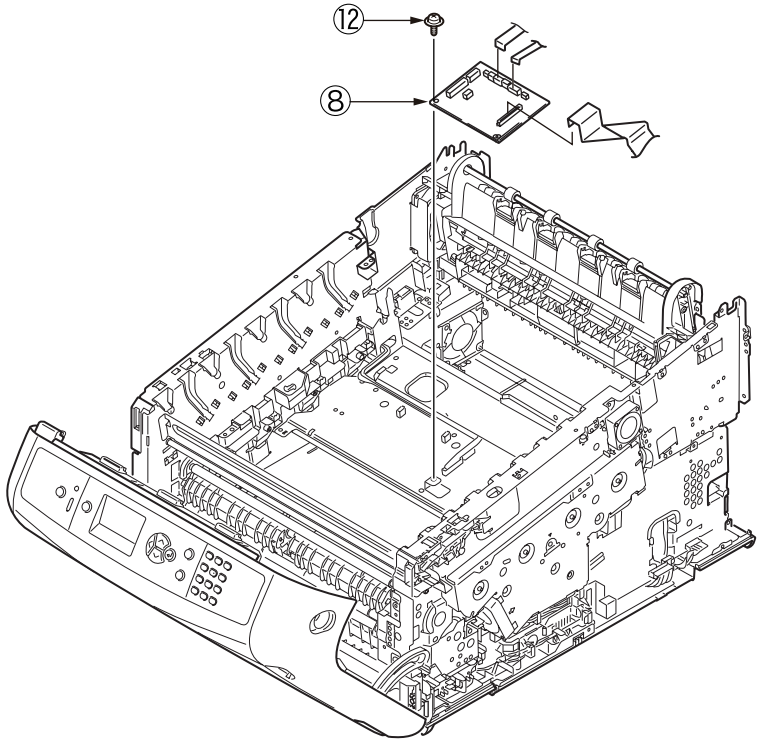
(8) Disconnect the right and left FFC connectors ⑥ and the three connectors ⑦ from the relay board (P6Z) ⑧ and the connector ⑨ from the high-voltage power supply board, and remove the five round-head screws (black) ⑩ and the color registration Assy. ⑪.



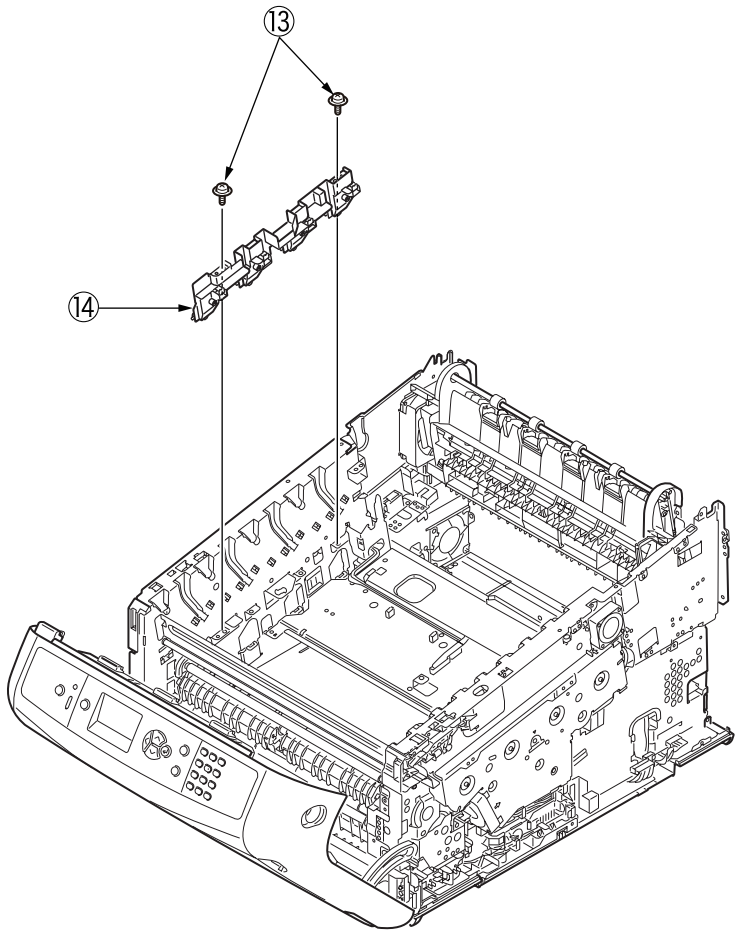


Relay board (P6Z)

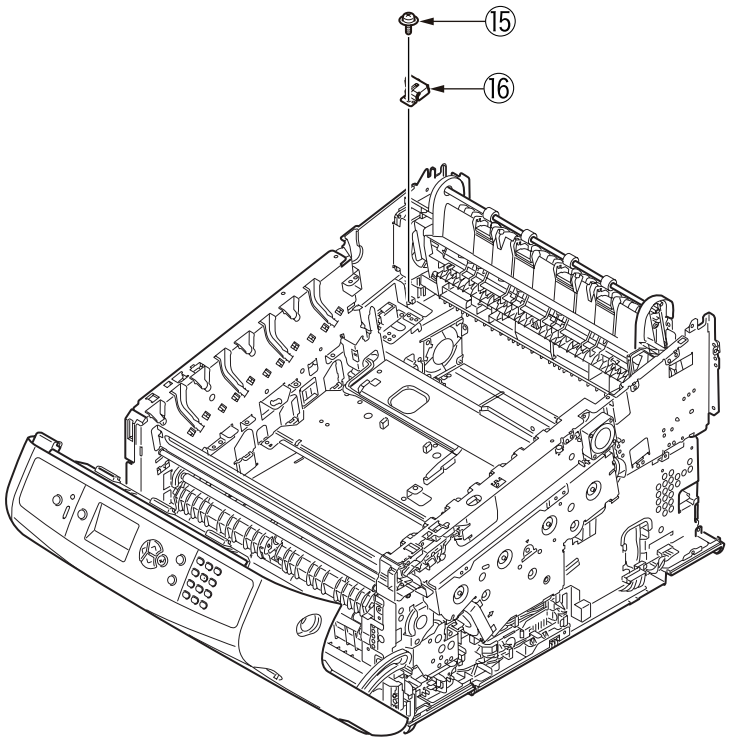
(9) Disconnect each connector, remove the screw (silver) ⑫ and the relay board (P6Z) ⑧.



(10) Remove the two screws (silver) ⑬ and the contact Assy. ⑭.



(11) Remove the screw (silver) ⑮ and the fuser sensor Assy. ⑯.

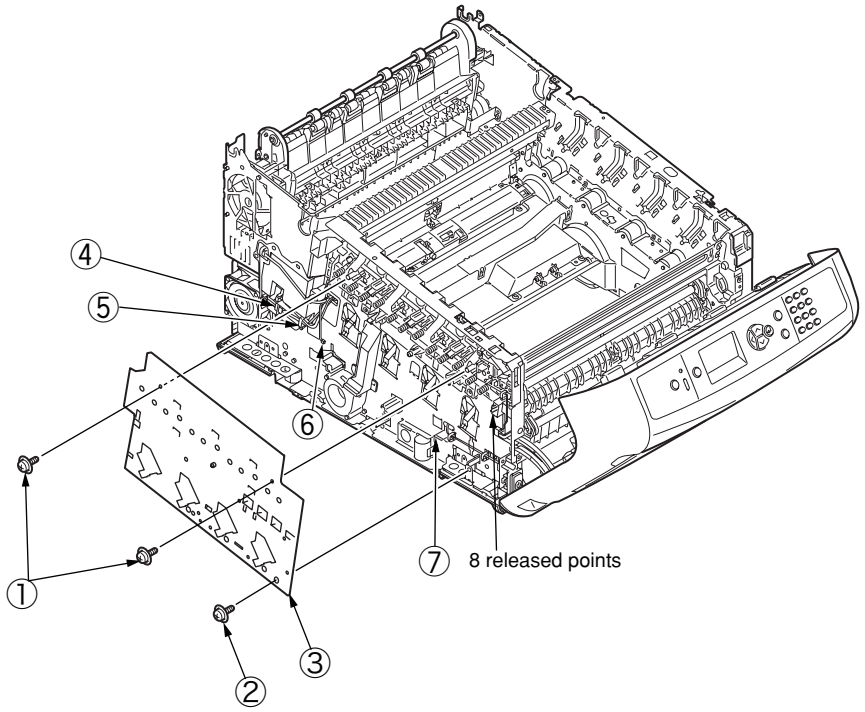


4.2.15 High-voltage power supply board

(1) Remove the image drum unit/belt unit. (Refer to section 4.2.1.)

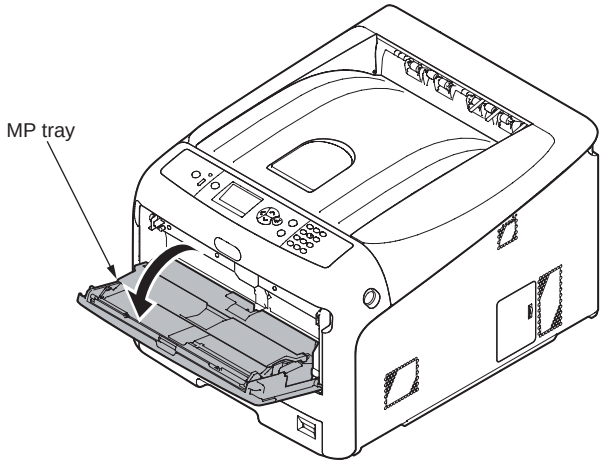
(2) Detach the cover side-L Assy. (Refer to section 4.2.3.)

(3) Remove the two screws (black) ① and the screw (silver) ②, release the high-voltage power supply board ③ at the eight points, disconnect the FAN (Fuser) connector ④, the belt thermistor connector ⑤, the cover-open sensor connector ⑥, and the FFC connector ⑦, and detach the high-voltage power supply board ③.

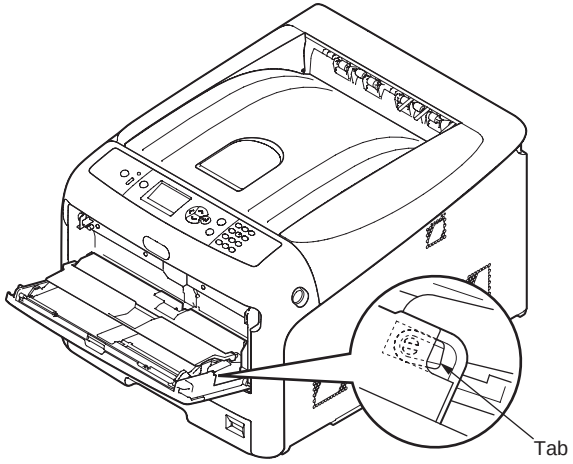


4.2.16 Frame Assy.-Front

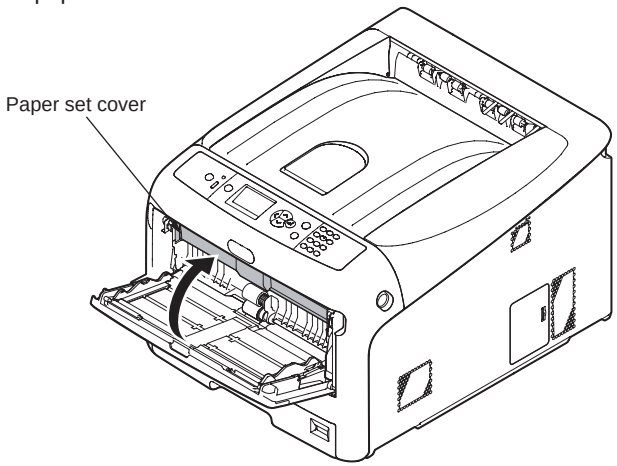
(1) Turn off the printer and open the MP tray forward by inserting your fingers into the front recesses.



(2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP tray lightly. (Release the tab on the left side in the same manner.)



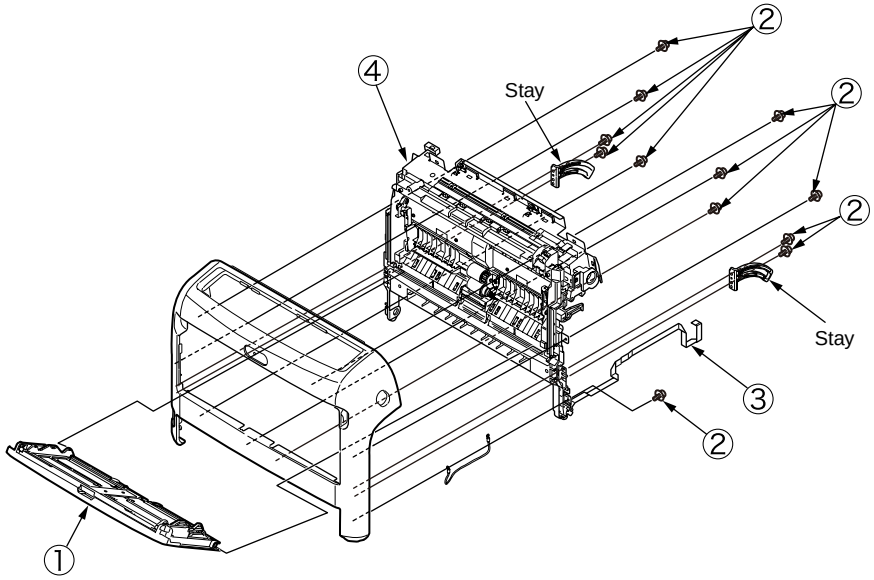
(3) Open the paper set cover.



(4) Release the cover AssyMPT ① at the left side first and then the right side. (Be careful not to deform the spring on the right side.)

(5) Detach the front cover Assy. (Refer to section 4.2.11.)

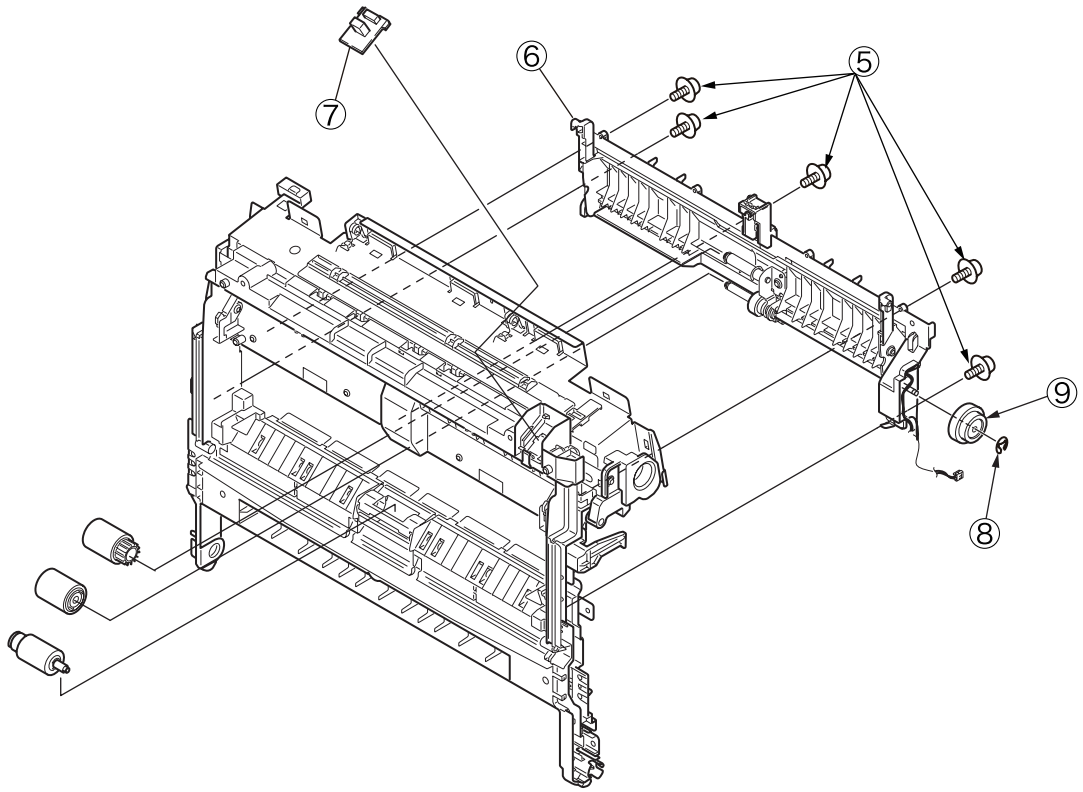
(6) Remove the seven screws ②, disconnect the ground cable ③, and detach the frame Assy. front ④. (Two stays come off at the same time, too)



(7) Remove the five screws ⑤ and detach the guide Assy. ⑥.

(8) Remove the environment sensor ⑦.

(9) Remove the E-ring ⑧ and the MPT clutch ⑨.



4.2.17 Roller Assy.-registration

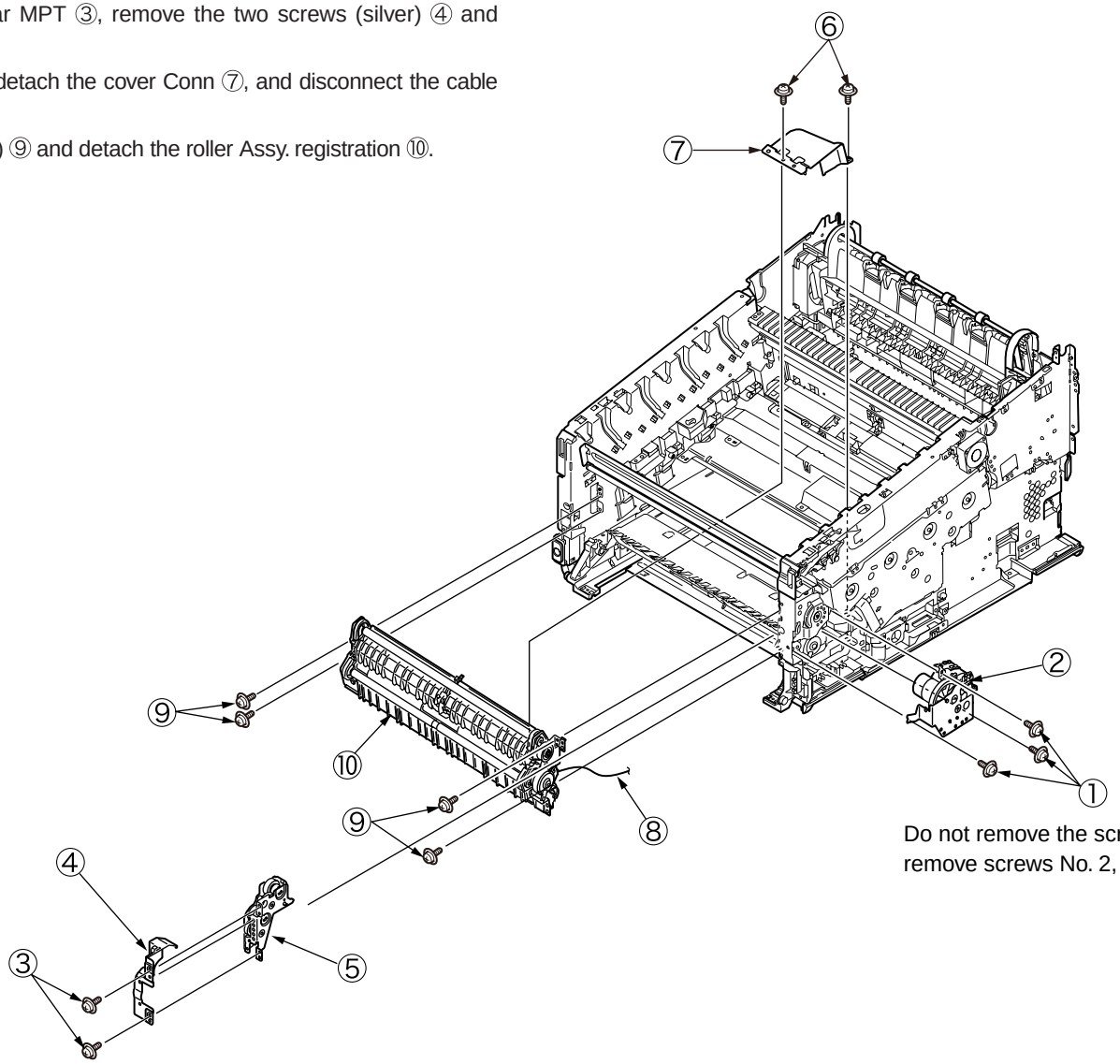
(1) Detach the front cover Assy. (Refer to section 4.2.11.)

(2) Remove the three screws (silver) ① and pull out the gear Assy. hopping ②.

(3) After detaching the cover gear MPT ③, remove the two screws (silver) ④ and detach the gear Assy. MPT ⑤.

(4) Remove the screw (silver) ⑥, detach the cover Conn ⑦, and disconnect the cable ⑧ from the clamp.

(5) Remove the four screws (silver) ⑨ and detach the roller Assy. registration ⑩.



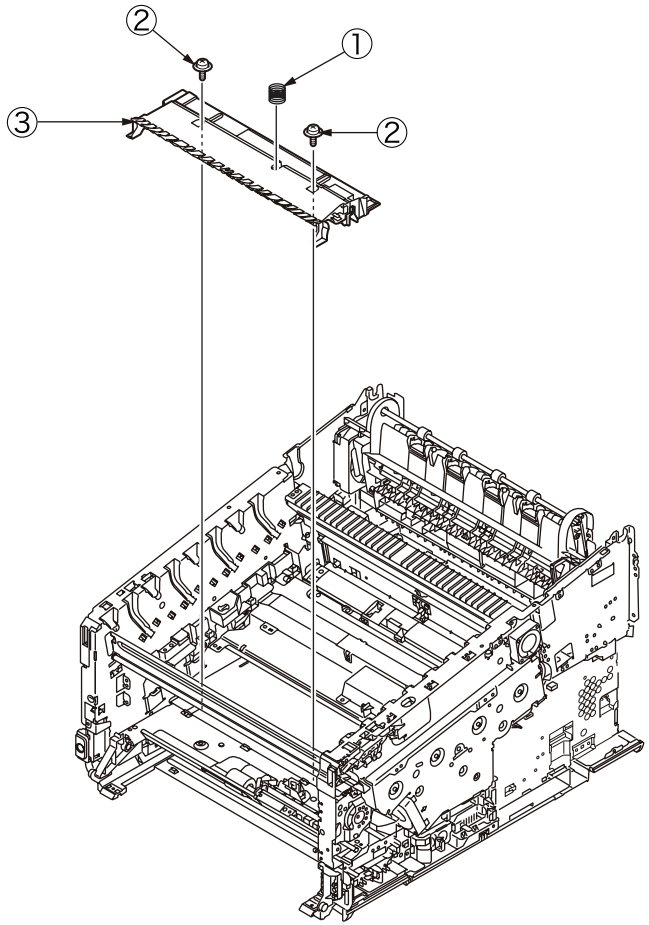
Do not remove the screw No. 1;
remove screws No. 2, No. 3 and No. 4.

4.2.18 Roller-feed, roller-pickup, frame Assy.-pickup, and holder sensor Assy.

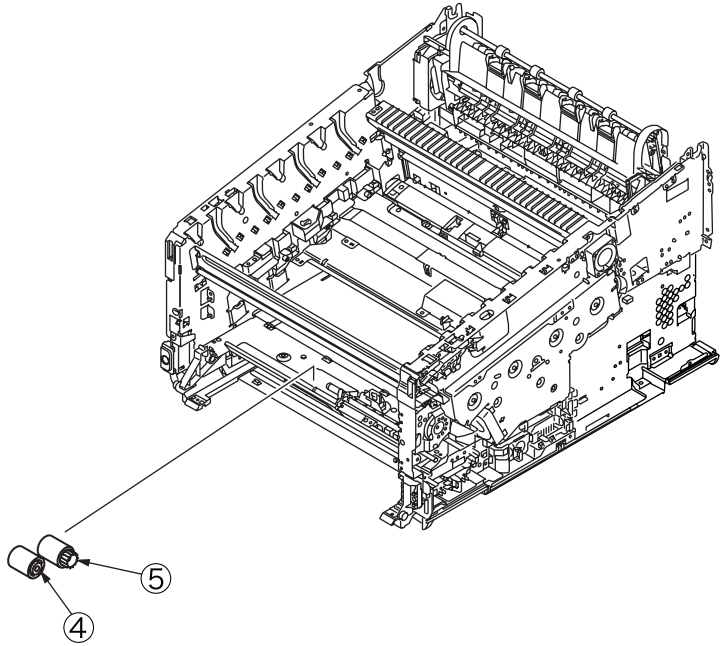
(1) Remove the roller Assy.-registration. (Refer to section 4.2.17.)

(2) Remove the spring-pickup ①.

(3) Remove the two round-head screws (black) ②, disconnect the cable from the clamp, and detach the cover Assy. hopping ③.



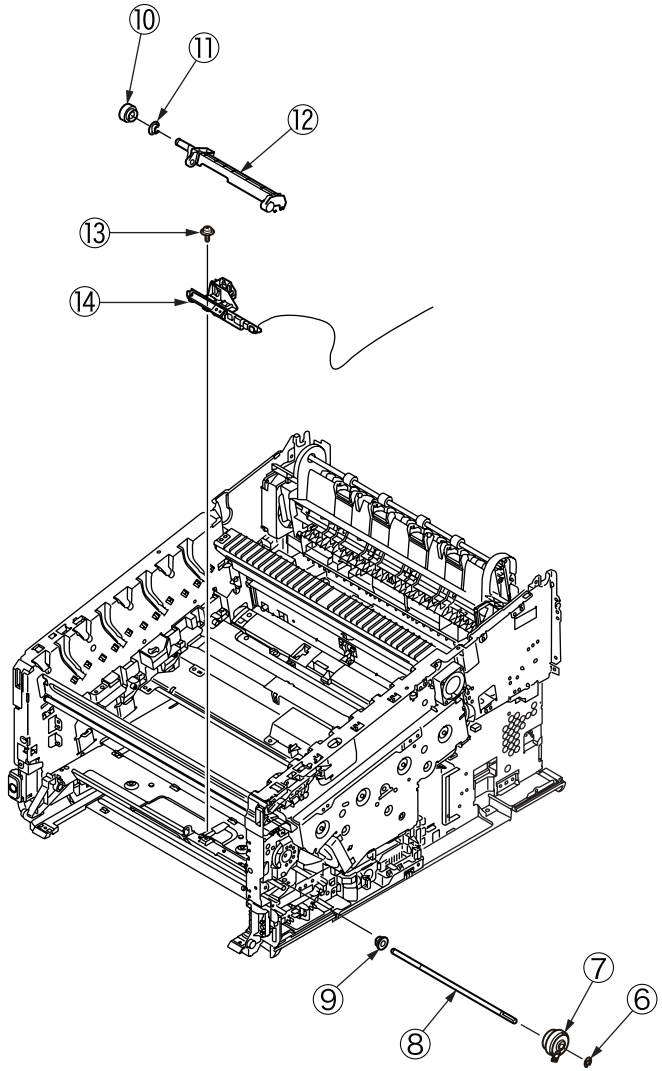
(4) Remove the roller-feed ④ and the roller-pickup ⑤.



(5) Remove the E-ring ⑥, the clutch hopping ⑦, shaft hopping ⑧, and the gear-feed ⑨.

(6) Remove the bearing ⑩, the gear ⑪, and the frame Assy.-pickup ⑫.

(7) Remove the round-head screw (black) ⑬ and the holder sensor Assy. ⑭.



4.2.19 Low-voltage power supply Assy.

⚠Warning	Electric shock hazard.	⚡

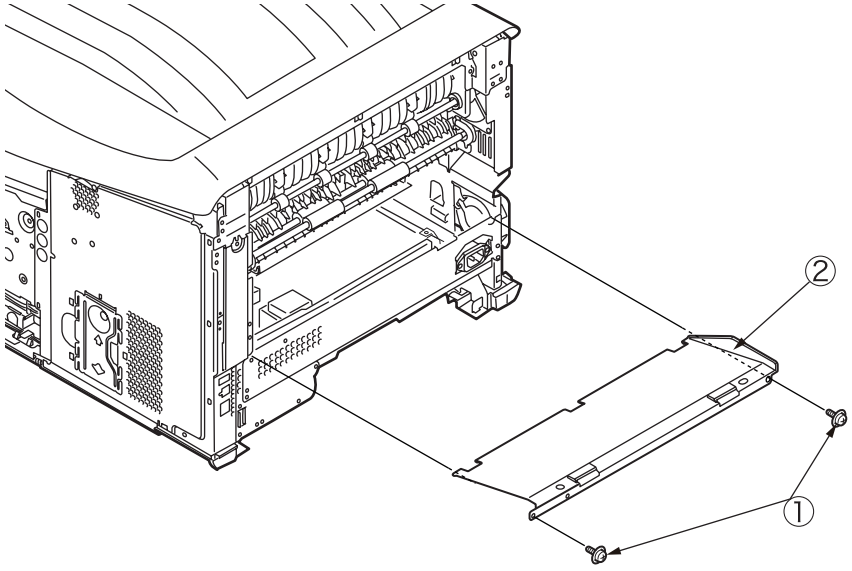
Be sure to unplug the AC cable as some circuits keep working while the power cable is connected even after the power is turned off.

When replacing the low-voltage power supply, due to potential electric shock, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

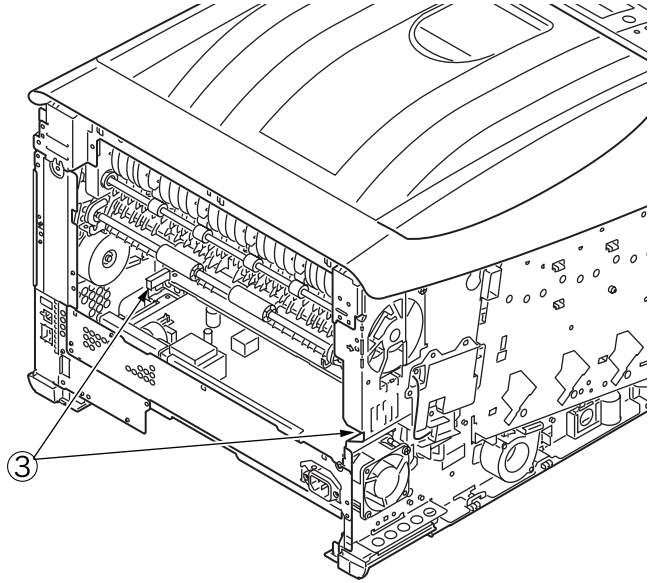
After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

(1) Detach the rear cover Assy. (Refer to section 4.2.5.)

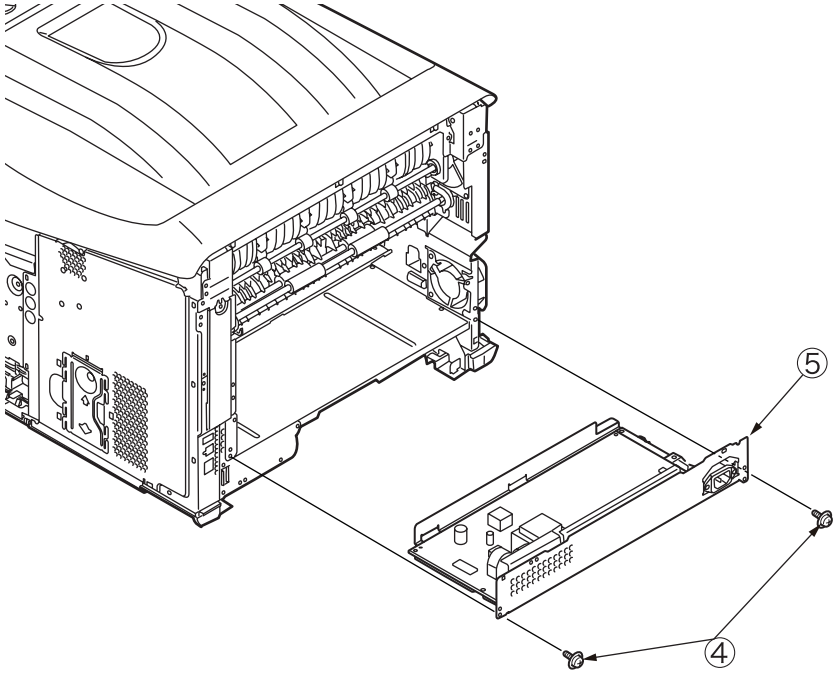
(2) Remove the two screws (silver) ① and detach the cover POW ②.



(3) Disconnect the two cables ③.



(4) Remove the two screws (silver) ④ and detach the low-voltage power supply Assy. ⑤.

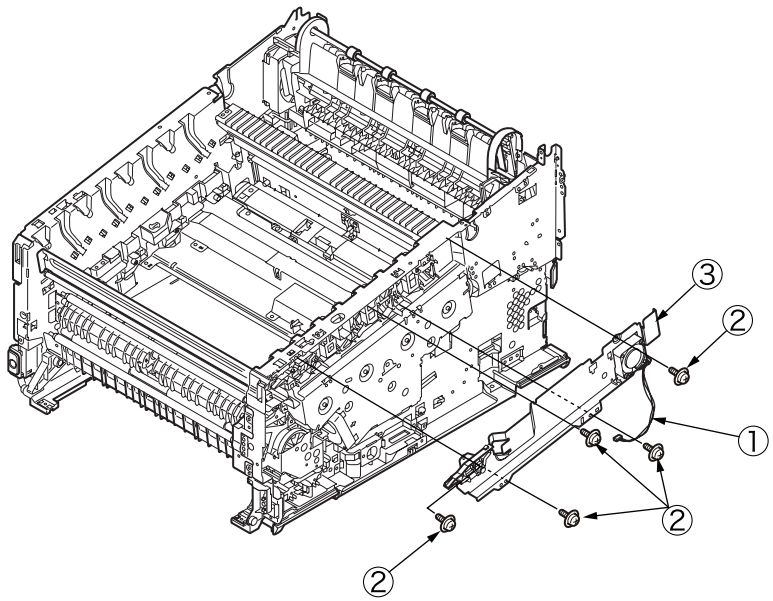


4.2.20 Motor Assy.-belt and motor Assy-ID

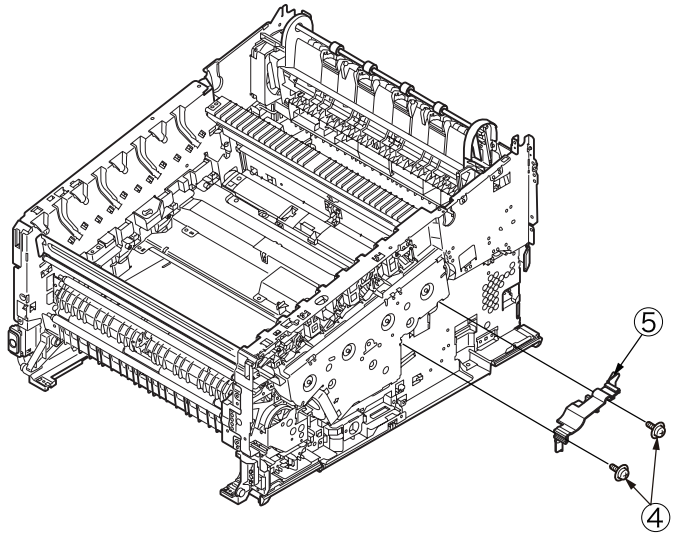
(1) Remove the main board Assy. (board Assy-MEL). (Refer to section 4.2.7.)

(2) Disconnect the cable ① from the clamp.

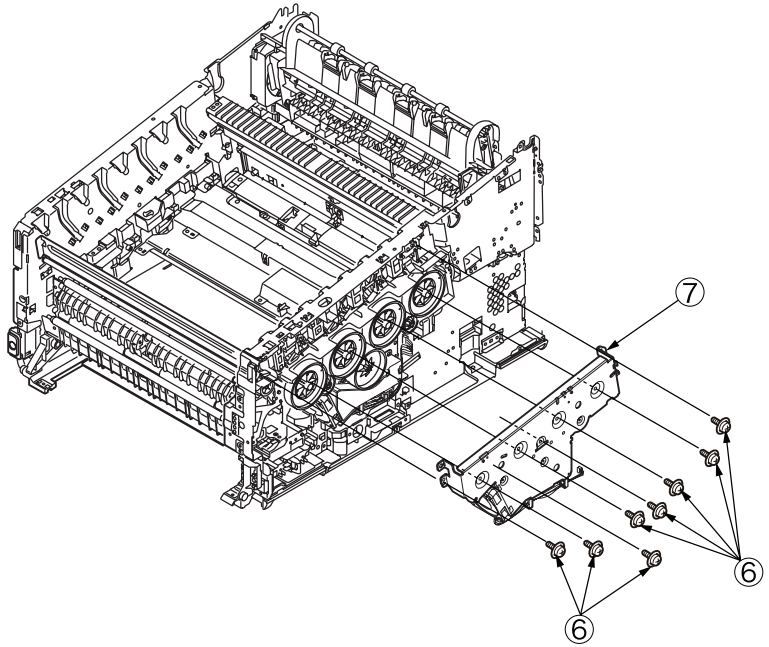
(3) Remove the five screws (silver) ② and detach the plate Assy.-toner ③.



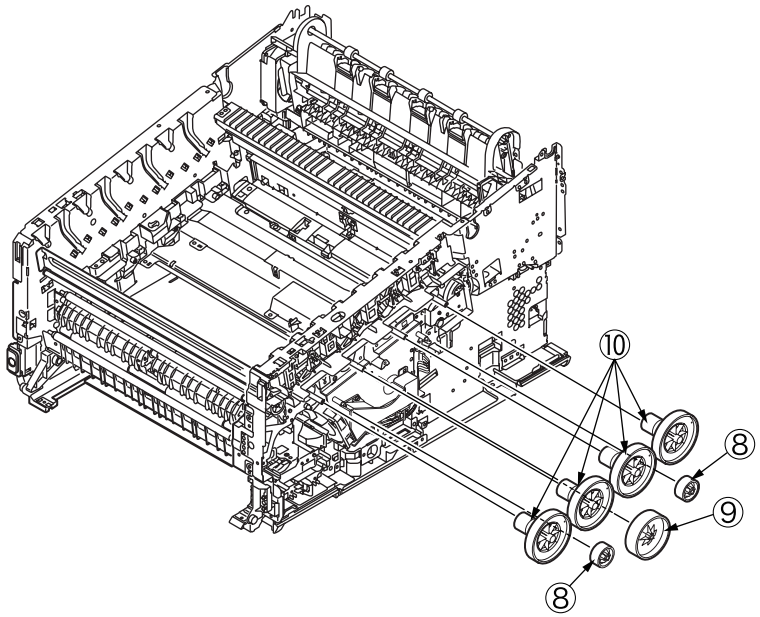
(4) Remove the two screws (silver) ④ and detach the cover gear belt ⑤.



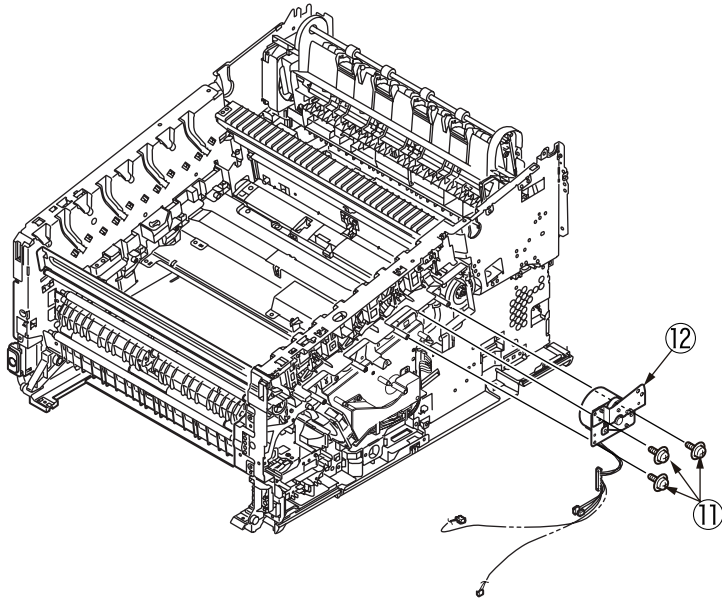
(5) Remove the eight screws (silver) ⑥ and detach the plate Assy. ID gear ⑦.



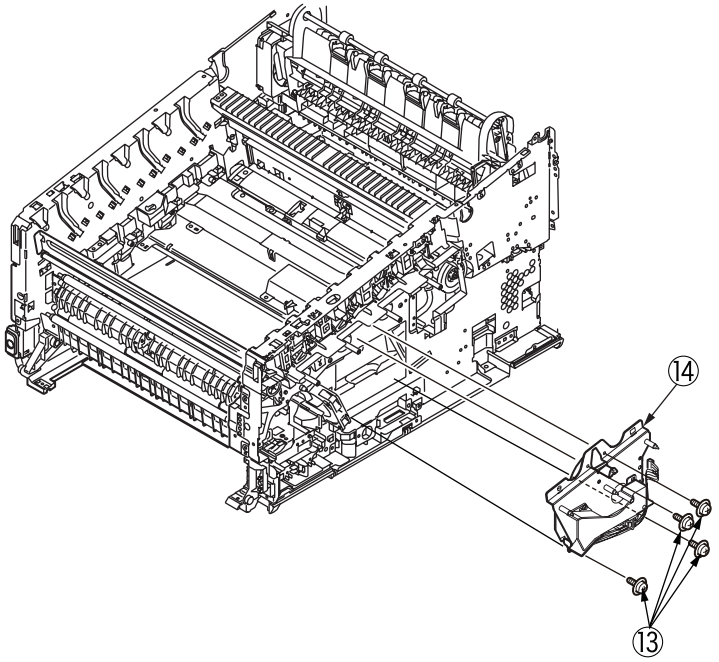
(6) Remove the gear-idler-A ⑧, the gear-idler-B ⑨, and the gear-reduction ID ⑩.



(7) Remove the three screws (silver) ⑪ and the motor Assy. belt ⑫.



(8) Remove the four screws ⑬ and detach the motor Assy-ID ⑭.



Notes on attaching:

Adjust the phase between gears to assemble the gear-reduction ID.

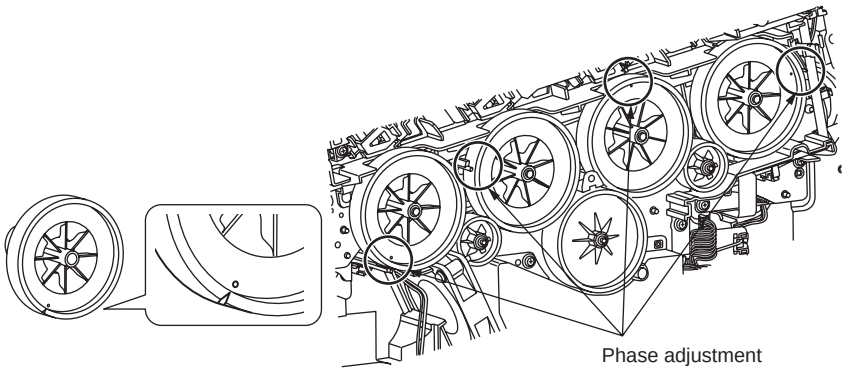


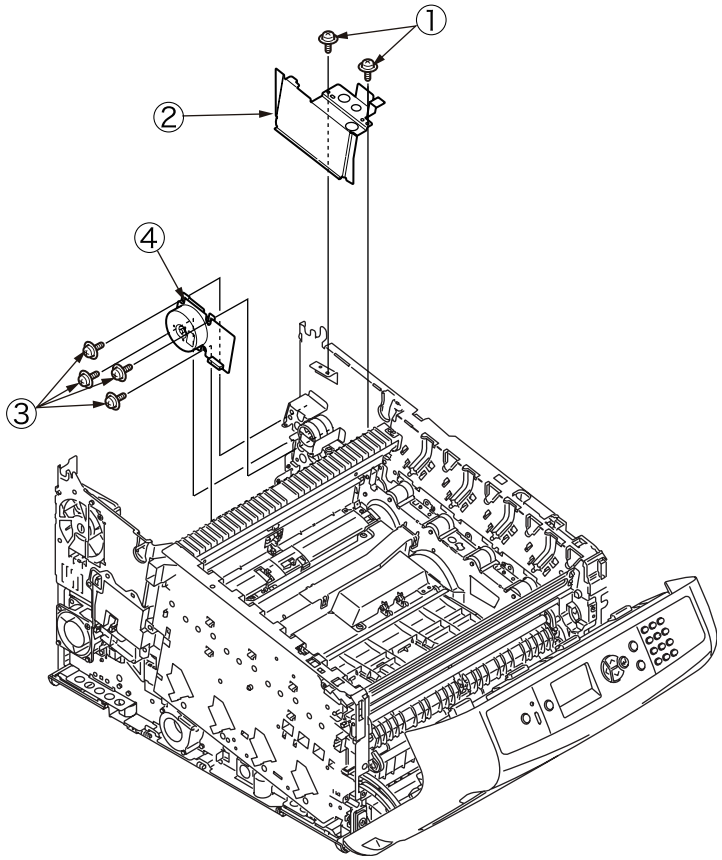
Illustration of phase adjustment of gear-reduction ID

4.2.21 Motor DC-FU (fuser motor)

(1) Detach the guide Assy.-eject. (Refer to section 4.2.12)

(2) Remove the two screws (silver) ① and the plate cover FU ②.

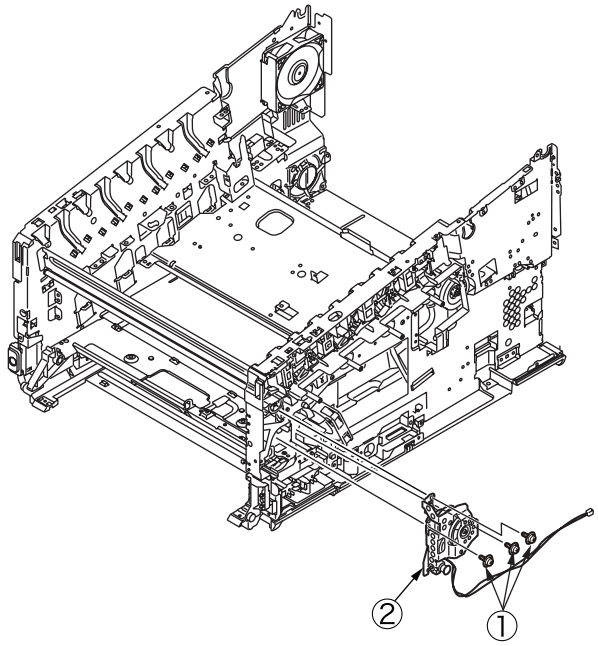
(3) Remove the four screws (silver) ③ and the motor DC-FU ④.



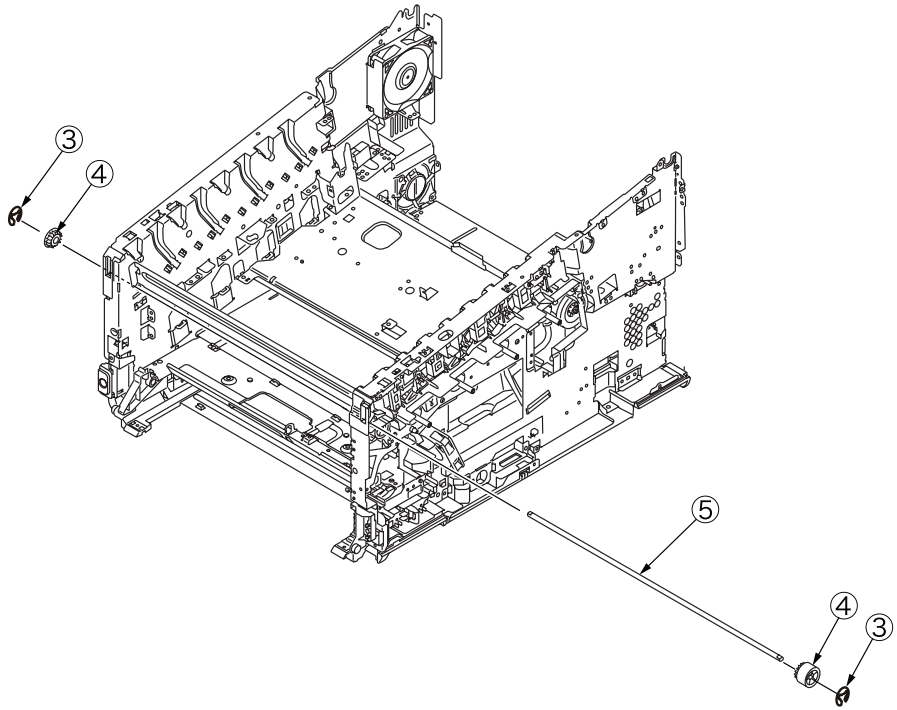
4.2.22 Side-R Assy. and side-L Assy.

(1) See sections 4.2.1 to 4.2.20.

(2) Remove the three screws (silver) ① and the gear Assy. image drum lift-up ②.



(3) Remove the E-ring ③, gear lift-up C/D ④ and the shaft lift-up ⑤.



Notes on attaching:

To assemble the gear lift-up, match the phase of the right and left gears.

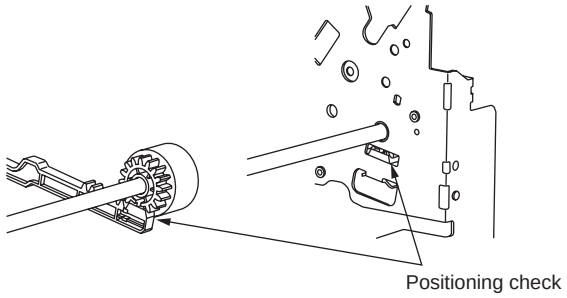
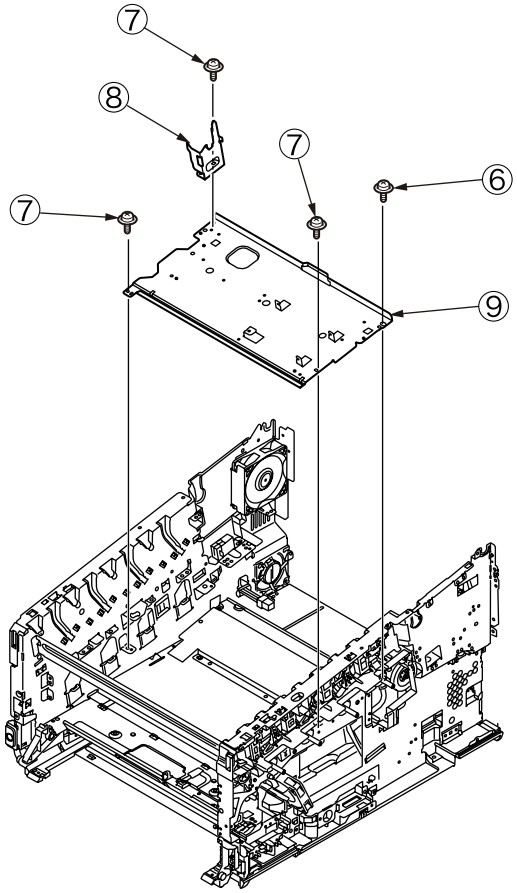
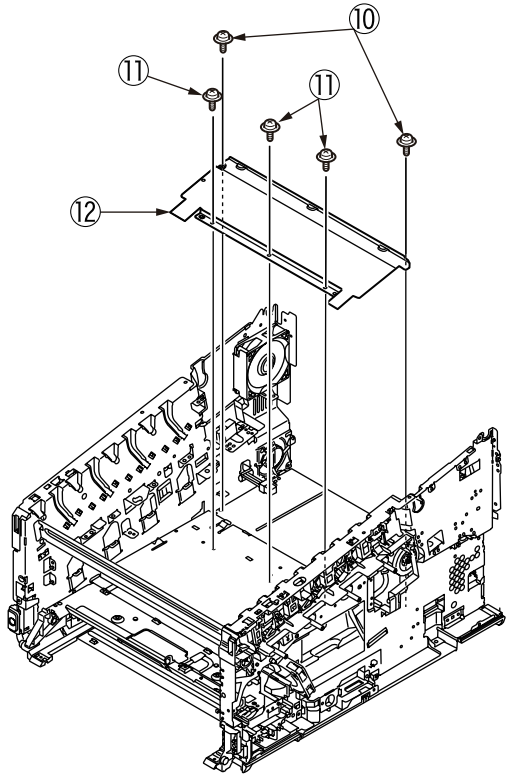


Illustration of (right and left) gear lift-up positioning

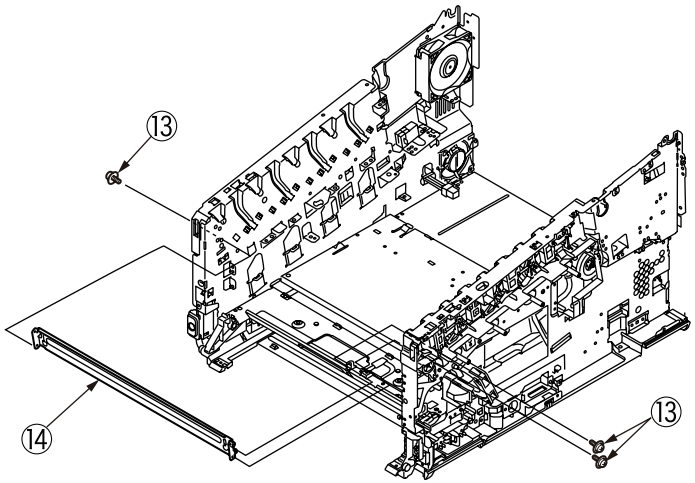
(4) Remove the screw (silver) ⑥ and the three round-head screws (black) ⑦ and detach the plate guide belt ⑧ and the plate base registration ⑨.



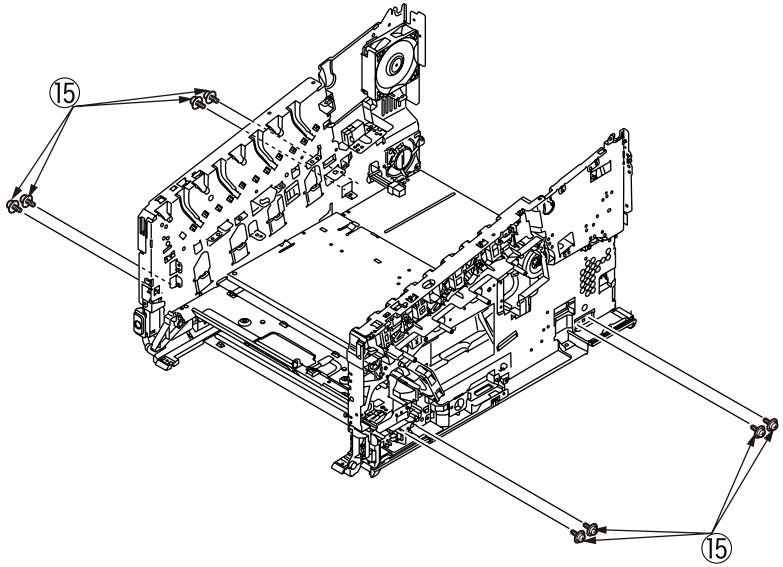
(5) Remove the two screws (silver) ⑩ and the three round-head screws (black) ⑪ and detach the plate cover POW ⑫.



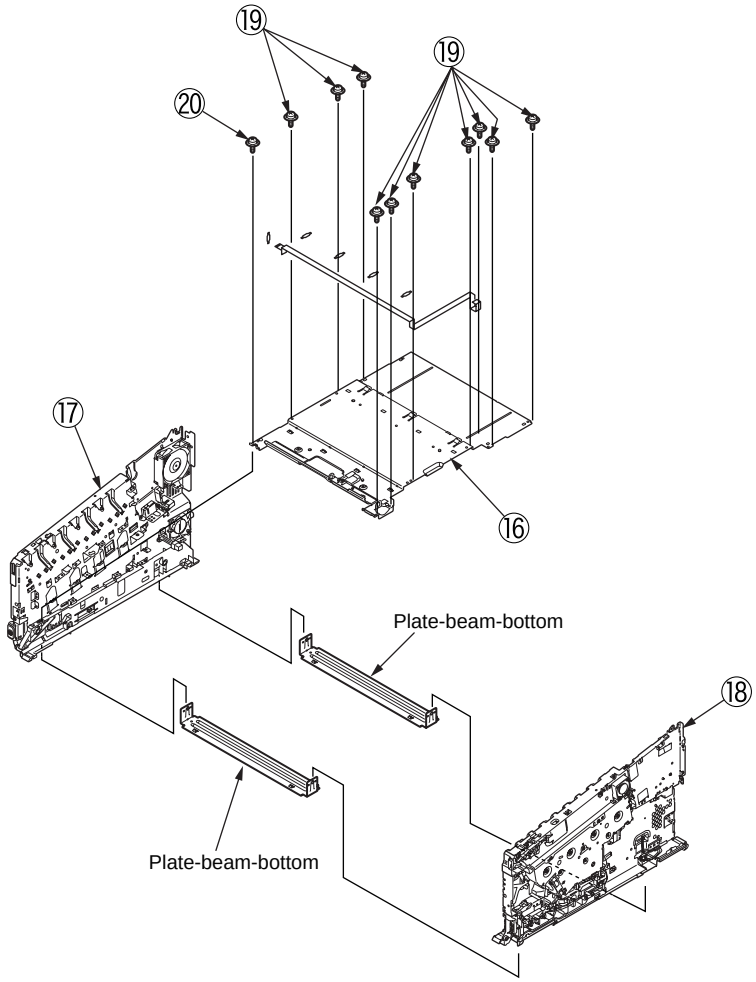
(6) Remove the three screws (silver) ⑬ and detach the plate-beam-front ⑭.



(7) Remove the eight screws (silver) ⑮ that are fixing the plate-beam-bottom.



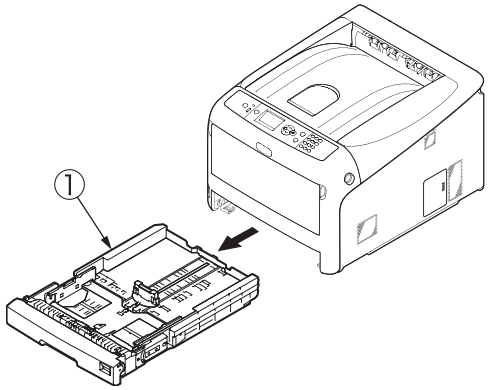
(8) Remove the eleven screws, ten screws (silver) ⑲ and the screw (black) ⑳ that are fixing the plate base ⑯ and both of the plate Assy. side-L ⑰ and -R ⑱, and detach the plate Assy. side-L ⑰ and -R ⑱.



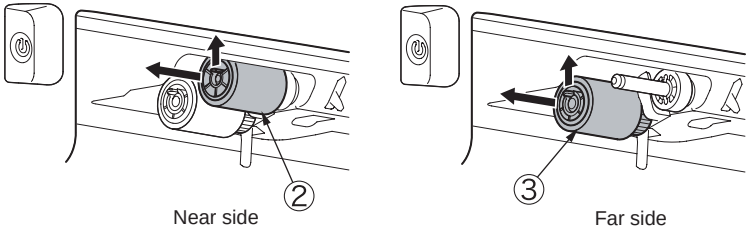
4.2.22 Feed rollers (Tray 1/2/3/4)

Note! Be sure to replace all of the three paper feed rollers.

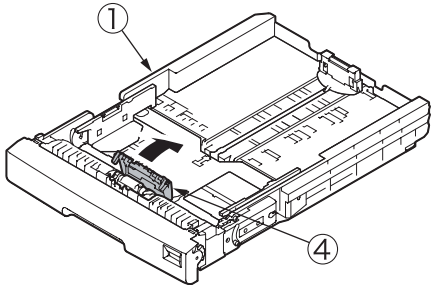
(1) Turn off the printer and remove the paper cassette ①.



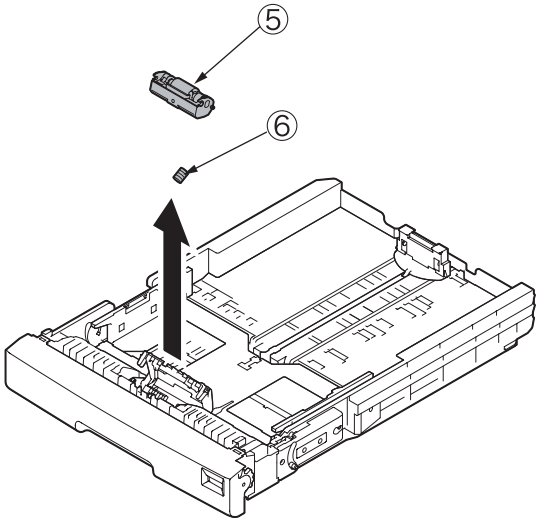
(2) While pressing the protrusions of the two paper feed rollers ② and ③ outward, detach them from their shafts.



(3) Bend the protrusion on each side of the cover on the paper cassette to detach the cover ④, and remove the cover ④ by turning the cover toward you.



(4) Remove the separation roller ⑤ and the spring ⑥ while pressing the both ends of the separation roller ⑤ tray inward that are caught by the protrusions.



Notes on attaching paper feed rollers:

1. Insert a new paper feed roller (with a gear) ③ onto the inside shaft and turn it all the way in place.
2. Insert a new paper feed roller (with no gears) ② onto the outside shaft and turn all the way in place.

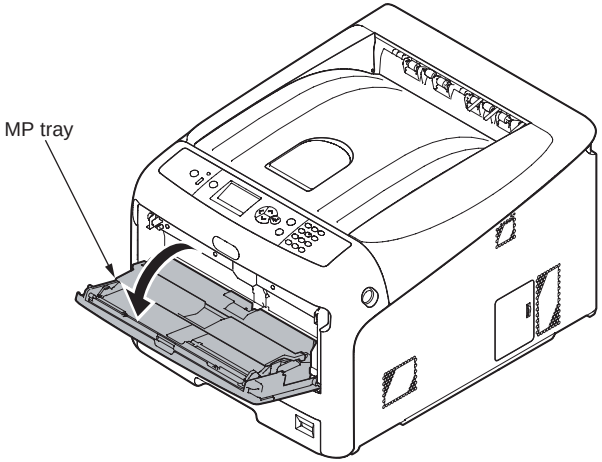
   Check to make sure that the rollers do not come off.

Notes on attaching a separation roller:

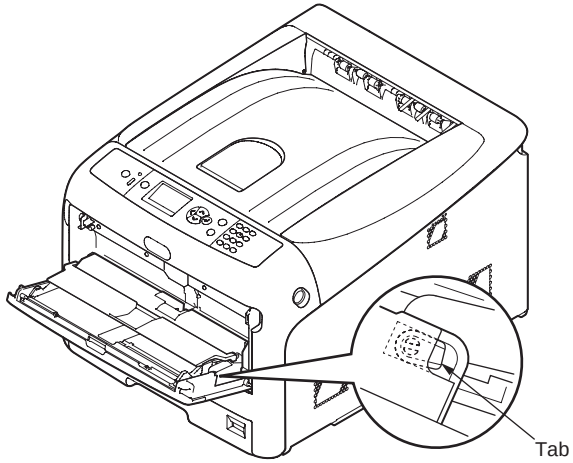
1. Put the spring ⑥ onto the boss on the rear of the separation roller ⑤, and push the bearing of the separation roller ⑤ obliquely from below onto the shaft on the side of the cassette.
2. Check to make sure that the separation roller ⑤ moves smoothly around the shaft and the roller rotates.

4.2.24 Paper feed rollers (MPT pick-up roller/MPT feed roller/MPT retard roller)

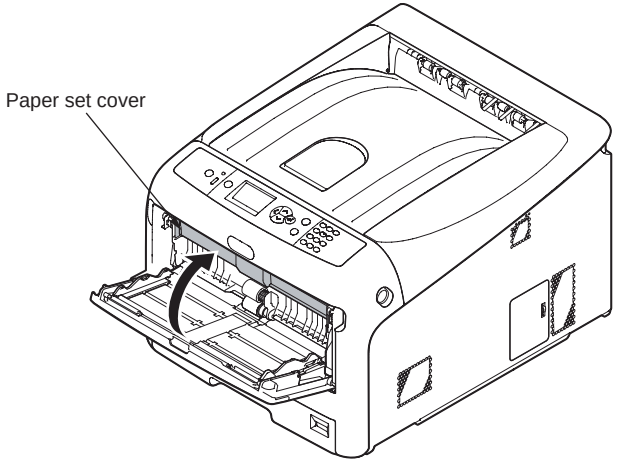
(1) Turn off the printer and open the MP tray forward by inserting your fingers into the front recesses.



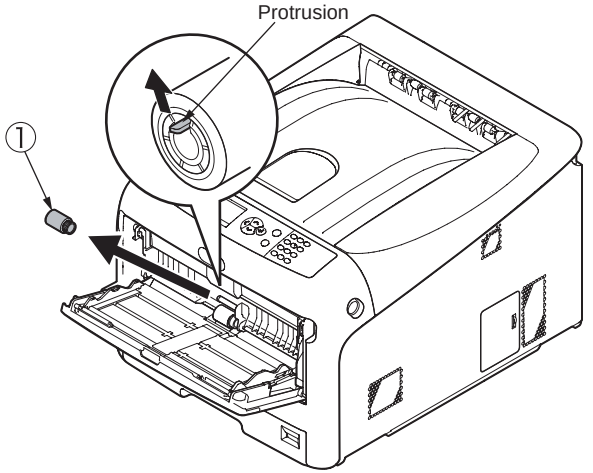
(2) Release the tab of the paper feed roller cover by pressing the right arm inward while lifting up the MP tray lightly. (Release the tab on the left side in the same manner.)



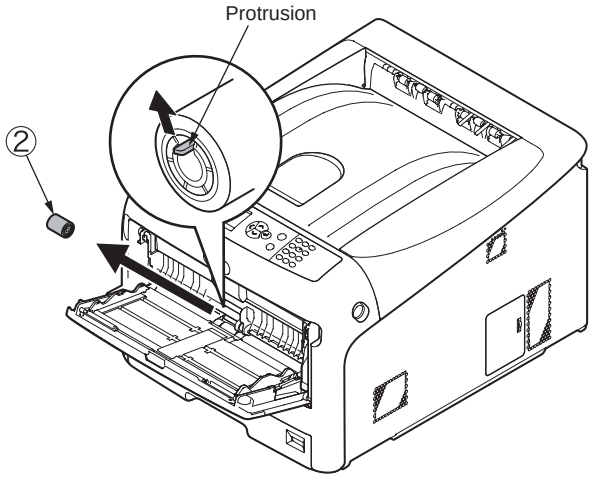
(3) Open the paper set cover.



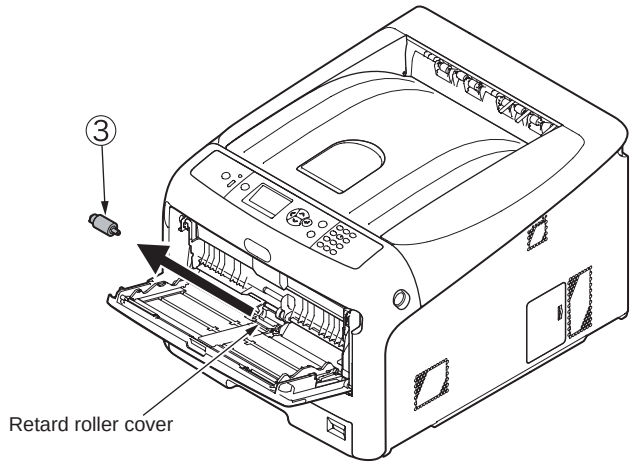
(4) While pressing the protrusion of the upper MPT pickup roller ① outward, pull out the feed roller from its shaft.



(5) While pressing both the separation roller cover and the protrusion of the lower MPT feed roller ② outward, slide the feed roller to the left hand side to remove.



(6) Pull the retard roller cover to open while pressing the center part of the MP tray and remove the MPT retard roller ③.



Notes on attaching paper feed rollers:

1. To attach a new MPT pickup roller ①, MPT feed roller ②, and MPT retard roller ③, insert them onto the shafts and turn them all the way. After attaching the rollers, make sure that they do not come off.
2. If closing the MP tray without returning the tab to the correct position, the paper set cover may be broken. Be sure to return the tab to the original position.
3. If the MP tray cannot be closed, return the paper set cover to the correct position by pressing the paper loading part on the MP tray downward.

4.2.25 Fuser Connector

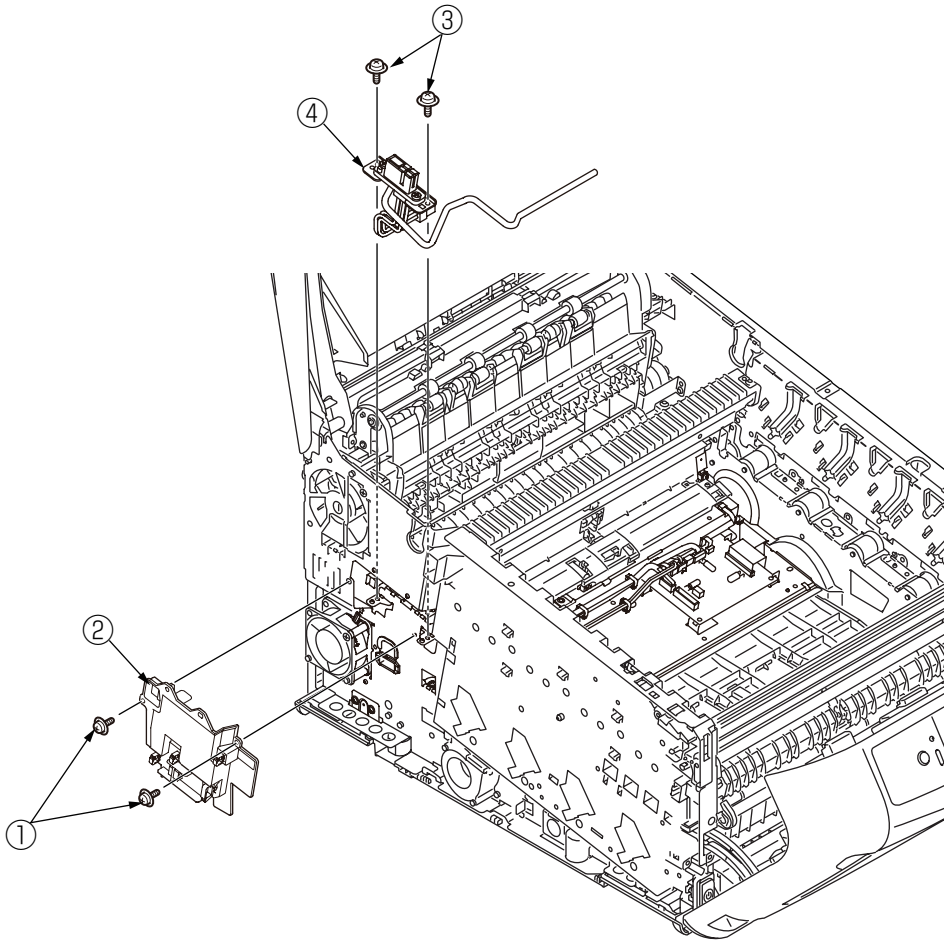
(1) Remove Image Drum Units, the Belt Unit and the Fuser Unit. (Refer to section 4.2.1 and 4.2.2)

(2) Remove the Cover-Side-L Assy.(Refer to section 4.2.3)

(3) Remove the cover Assy.-registration.(Refer to section 4.2.14)

(4) Remove cables and two screws(silver) ① from the Cover-Assy-FU-Connector ② to detach Cover-Assy-FU-Connector ②.

(5) Remove two screws(silver) ③ to detach the Fuser Connector ④.



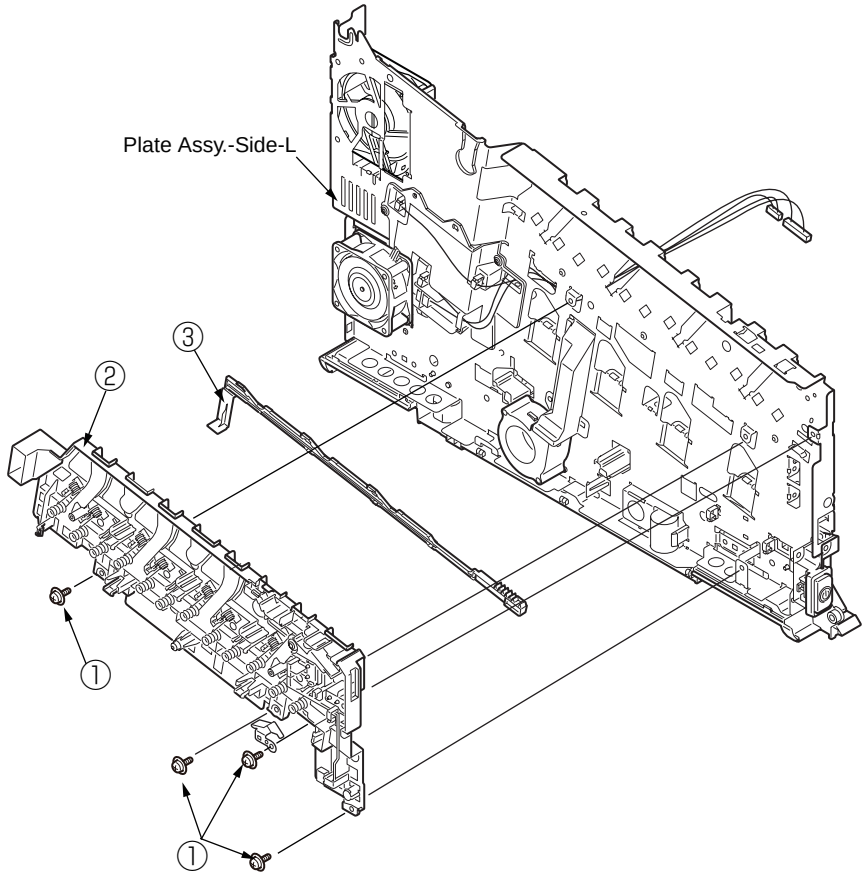
4.2.26 Guide Assy.-Side-L / Rack-L

(1) Refer to section 4.2.22(3).

(2) Remove four screws(silver) ① to detach Guide Assy.-Side-L ② and Rack-L ③.

Notes on attaching:

To assemble the gear lift-up, match the phase of the right and left gears.(Refer to the 'Notes on attaching' in the section 4.2.22(3).)



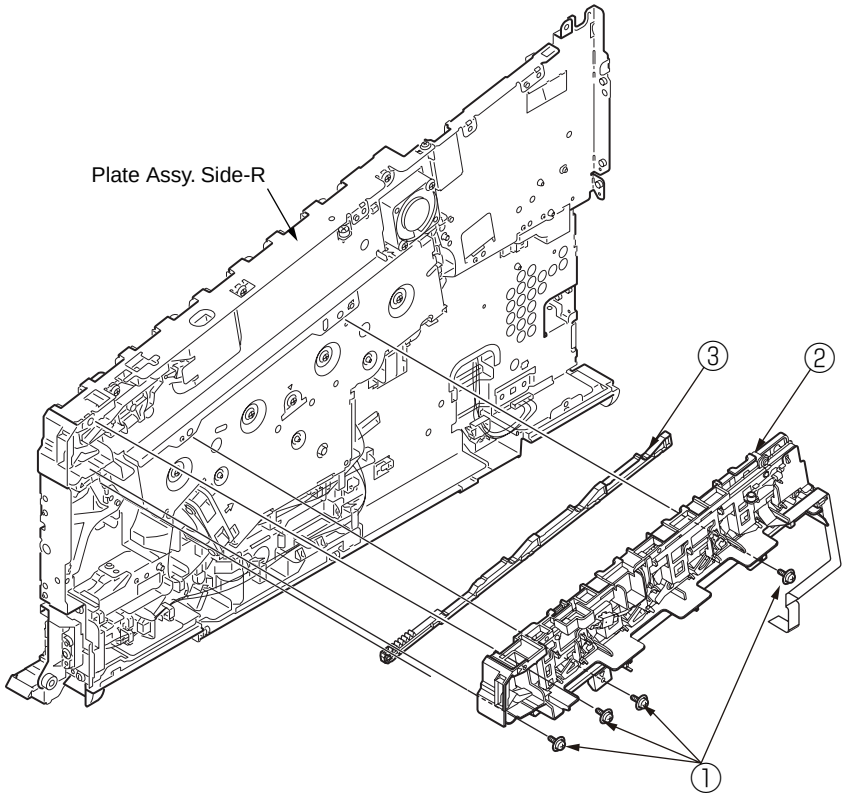
4.2.27 Guide Assy.-Side-R / Rack-R

(1) Refer to section 4.2.22(3).

(2) Remove four screws(silver) ① to detach Guide Assy.-Side-L ② and Rack-L ③.

Notes on attaching:

To assemble the gear lift-up, match the phase of the right and left gears.(Refer to the 'Notes on attaching' in the section 4.2.22(3).)



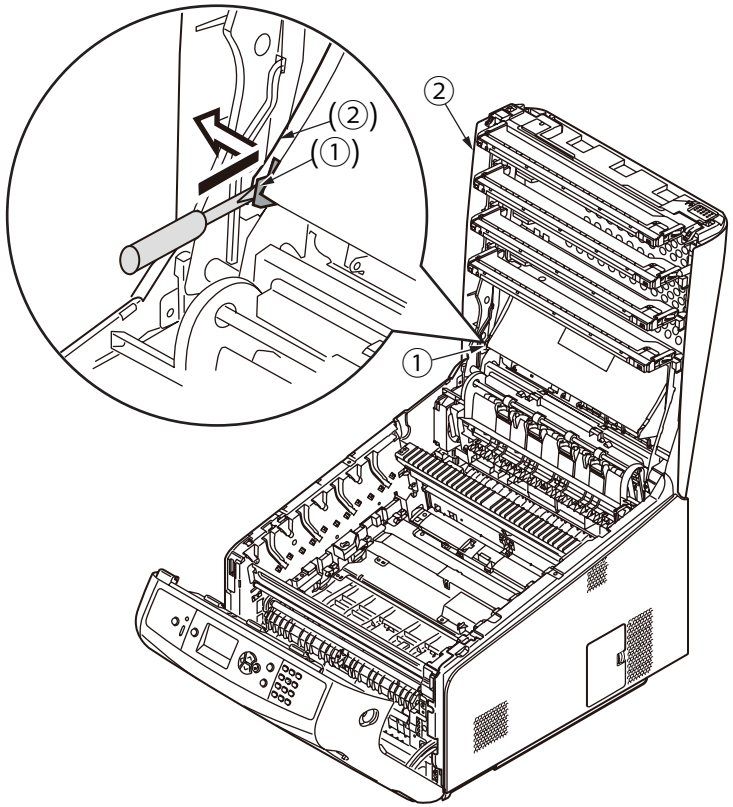
4.2.28 Cover-Top-L / Cover-Top-R

Note! This section is explained for the operation of the Cover-Top-L. For the operation of the Cover-Top-R, it is same as the operation for the Cover-Top-R to except these forms are symetric.

(1) Remove Image Drum Units, the Belt Unit and the Fuser Unit. (Refer to section 4.2.1 and 4.2.2)

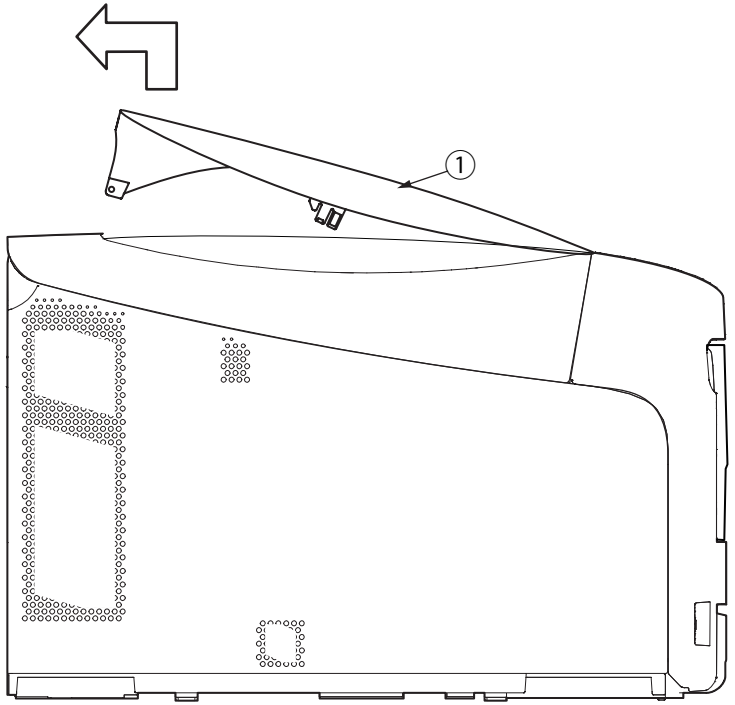
(2) To detach the Cover-Top-L ①, insert the tool whose head is flat(ex. flat-blade screwdriver) to between the latch portion of the Cover-Top ② and the Cover-Top-L ①. And move the latch by the tool to the outside of the Cover-Top to release them.

MEMO After the latch portion released, push the Cover-Top-L ① to the outside of the Cover-Top ② to keep the disengage the Cover-Top-L ① and the Cover-Top ②.



(3) Move and detach the Cover-Top-L ① to the top side of the Cover-Top ② and to the back side of the mainbody.

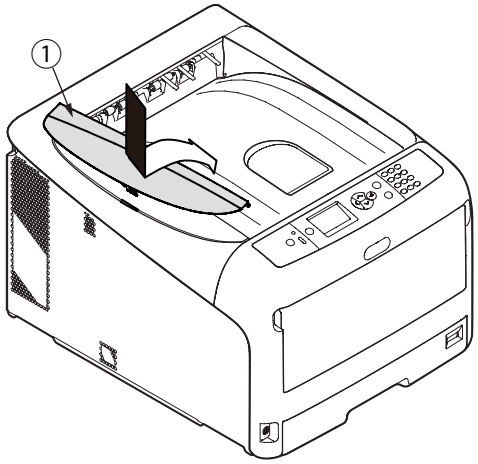
MEMO This operation is easily by to close the Cover-Top ②.



Notes on attaching:

Assemble the Cover-Top-L ① by following steps.

Step1. Insert the center latch of the Cover-Top-L ① with it slanted to the outside of the side of the mainbody. And roll it to the inside of the mainbody.



Step2. Lock the front side latch of the Cover-Top-L ① with sliding from back to front.

Step3. Insert the rear latch of the Cover-Top-L ①.

5. LUBRICATION

5.1 Portions Lubricated 5-2

5.1 Portions Lubricated

Portions lubricated are shown in this section. The other portions must not be lubricated. Lubrication is not required during assembly or disassembly, except that the lubricant specified must be applied to portions from which lubricant was wiped.

Lubrication work

(1) Lubricant names and their abbreviations

EM-30L: MOLYKOTE EM-30L

HP-300: MOLYKOTE HP-300

PM: Pan motor oil 10W-40 or ZOA 10W-30

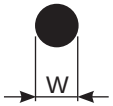
FL: FLOIL GE334C

HANARL: HANARL SF-133

C-9300: Tetra C-9300

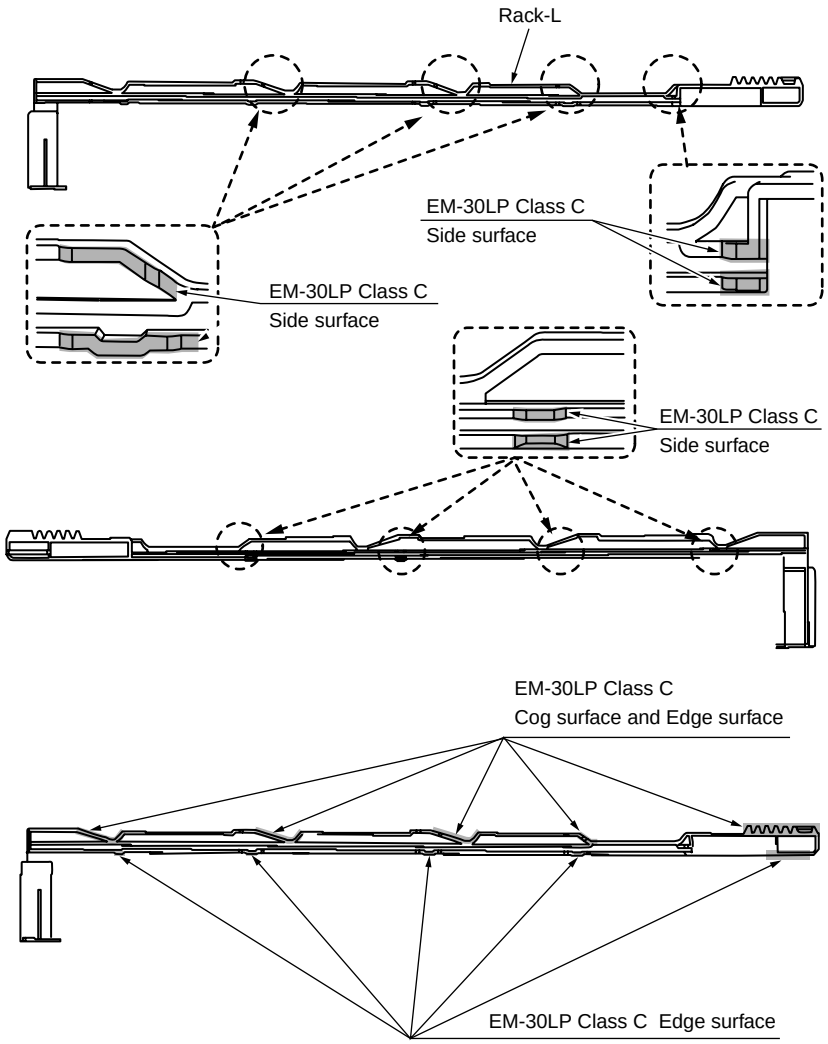
(2) Standard of amount of grease

Class	S	A	B	C	D	E	F
Amount of grease (cc)	0.0005	0.003	0.005	0.01	0.03	0.05	0.1
W(mm)	1.24	2.25	2.67	3.37	4.86	5.76	7.26
Sample							

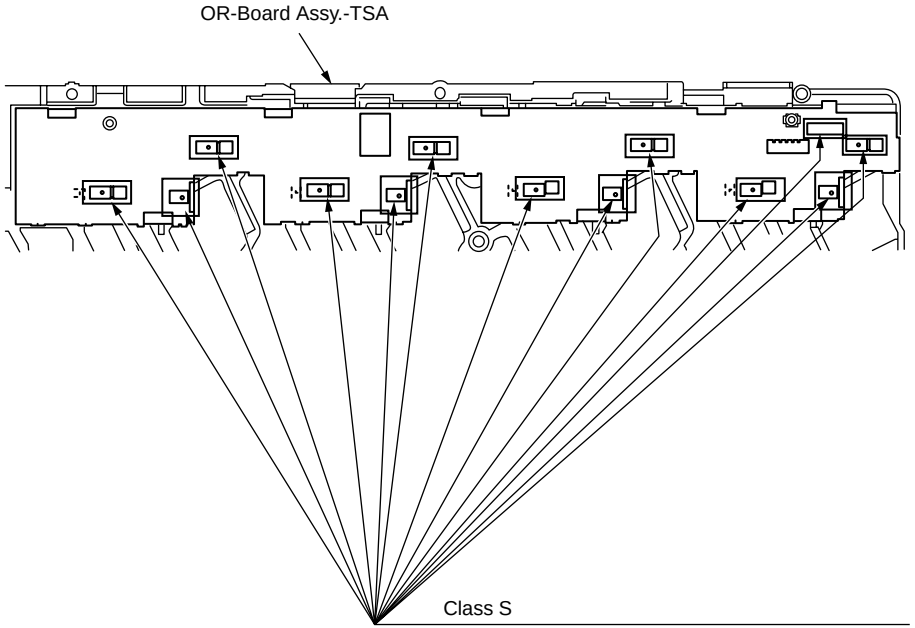


① Plate Assy.-Side-L

Apply a small amount of MOLYKOTE (EM-30LP) 26 positions

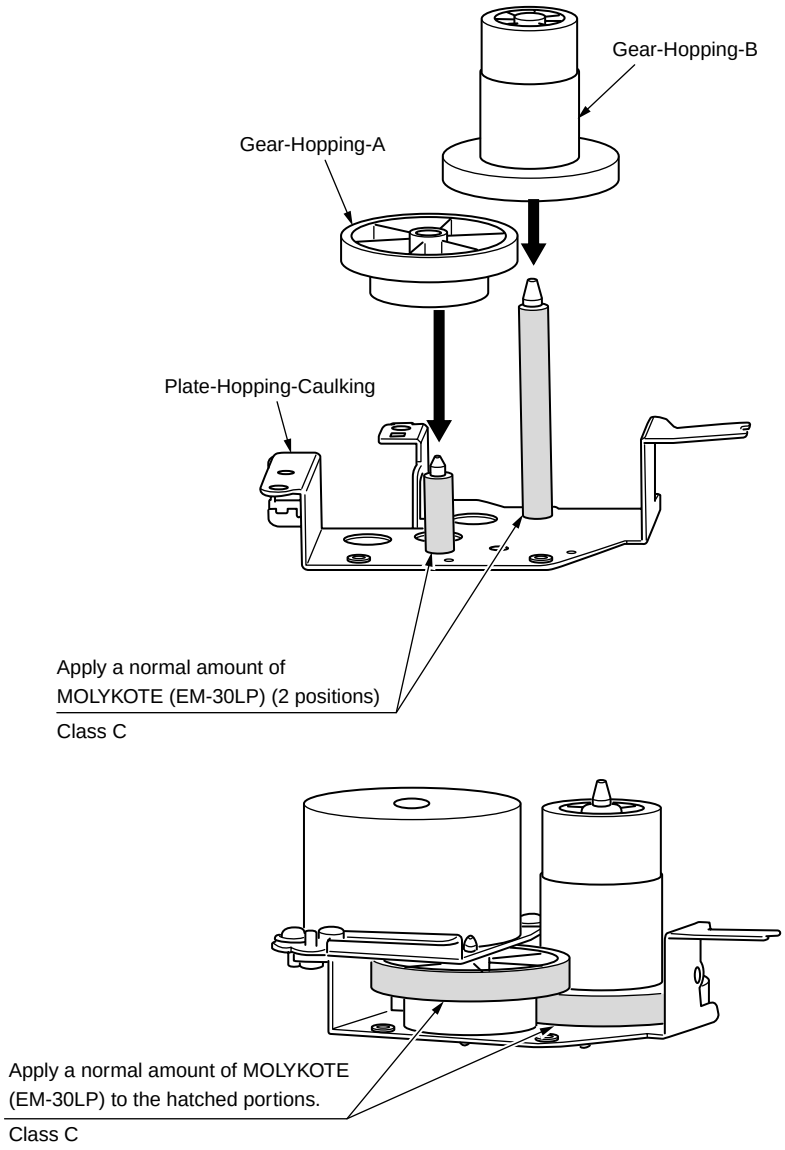


② Guide Assy.-Side-R

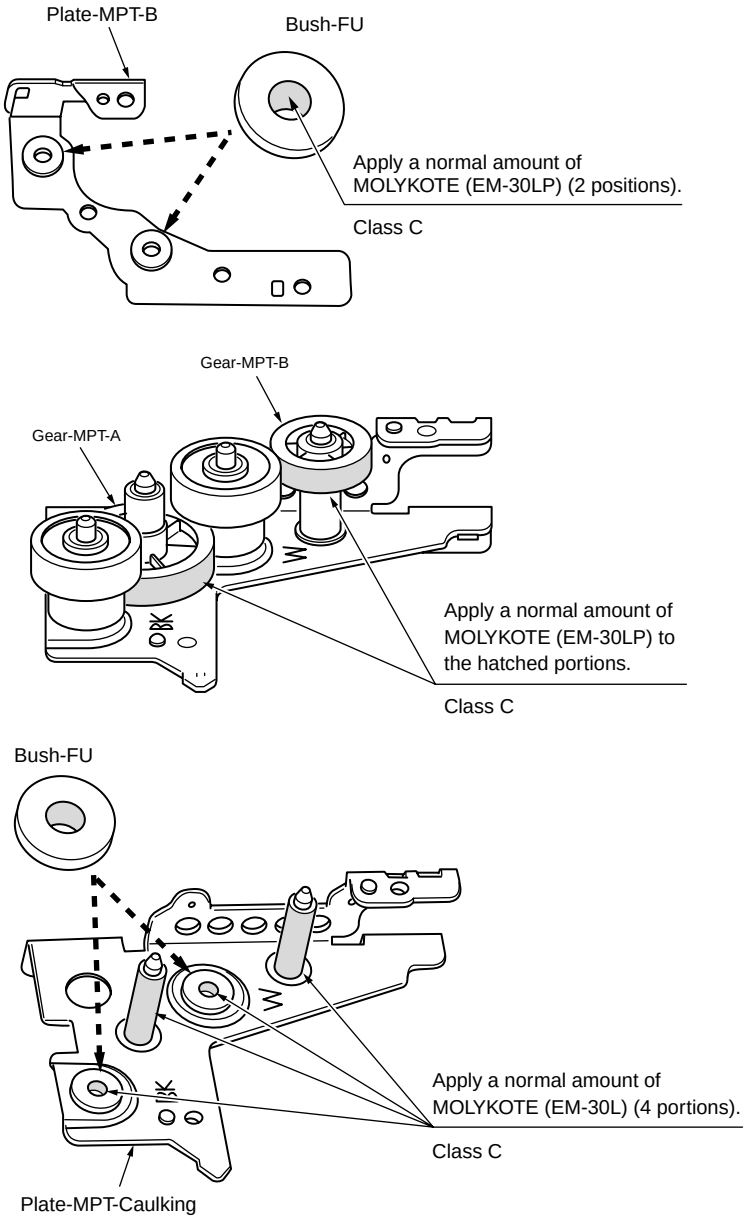


After polish the terminals to luster with BETCOM M-3, Tetra (C-9300) is soaked into cotton swab a little (Class S), and it coated on terminals. (13 positions)

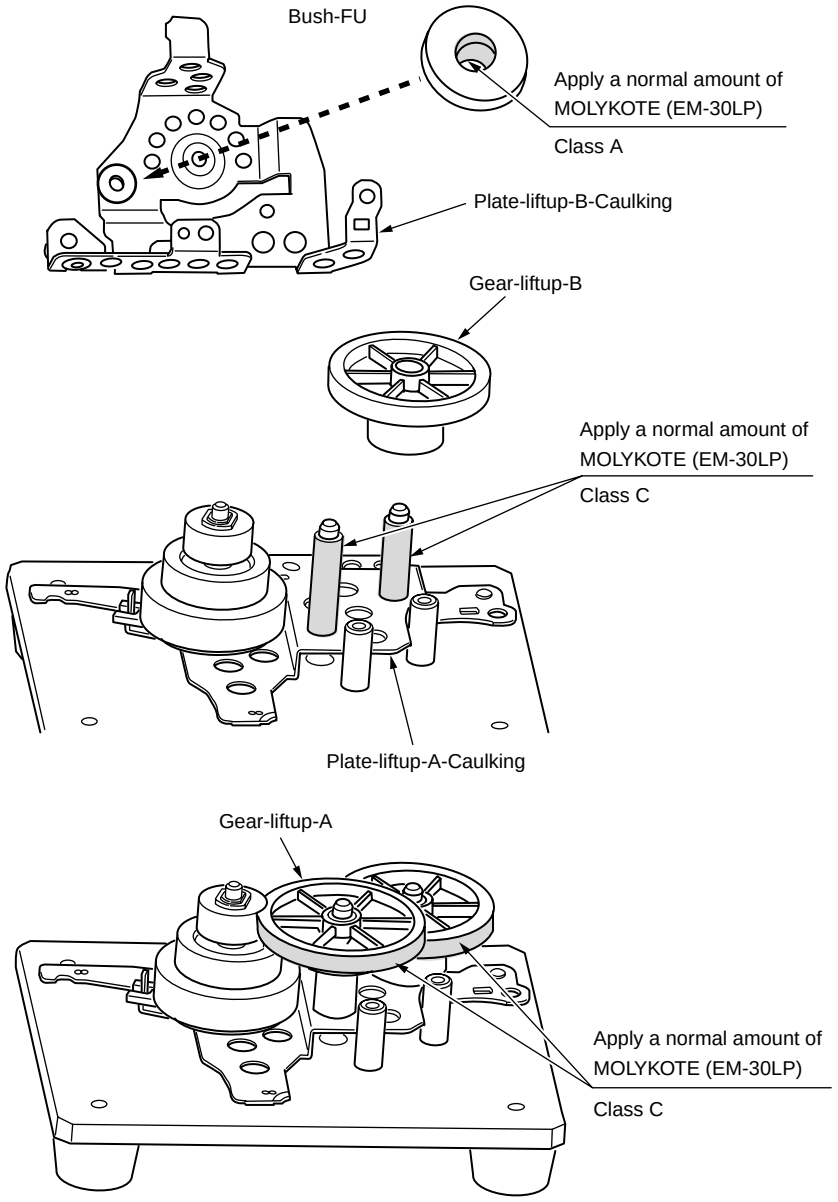
③ Gear Assy.-Hopping



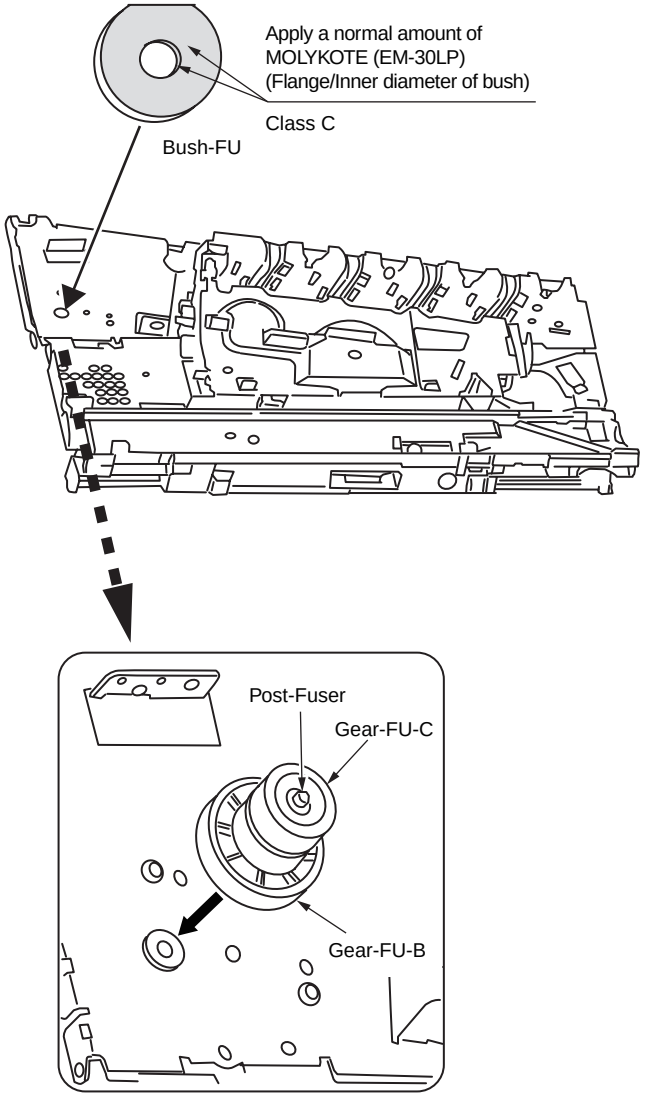
④ Gear Assy.-MPT



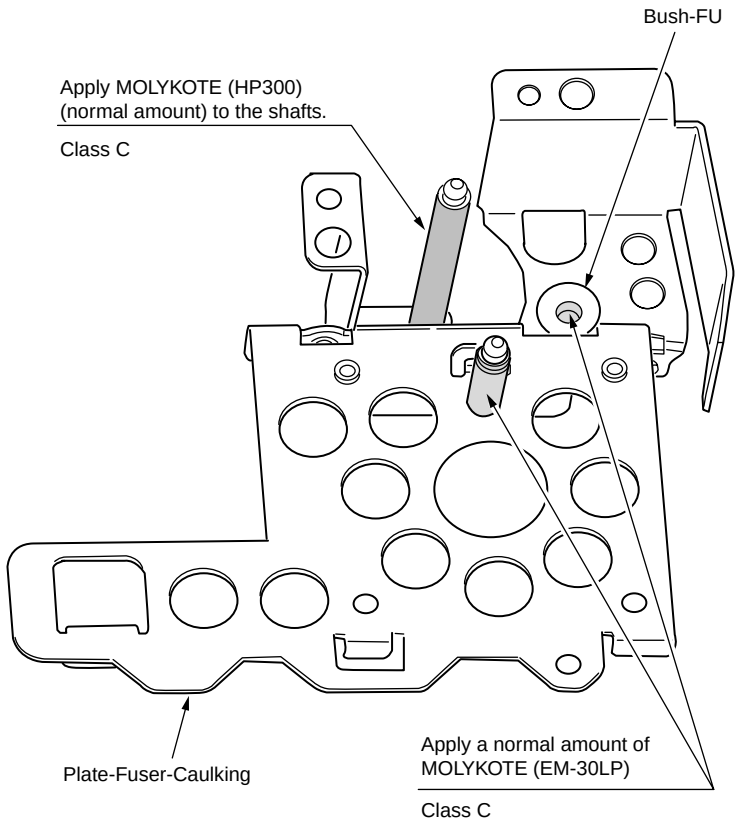
⑤ Gear Assy.-ID-Liftup



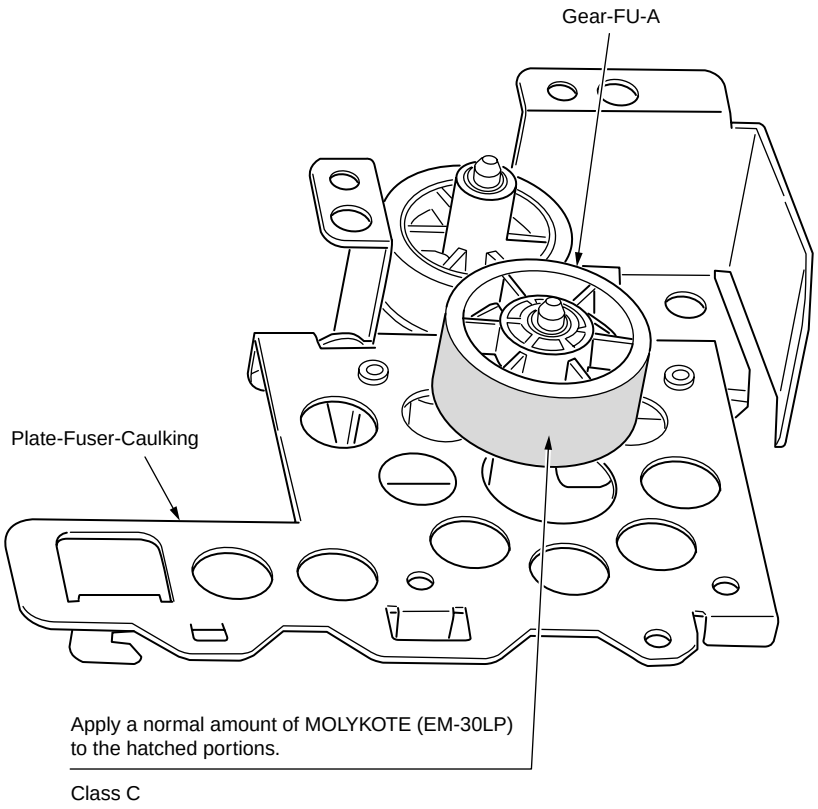
⑥-1 Plate Assy.-Side-R



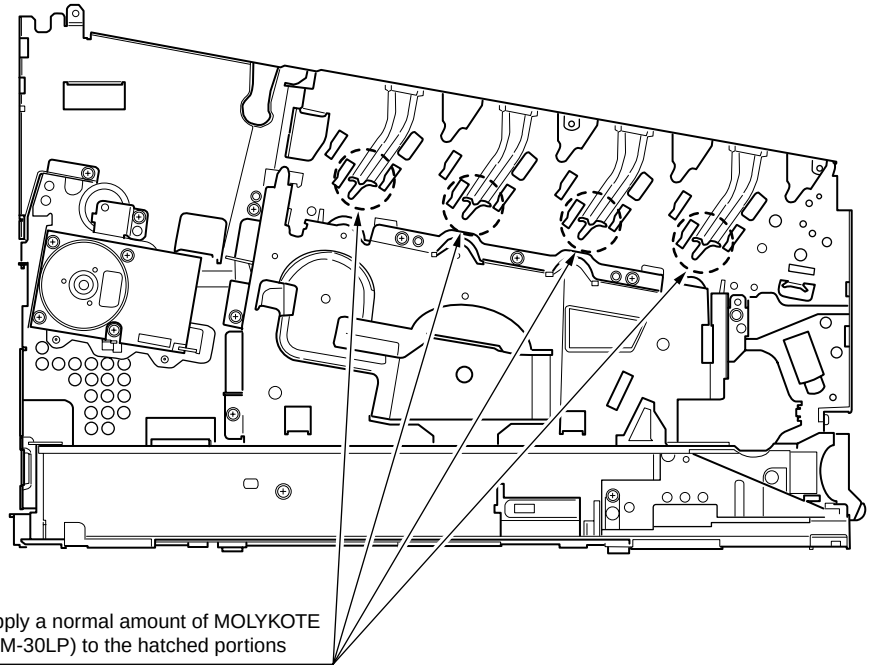
⑥-2 Plate Assy.-Side-R



⑥-3 Plate Assy.-Side-R



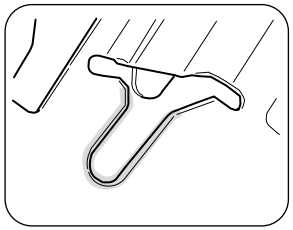
⑥-4 Plate Assy.-Side-R



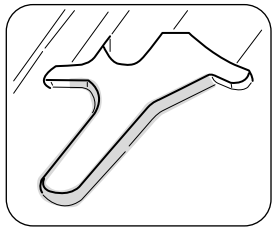
Apply a normal amount of MOLYKOTE (EM-30LP) to the hatched portions

Class C (4 positions)

Expanded view

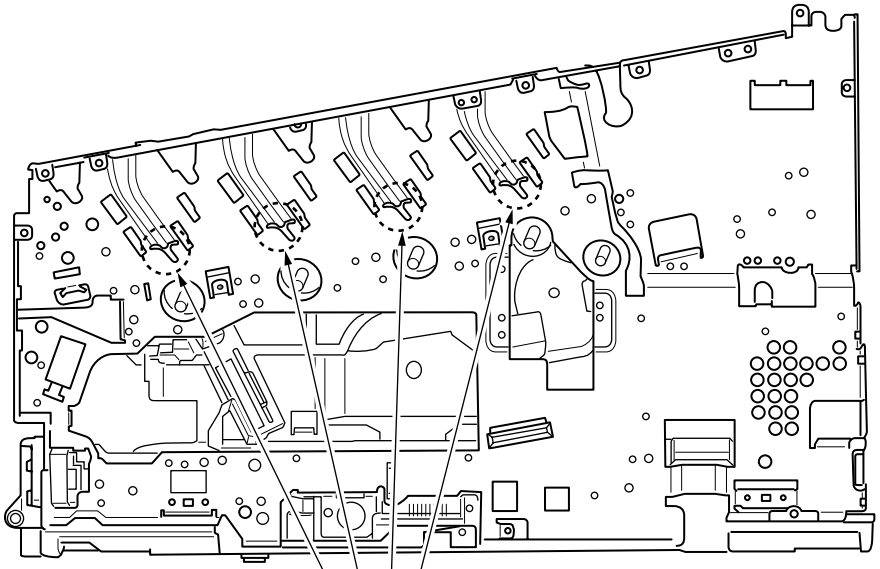


Apply EM-30LP (Class C) on the side surface. (4 positions)



Apply EM-30LP (Class C) on the edge surface. (4 positions)

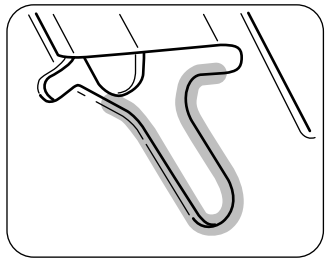
⑥-5 Plate Assy.-Side-R



Apply a normal amont of MPLYKOTE (EM-30LP) to the hatched portions (The reverse side of ⑥-4)

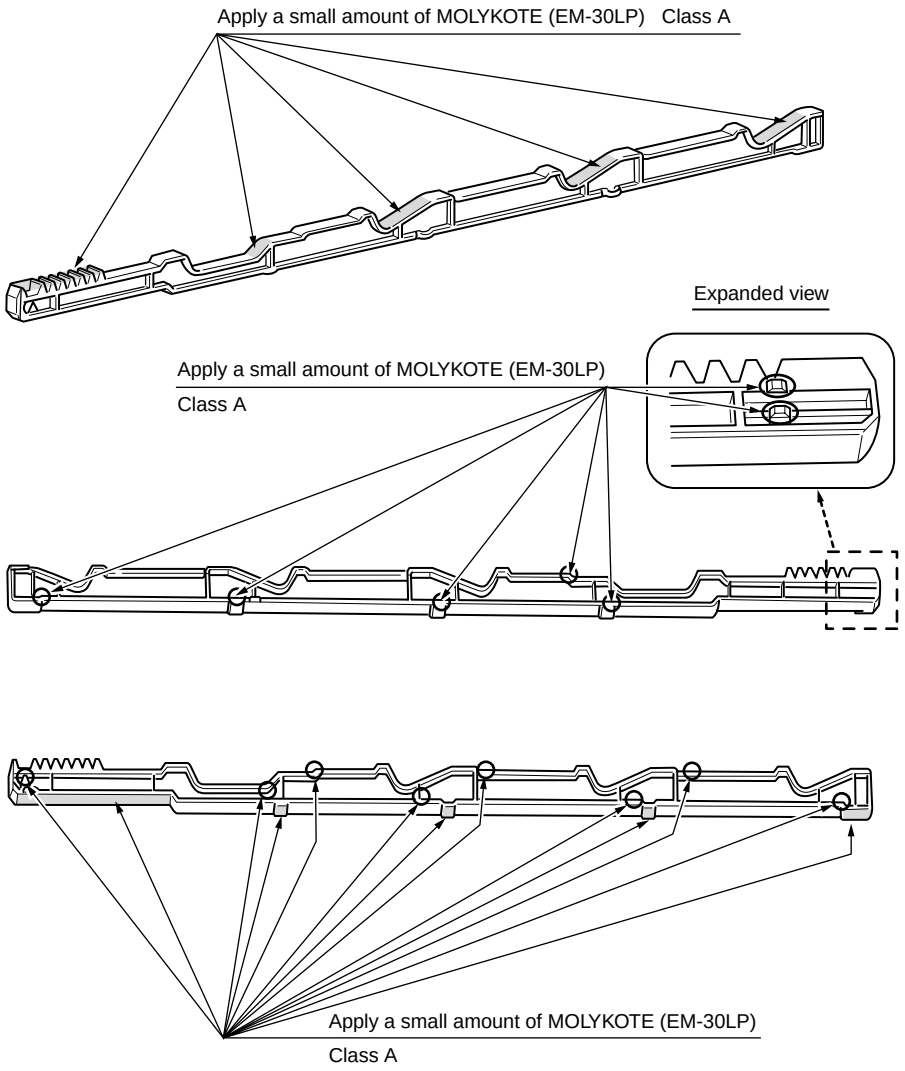
Class C

Expanded view

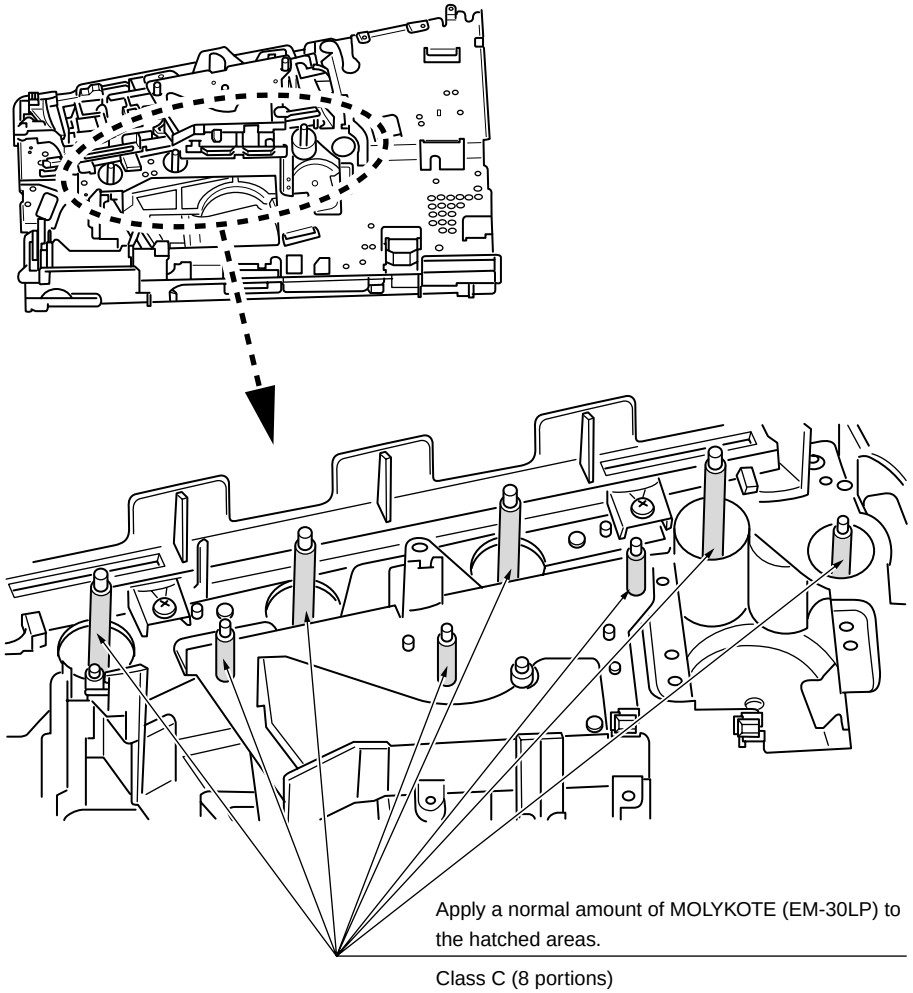


Apply EM-30LP (Class C) on the side surface. (4 positions)

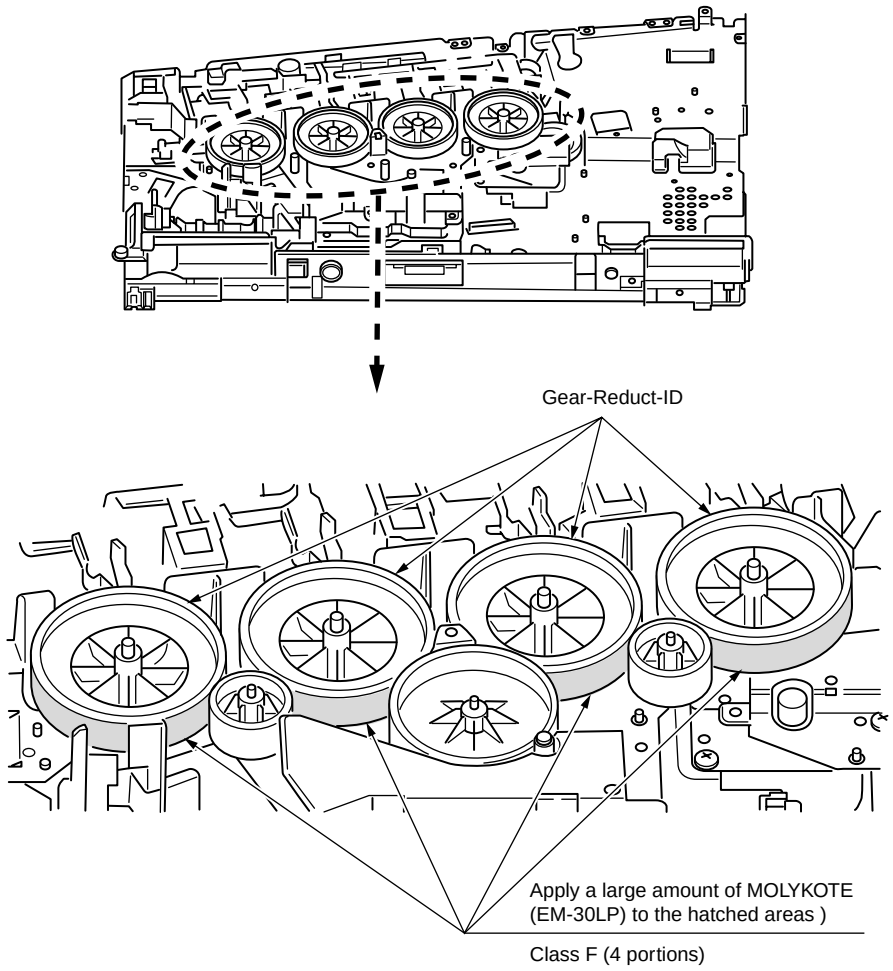
⑥-6 Plate Assy.-Side-R



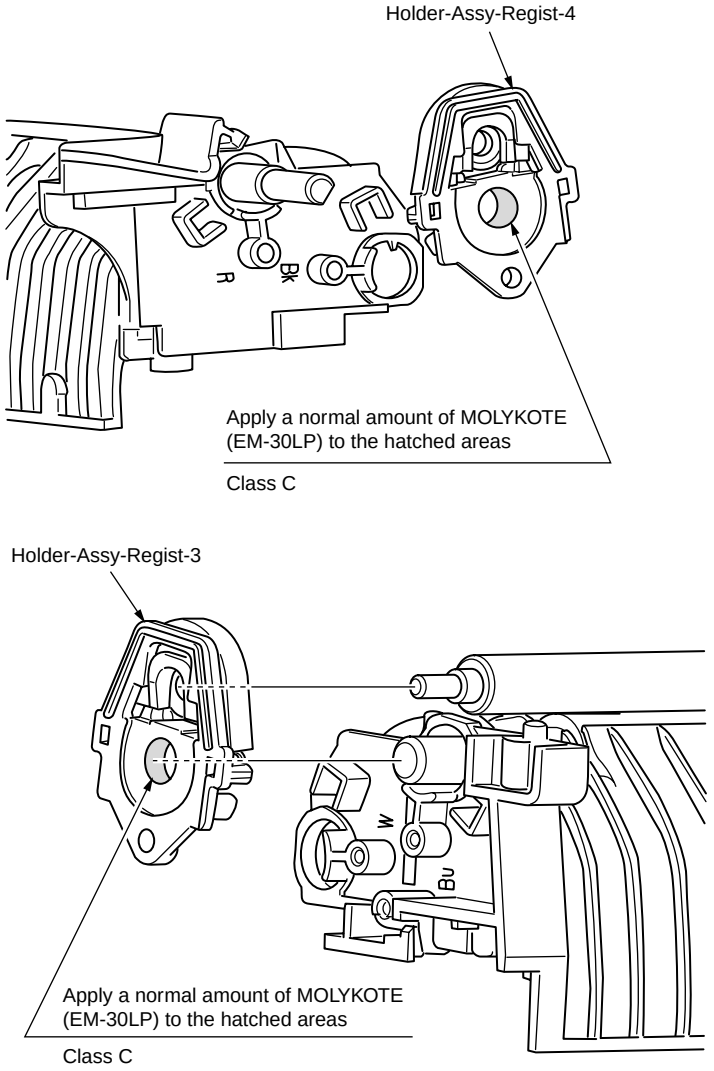
⑥-7 Plate Assy.-Side-R



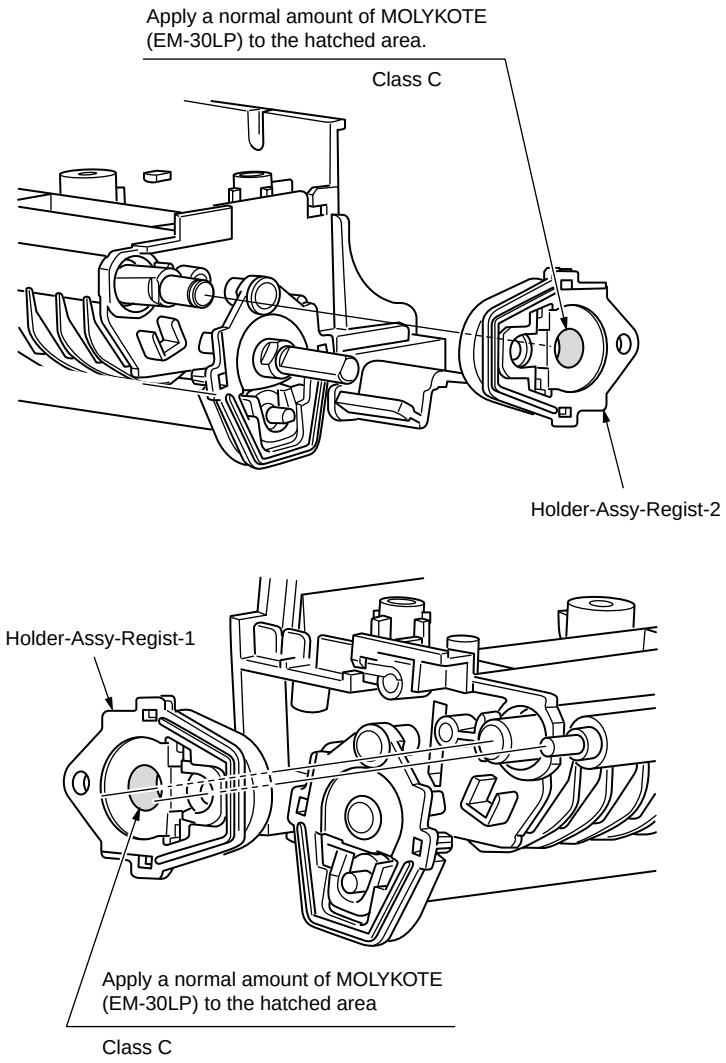
⑥-8 Plate Assy.-Side-R



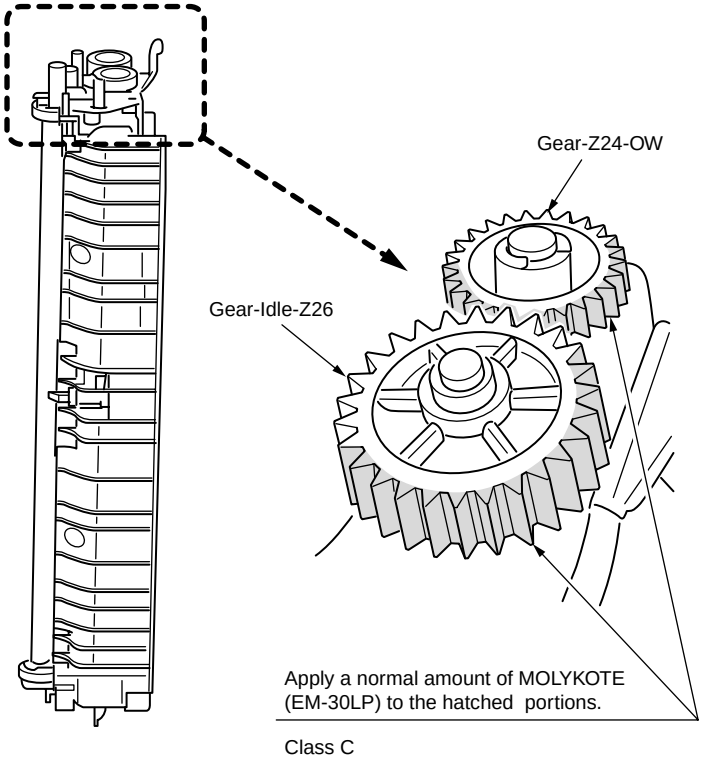
⑦-1 Roller Assy.-Regist



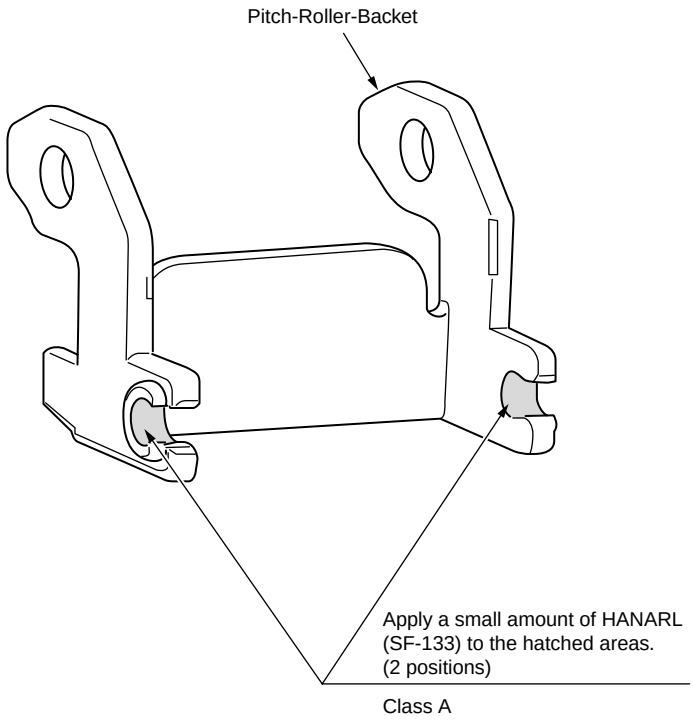
⑦-2 Roller Assy.-Regist



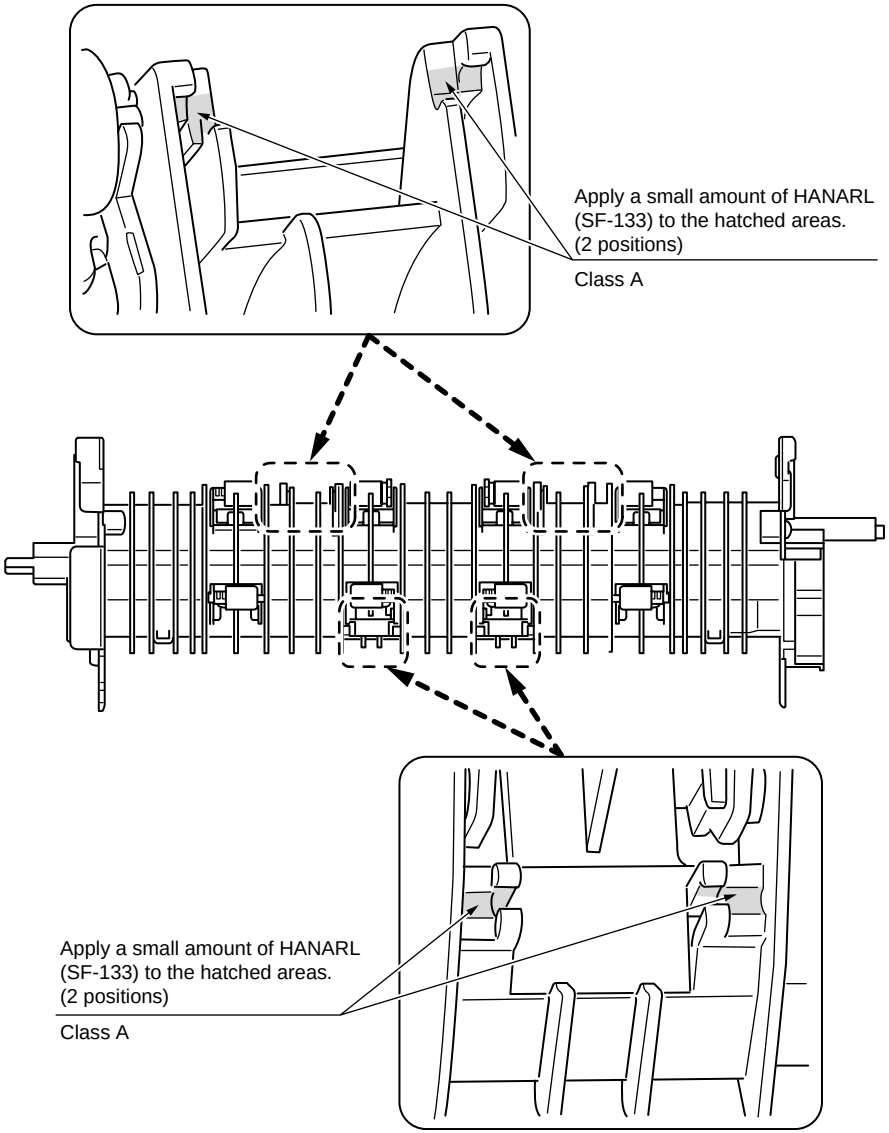
⑦-3 Roller Assy.-Regist



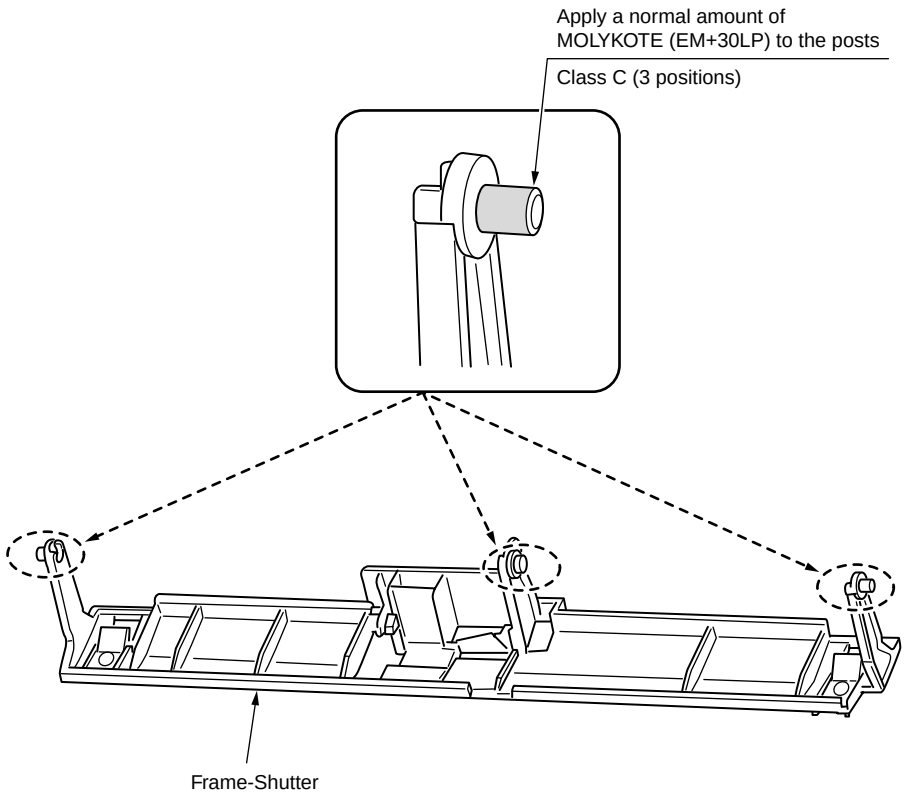
⑧-1 Guide Assy.-Eject_Upper



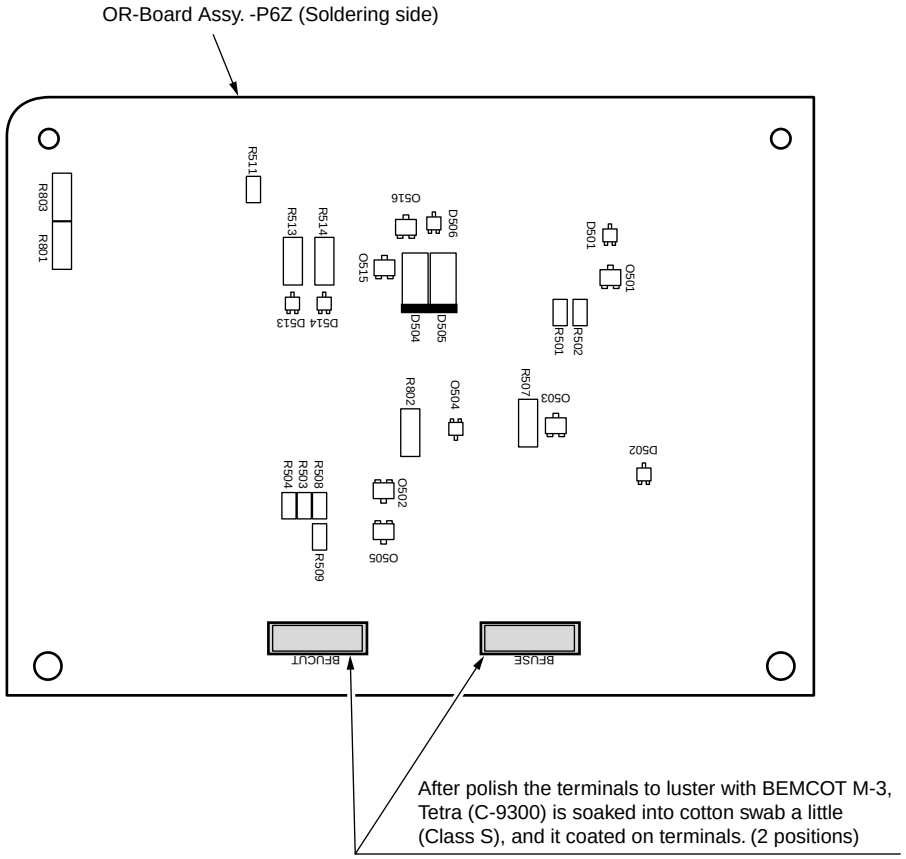
⑧-2 Guide Assy.-Eject_Upper



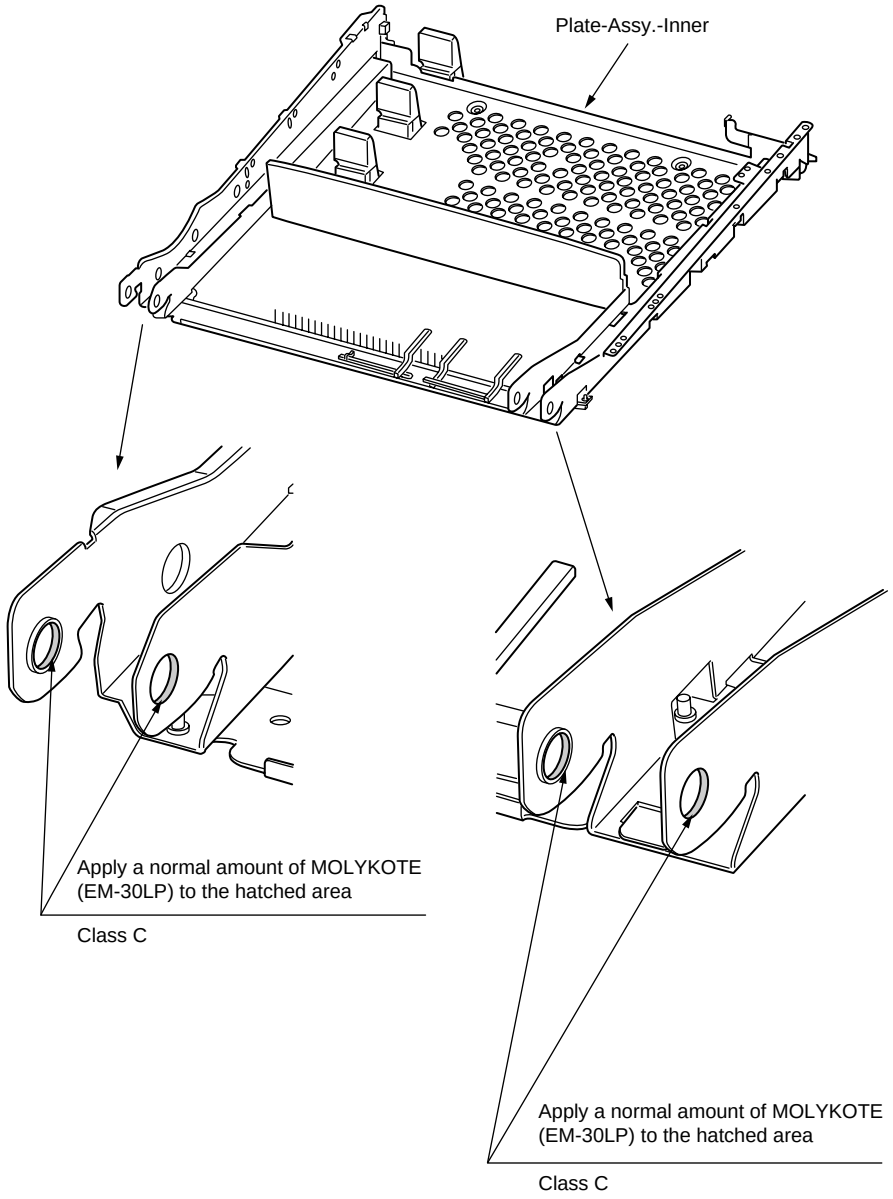
⑨ Sensor-Assy-Regist



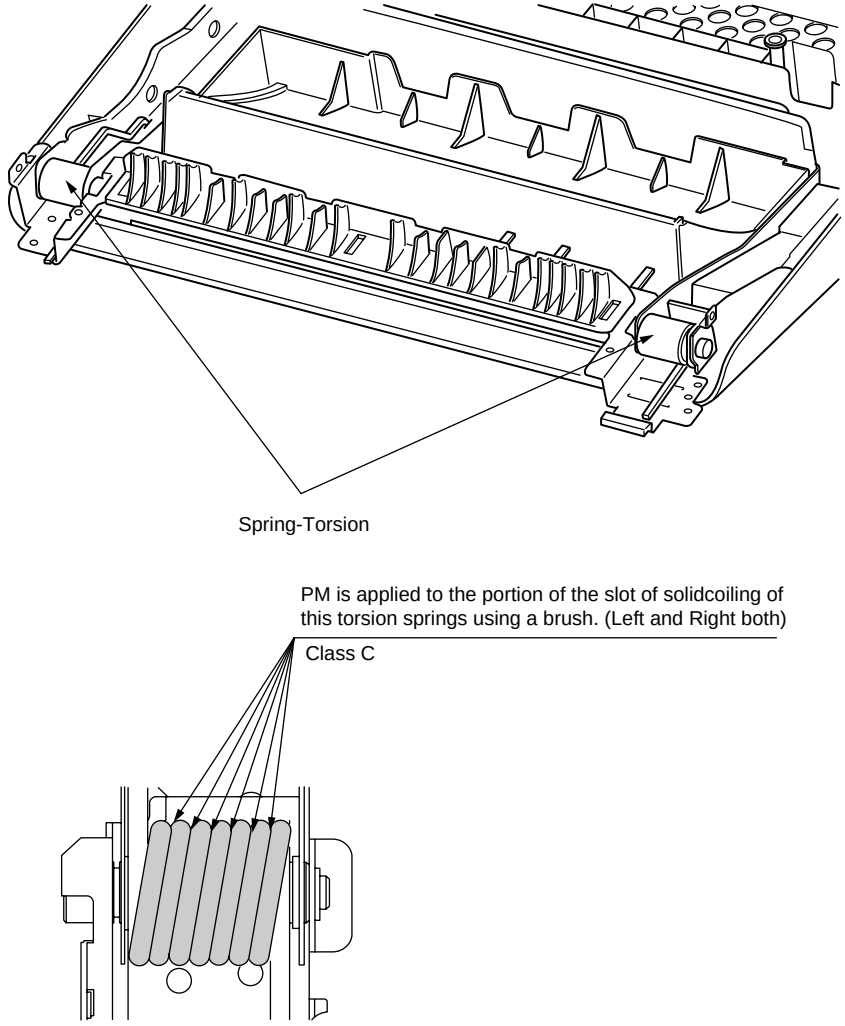
⑩ Frame Assy



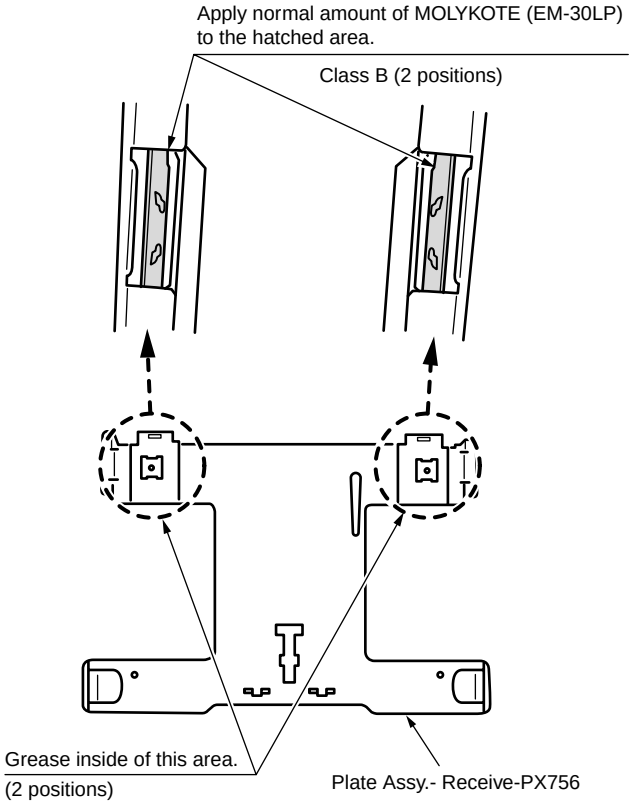
⑪-1 Cover-Assy-TOP

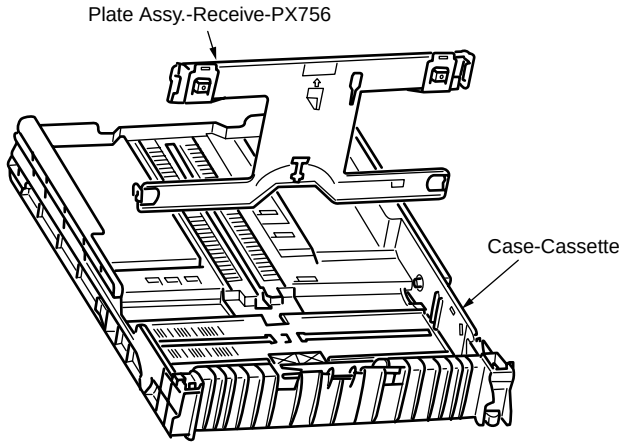


⑪-2 Cover-Assy-TOP

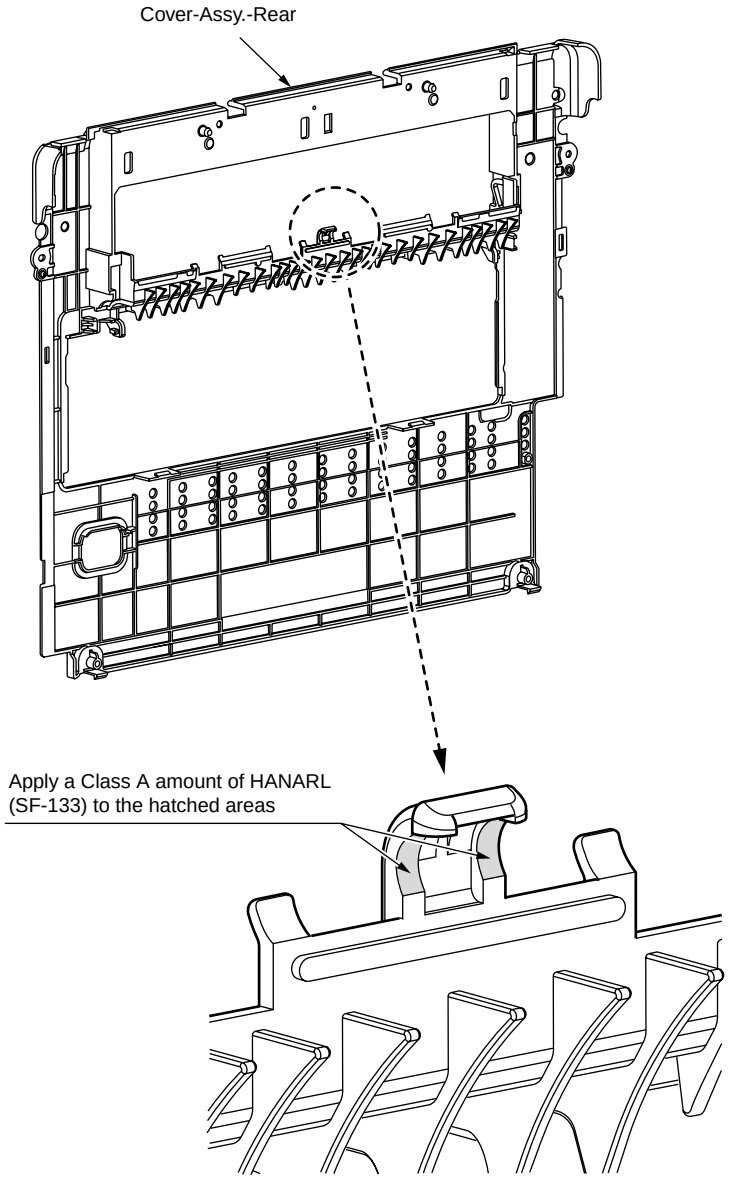


⑫ Cassette Assy.

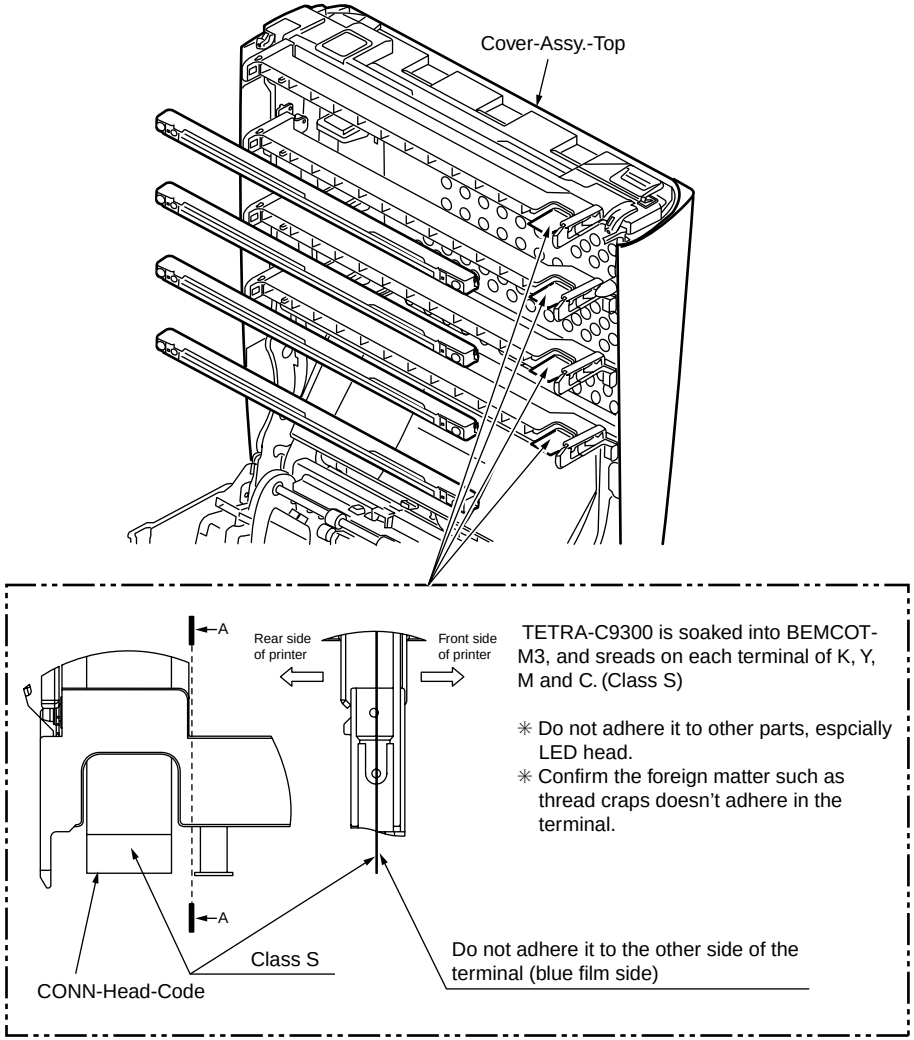




⑬-1 Printer Unit



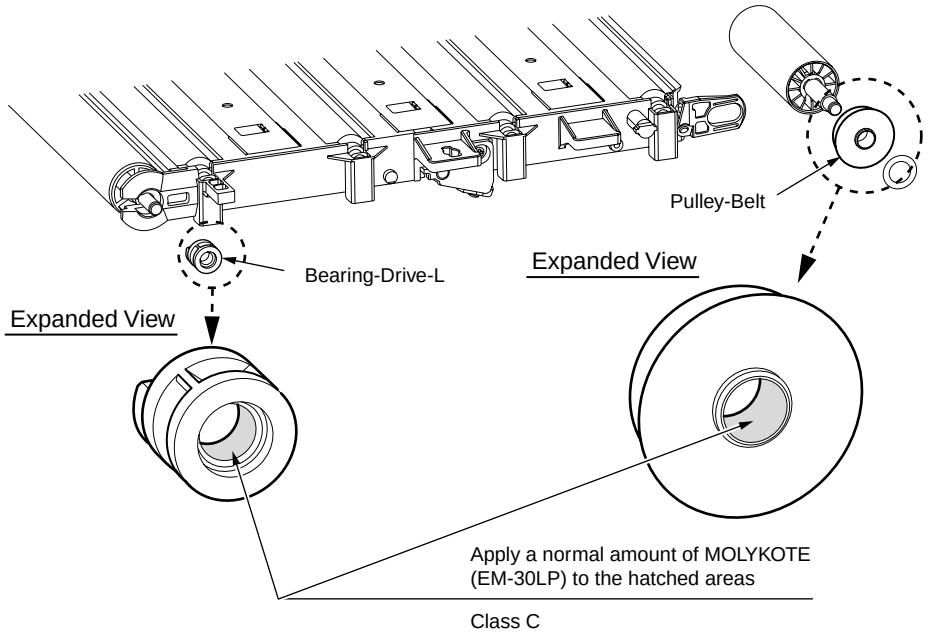
⑬-2 Printer Unit

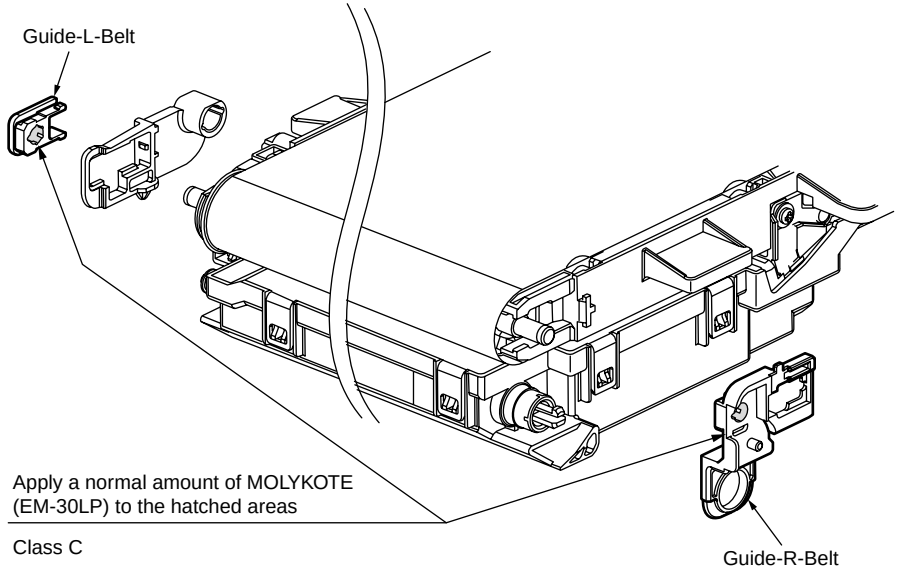


TETRA-C9300 is soaked into BEMCOT-M3, and sreads on each terminal of K, Y, M and C. (Class S)

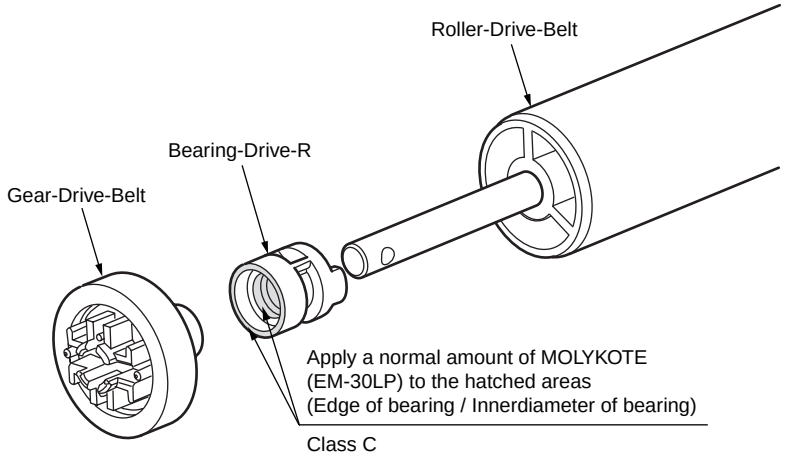
✳ Do not adhere it to other parts, espcially LED head.
✳ Confirm the foreign matter such as thread craps doesn't adhere in the terminal.

⑭ Belt-Assy. PX756

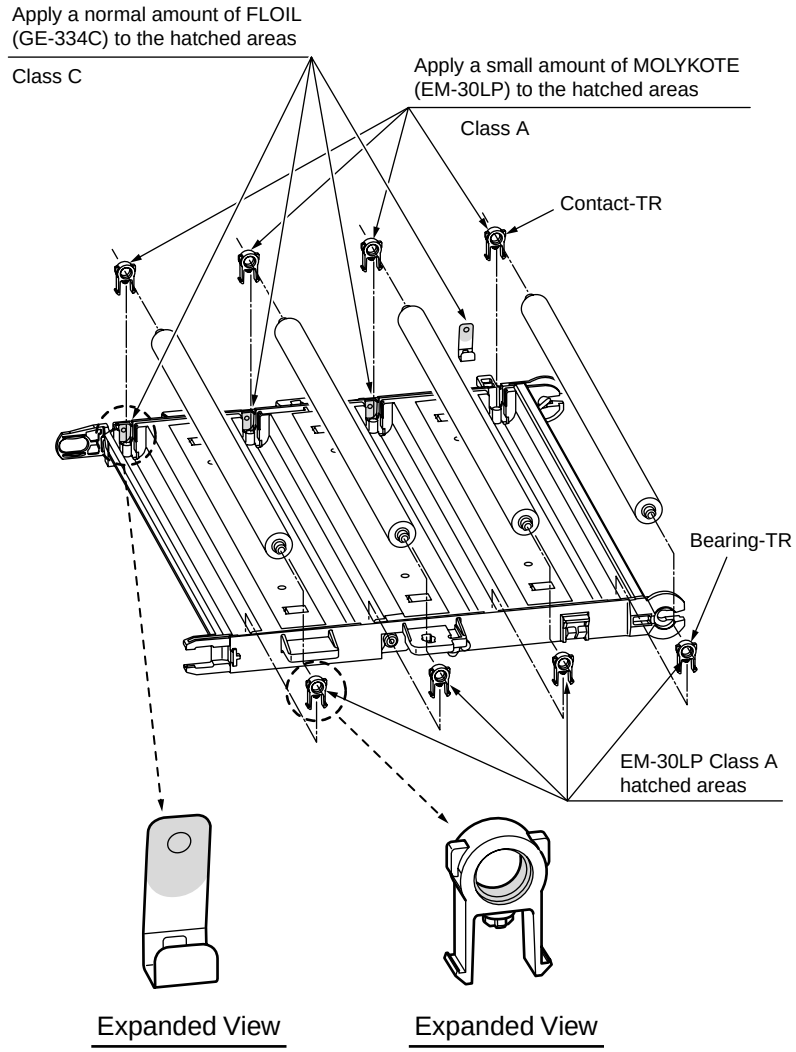




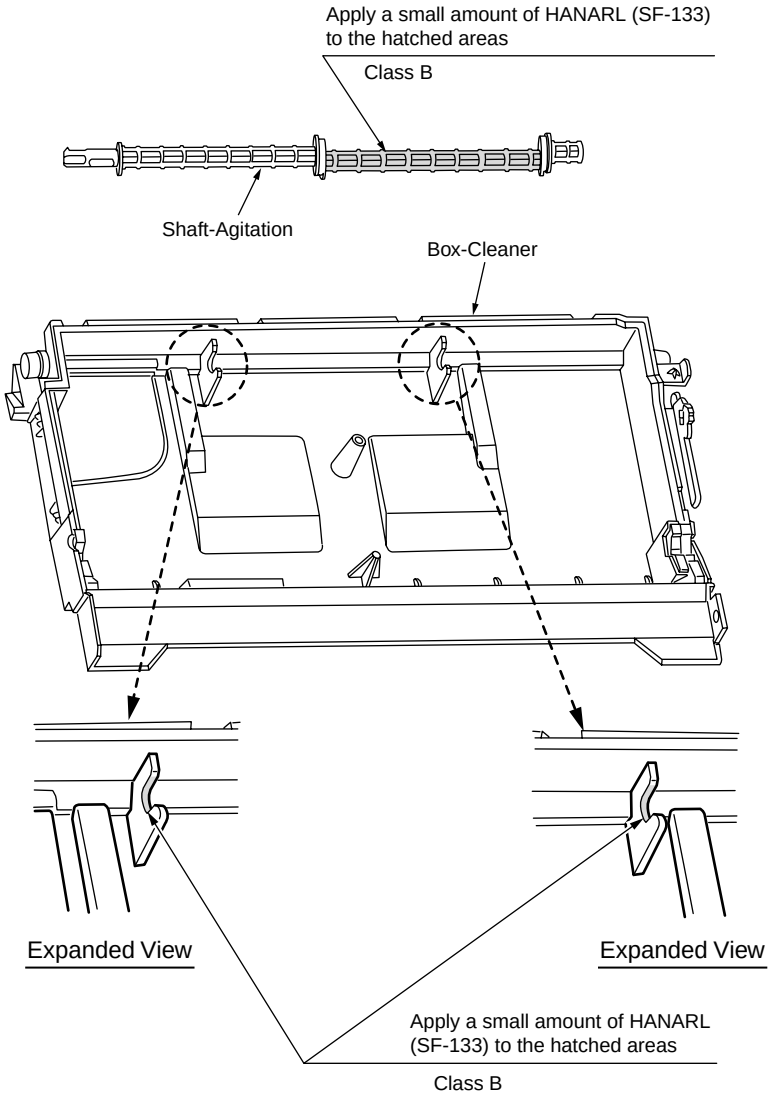
⑮ Roller-Assy. Drive



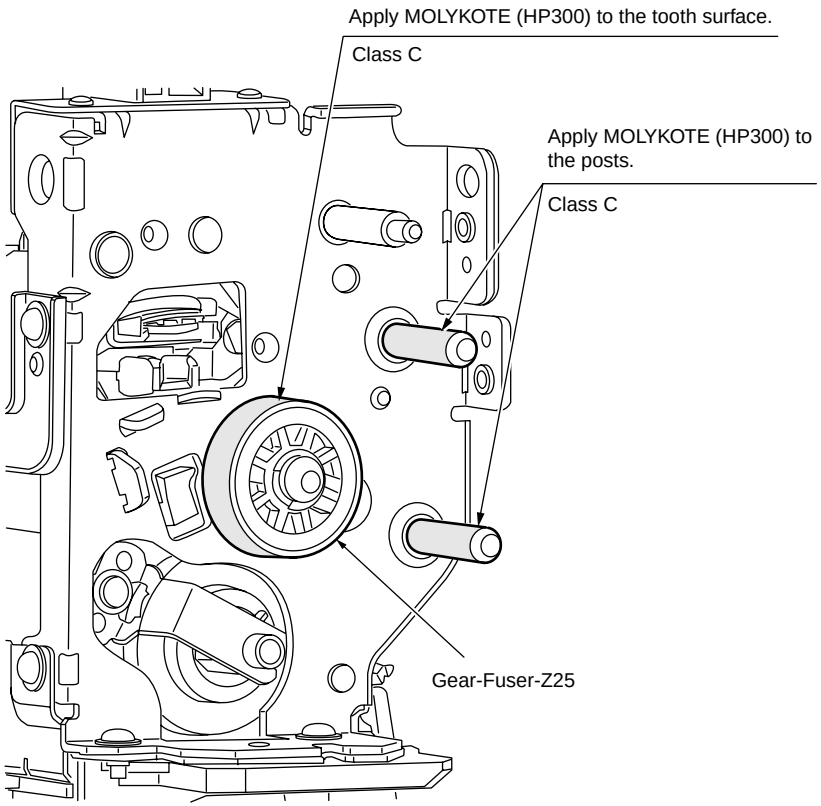
⑯ Frame-Assy.-Belt



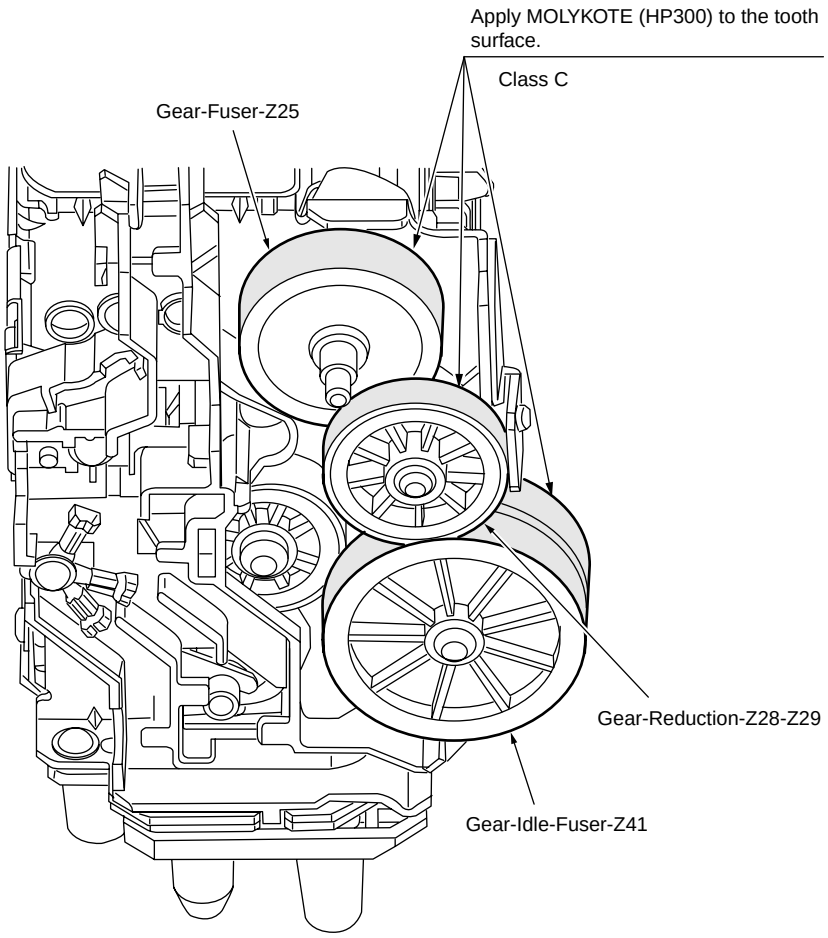
⑰ Box-Assy.-Cleaner



⑱-1 Fuser-Unit-PX756



⑱-2 Fuser-Unit-PX756



6. MAINTENANCE MENUS

The Printer can be adjusted by using Maintenance Utility, or button operation on its operator panel.
On the panel, maintenance menus are provided in addition to general menus. Select the menu intended for each adjustment purpose.

6.1 System maintenance menu (For maintenance personnel).....6-2
6.2 Maintenance Utility.....6-4
6.3 User maintenance menu functions.....6-6
6.4 Setup after part replacement.....6-33
6.5 Manual density adjustment setting.....6-35
6.6 Boot Menu List.....6-36

6.1 System maintenance menu (For maintenance personnel)

This menu is activated when the power is turned with the **MENU**∧ and **MENU**∨ and **HELP** buttons held down.

The menu is displayed in English irrespective of the destination of the product.

Note! Since this menu is changed depending on the destination or for other reason, it is not disclosed to the end users.

Table 6-1 Maintenance menu display table

Category	Item (1st Line)		Value (2nd Line)	DF	Functions
System Maintenance	Enter Password		******	000 000	Enters a password to enter the system maintenance menu. The default is “000000”. The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.
	OKIUSER		ODA OEL APS JP1 JPOEM1 OEMA OEML	*	Used to set the destination. JPOEM1: Japan OEM OEMA: Overseas OEM for A4 default OEML: Overseas OEM for Letter default When the menu is dismissed, the printer is automatically rebooted.
	Maintenance Menu				Display condition: The encryption SD memory card function is disabled.
		Format SD Card	Execute	-	Initializes an SD memory card. Pressing the Enter button displays the confirmation message: Are You Sure? Yes No No restores the display of this menu. Yes exits the menu, starting formatting an SD memory card that has been installed on the printer. Display condition: An SD memory card has been installed on the printer (Boot Menu-Storage Setup-Enable SD memory card has been set to YES).

Category	Item (1st Line)		Value (2nd Line)	DF	Functions
System Maintenance	Maintenance Menu	Format Flash ROM	Execute	-	Initializes flash ROM. Pressing the Enter button displays the confirmation message: Are You Sure? Yes No No restores the display of this menu. Yes exits the menu, starting formatting a resident (on-board) flash device of the printer. * Never use this option.
		Reset EEPROM	Execute	-	Resets the information in EEPROM to factory default settings. The printer is rebooted automatically after that. * This does not initialize part of special information in the EEPROM.
	Maintenance Print Menu		Enable Disable	*	Sets whether to enable or disable display of ‘Print Information’-‘ID Check Pattern’ and ‘Engine Status’. Disable does not display them in the Function menu. After change of the setting for this option, exiting it restarts the printer.
	Fuse Keep Mode		Execute	-	Places the printer online, a command being issued from the CU to PU, when the Enter button is pressed. With the printer on, a consumable of the printer can be replaced with a new one, and then the printer can be checked for proper operation (where, not breaking the new one’s fuse, the printer does not count consumption as the life of the consumable replaced with the one). Turning off the printer ends the check mode, and then turning it on disables the mode.

Category	Item (1st Line)		Value (2nd Line)	DF	Functions
System Maintenance	Personality	XPS	Enable Disable	*	
		IBM 5577	Enable Disable	*	Changes the support PDL language default based on the destination of the printer. Under 'Print Setup' -'Personality' in the Function menu, the printer does not display languages disabled with this option. Displaying INVALID DATA, the printer discards print data received in a language disabled with the option.
		IBM PPR III XL	Enable Disable	*	
		EPSON FX	Enable Disable	*	
		HP-GL/2	Enable Disable	*	
	PDF Paper Size		Current Tray Size Size in PDF file	*	Paper size Select of PDF Direct Print. Current Tray Size : It selects the current tray, and it lets fit paper size of the tray. Size in PDF file : It refers to the paper size in a PDF file.
	Change Password			-	Changes a password. Pressing the Enter button with this option displayed displays 'NEW PASSWORD' and 'VERIFY PASSWORD', and then a new password can be entered.
		New Password	****** ******	-	Sets a new password to enter the System Maintenance menu. Six to twelve alphanumeric characters can be entered as the password.
		Verify Password	****** ******	-	Prompts a user to verify and enter again the new password that the use set for NEW PASSWORD to enter the System Maintenance menu. Six to twelve alphanumeric characters can be entered as the password.
	Diagnostic Mode			-	Enters the engine self-diagnostic mode.

6.2 Maintenance Utility

The adjustments described in table 6-2 should be made by using Maintenance Utility. Details on the utility are as follows:

(1) Maintenance Utility operation manuals:

42678801FU01 Version 30.0 or higher (Japanese)

42678801FU02 Version 30.0 or higher (English)

(2) Maintenance Utility program:

Applicable operating system	File name	Part number
Win2000/XP/Vista/7 (Japanese/English)	MuWin.zip	42678801FW01 Version 1.34.0 or higher

Table 6-2 Maintenance Utility Adjustment Items

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operator panel (section in this maintenance manual)
1	Board Replace-ment	Copies the information from the EEPROM on the PU board, and copies the EEPROM setting value on CU board. Purpose: To copy the information stored on the EEPROM on the PU or CU board when the CU/ or PU board needs to be replaced with another one due to maintenance.	Section 2.4.1.1.9	Unavailable
2	Serial Number Information Setting	Rewrites the serial number recorded on the PU, and Selects the printer serial number recorded on the CU, output mode, and rewrites the device serial number. Purpose: To configure a maintenance replacement board to which the information on the PU board cannot be copied (due to an interface error).	Section 2.4.1.1.10.3	Unavailable
3	Factory/ Shipping Mode	Switches between Factory and Shipping modes. Purpose: To configure a maintenance replacement PU board to which the information on the EEPROM on the PU board cannot be copied (due to an interface error). The maintenance board is set to the Factory mode usually by default and, by using this function, must be set to the Shipping mode.	Section 2.4.1.1.10.4	Section 6.3.2.10
4	Board items setting information	Checks serial number information and the Factory/Shipping mode.	Section 2.4.1.1.7	Unavailable
5	Network Software	Updates the NIC software.	Section 2.4.2.2.17	Unavailable
6	Mac address setting	Sets the Mac address	Section 2.4.2.2.5	Unavailable
7	Counter mainte-nance function	Copies the counter value of each consumable: Drum counter (Y, M, C or K) Fuser counter Belt counter Toner counter (Y, M, C or K) Purpose: To copy the counter value of each consumable in the printer to use in another printer.	Section 2.4.1.2.1	Unavailable
8	Brand/PnP information	Sets or checks the (CU) destination, device identification and USB identification.	Section 2.4.1.2.9	Section 6.4.3
9	Network Log Save function	Stores Network log files.	Section 2.4.2.2.14	Unavailable

	Item	Adjustment	Section in Maintenance Utility Operation manual	Operation from operator panel (section in this maintenance manual)
10	Send to file	Transmits a specified file.	Section 2.4.1.2.15	Unavailable
11	PU Log File Save function	Stores PU log flies.	Section 2.4.1.2.16	Unavailable
12	Counter/ Toner information	Checks the current consumable counter values.	Section 2.4.1.3.1	Section 6.3.2.8
13	Menu setting values	Displays the menu settings set on the printer (CU).	Section 2.4.1.3.2	Print a configuration report (Menu Map) (refer to User's Manual).
14	Printer information	Checks the Mac address and each firmware version.	Section 2.4.1.3.3	Print a configuration report (Menu Map) (refer to User's Manual).
15	Memory information	Checks the information on the CPU and memory installed on the printer (CU).	Section 2.4.1.3.4	Print a configuration report (Menu Map) (refer to User's Manual).
16	Test print	Executes the local print function and sends a specified file. Purpose: To check the printer on a stand-alone basis and send a download file.	Section 2.4.1.4.1	Perform local printing (refer to System Specification
17	Save local print data	Stores files of local print data	Section 2.4.2.4.2	Unavailable
18	Switch scan test	Executes the switch scan test. Purpose: To check each sensor for proper operation.	Section 2.4.1.5.1	Section 6.3.2.3
19	Motor and Clutch Tests	Executes the motor clutch test. Purpose: To check each item, such as a motor or clutch, for proper operation.	Section 2.4.1.5.2	Section 6.3.2.4
20	Color registration adjustment function	Executes the color registration adjustment test.	Section 2.4.1.5.3	Section 6.3.2.6
21	Density adjustment test	Executes the density adjustment test.	Section 2.4.1.5.4	Section 6.3.2.7
22	Automatic Density Adjustment Control Parame-ters Setting (DENSITY ADJUST PAR-SET)	Sets the auto density setting control parameter.	**Never use this option.**	Section 6.3.2.7
23	Counter	Checks the consumable, continuous consumable and waste toner counter values.	Section 2.4.1.5.6	Section 6.3.2.8
24	Local Parame-ters Setting/ Information	Switches between the Factory and Shipping modes and checks the status of the fuse.	Section 2.4.1.5.7	Section 6.3.2.10
25	Engine Parame-ters Setting	Makes an engine parameter setting.	Section 2.4.1.5.8	Section 6.3.2.11
26	Translate Parame-ters Setting	Makes a print media transfer parameter setting.	Section 2.4.1.5.9	Section 6.3.2.11
27	PU diagnosis log save function	Stores self-diagnosis log files of printer paper running system.	Section 2.4.1.5.10	Unavailable

Note! Do not operate or set options marked with 'Never use this option', or a malfunction is potentially caused.

6.3 User maintenance menu functions

6.3.1 Maintenance menu (for end-users)

Some general menu categories on the operator panel of C831/C841 serve as maintenance menus (but are not system maintenance menus).

The options available in the menus are as follows:

Default setting in shade area

Item		Settings	Functions
System Adjust	Time Period to Go Power Save Mode	1 min 2 min 3 min 4 min 5 min 10 min 15 min 30 min 60 min 120 min	Sets the time to move to the power save mode.
	Time Period to Go Sleep Mode	1 min 2 min 3 min 4 min 5 min 10 min 15 min 30 min 60 min 120 min	Sets the time to move to the sleep mode from the power save mode.
	Time Period to Go Auto Power OFF	1 Hr. 2 Hr. 3 Hr. 4 Hr. 8 Hr. 12 Hr. 18 Hr. 24 Hr.	Sets the time to move the off mode from the start of the standby mode.
	Clearable Warning	Online Job	Sets the timing for clearable warnings to disappear.
System Adjust	Auto Continue	On Off	Sets whether to recover the printer automatically upon a memory overflow or tray request.
	Manual Timeout	Off 30 sec 60 sec	Sets the time to wait for feeding paper for printing a job at manual feeding. The job is cancelled when the paper is not loaded within the time.
	Wait Timeout	Off 5 sec 10 sec 20 sec 30 sec 40 sec 50 sec 60 sec 90 sec 120 sec 150 sec 180 sec 210 sec 240 sec 270 sec 300 sec	Sets the time period between stopping job data reception and forced printing of a job. When a PostScript job, the job is not printed, being cancelled.
	Low Toner	Continue Stop	Sets the printing operation when a state that the printer is low on toner is detected. Continue allows the printer to continue printing while remaining online. Stop makes the printer offline.
	Jam Recovery	On Off	Sets whether to perform recovery printing when a paper jam occurs. Off cancels a job including the page being printed when the jam occurs.
	Error Report	On Off	Prints an error report when an internal error occurs. This option is available only for PostScript and PCL XL.

Item			Settings	Functions
System Adjust	Print Position Adjust	X Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	Adjusts the position of a whole printing image (in 0.25-mm increments) perpendicular to the direction of paper movement (i.e. horizontally).
		Y Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	Adjusts the position of a whole printing image (in 0.25-mm increments) parallel to the direction of paper movement (i.e. vertically).
		Duplex print X Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	During the flip-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-mm increments) perpendicular to the direction of paper movement (i.e. horizontally).
		Duplex print Y Adjust	0.00 mm +0.25 mm to +2.00 mm -2.00 mm to -0.25 mm	During the flip-side printing of duplex printing (when feeding from the duplex unit), adjusts the location of a whole printing image (in 0.25-mm increments) parallel to the direction of paper movement (i.e. vertically).
	Plain-Paper Black Setting		0 +1 +2 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of plain/BLACK printing.
	Plain-Paper Color Setting		0 +1 +2 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of plain/COLOR printing.
	Special paper 2 Black Setting		0 +1 +2 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of OHP transparency/ BLACK printing.
	Special paper 2 Color Setting		0 +1 +2 -2 -1	Performs micro adjustment when visible faded black print, or specks or streaks occur more frequently on print results of OHP transparency/ COLOR printing.

Item		Settings	Functions
System Adjust	SMR Setting	0 +1 +2 +3 -3 -2 -1	Makes a setting when print quality is uneven.
	BG Setting	0 +1 +2 +3 -3 -2 -1	Makes a setting when a dirty background results.
	Drum Cleaning	On Off	Sets whether to perform, for reduced white line jitter, image drum idling before printing.
	Hex Dump	Execute	Prints out data received in hexadecimal format.
Admin Setup	Enter Password	**********	Enters a password to start the administrator menu. The default is “aaaaaa”. The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.
	Network setup		
	Print setup		
	PS setup		
	PCL setup		
	XPS setup		
	IBM 5577 setup		
	HP-GL2 setup		
	Color setup		

Item				Settings	Functions
Admin Setup	Memory setup	Receive Buffer Size		Auto 0.5 MB 1 MB 2 MB 4 MB 8 MB 16 MB 32 MB	Sets receive buffer size.
		Resource Save Area		Auto Off 0.5 MB 1 MB 2 MB 4 MB 8 MB 16 MB 32 MB	Sets resource saving area size..
	Flash memory setup *1	Initialization		Execute	Initializes resident FLASH memory.
	SD card setup *2	Initialization		Execute	The printer deletes data stored in SD memory card.
		Change Partition	PCL nn%	nn%	Sets partition size.
			XX% Shared	mm%	
			PS ll%	ll%	
			<Apply>		
		Format		PCL Shared PostScript	Formats a specified partition.
	System setup	Near-Life Status		Enable Disable	Sets whether to control the LCD display when an image drum, fuser or belt near-life warning occurs.
		Near-Life LED		Enable Disable	Sets whether to control the LED turn-on when a toner, image drum, fuser or belt nearlife warning occurs.
		Standby screen display		Toner gauge Paper size	Selects information to display in the standby screen.

Item			Settings	Functions
Admin Setup	System setup	Panel contrast	-10 To 0 To +10	Adjusts a contrast value on LCD on the operator panel.
	Buzzer setup	Invalid operation sound	OFF Small Loud	Sets the buzzer volume in the invalid operation.
		Error occurrence sound	OFF Small Loud	Sets the buzzer volume in the occurrence of errors.
	Power Setup	Power Save	Enable Disable	Sets Enable/ Disable of the power save mode.
		Sleep	Enable Disable	Sets Enable/ Disable of the sleep mode.
		Auto power off	Enable Auto setting Disable	Sets the action of the Auto power-off. [Disable] cancels going to the off mode with time. In [Auto setting], the printer does not move to the off mode when the LAN cable is connected. However, it moves to the off mode when the USB cable or Centronnics parallel interface is connected. In [Enable], the printer moves to the off mode even when the LAN cable is connected.
	Change Password	New Password	**********	Sets a new password to enter Administrator Menu and [Boot Menu]. The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.
		Password Again	**********	Enters the new password set in [New Password] again to enter Administrator Menu and [Boot Menu]. The number of digits for the password is 6 to 12 digits of figures and small-case alphabets.
	Settings	Restore Defaults	Settings	Resets CU EEPROM, restoring user menu settings to their defaults.
		Save Settings	Execute	Saves current menu settings.
		Call Settings	Execute	Sets saved menu settings.

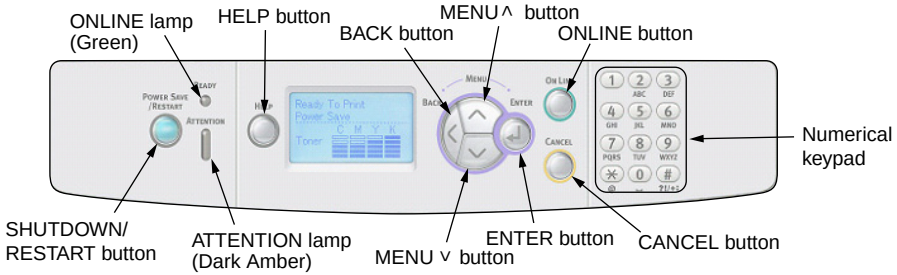
*1: The option is displayed when Boot Menu-Storage Setup-Enable Initialization is set to Yes.
*2: When Boot Menu-Storage Setup-Enable Initialization is set to Yes and an optional SD memory card is installed, the option is displayed.

6.3.2 Self-diagnostic mode

This section describes LEVEL 0 and LEVEL 1.

6.3.2.1 Operator panel

The following description on operating the self-diagnostic is provided, premised on the following operator panel layout:

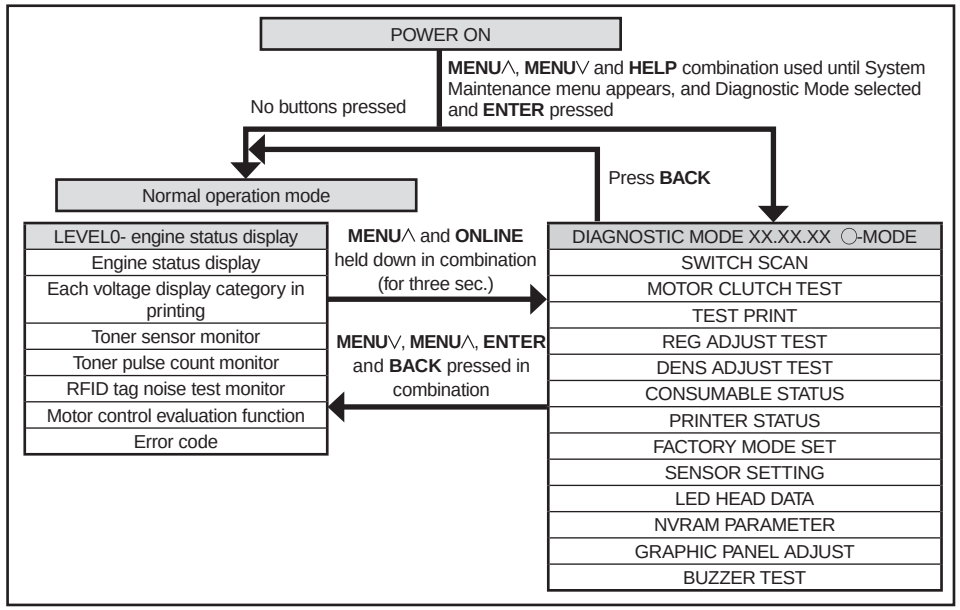


Self-diagnostic mode layout (Overall)

(1) Menu option display switching

The level in a shaded area XXXXX can be displayed only from another one.

Use the **MENU**∧ or **MENU**∨ button to display the menu option shown in a non-shaded area XXXXX .

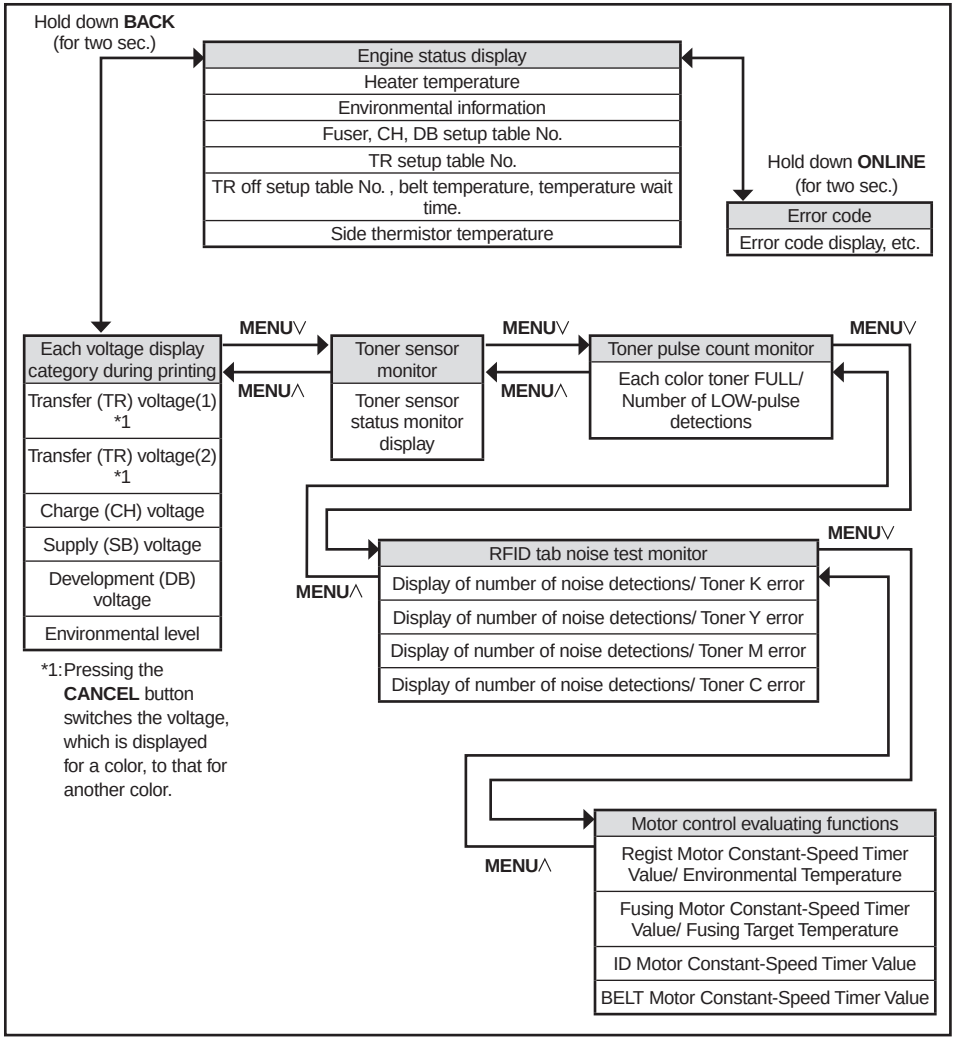


LEVEL0

(1) Menu option display switching

Hold down the **BACK** or **ONLINE** button or momentarily press the **MENU**∧ or **MENU**∨ button to display the option shown in a shaded area XXXX .

Use the **MENU**∧ or **MENU**∨ button to display the menu option shown in a non-shaded area XXXX .



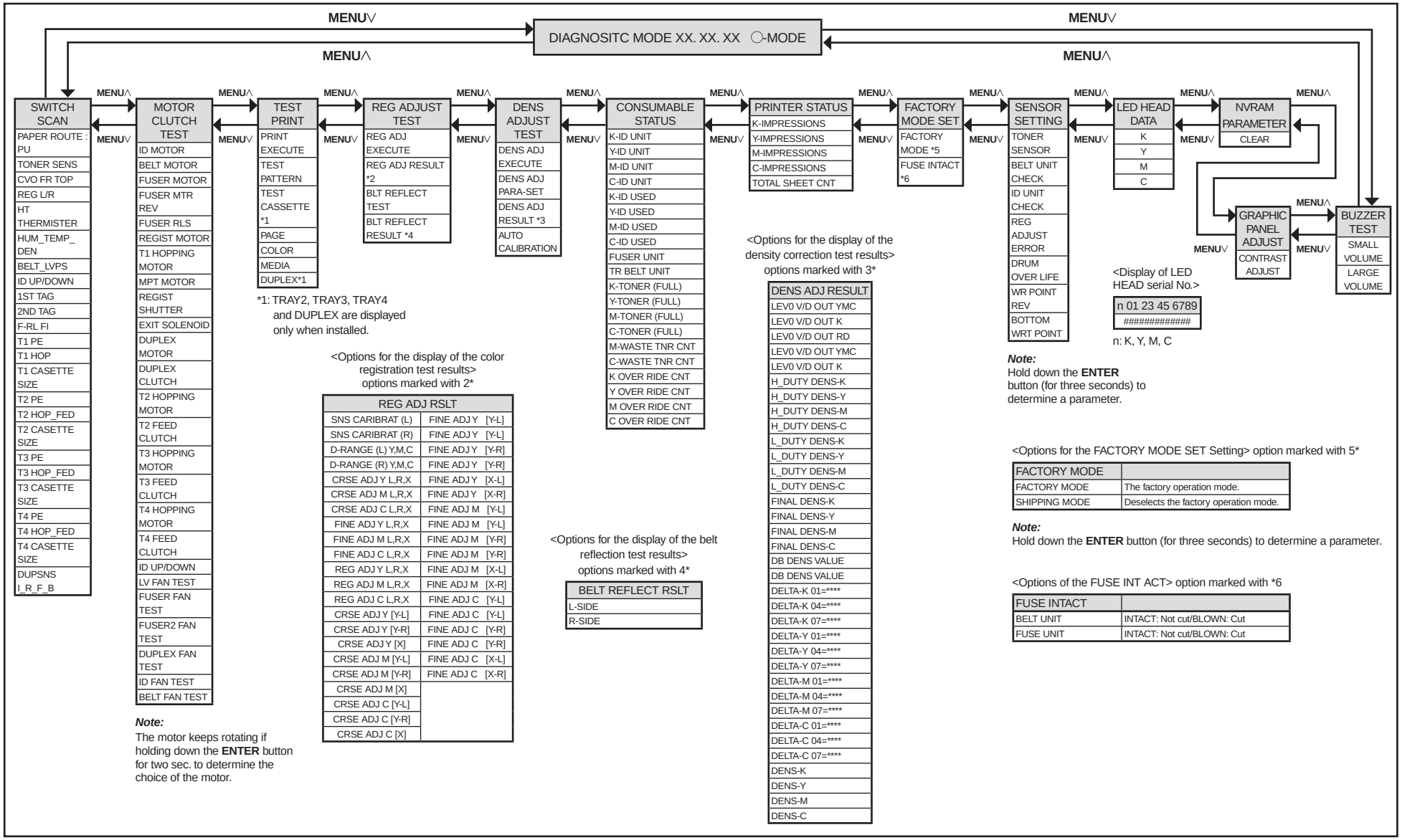
LEVEL1

(1) Menu option display switching

Use the **MENU**∧ or **MENU**∨ button to select the option shown in a shaded area (XXXXX), and press **ENTER** to execute the option.

Use **ENTER** or **BACK** to display the option shown in a non-shaded area (XXXXX), and use the **MENU**∧ or **MENU**∨ button to select the option.

Press **ENTER** to execute a test, and **BACK** to end the test.



6.3.2.2 Normal self-diagnostic mode (Level 1)

The normal self-diagnostic mode menus are as follows:

	Option	Self-diagnosis Menu	Adjustment	Maintenance Utility
1	Switch scan test	SWITCH SCAN	Checks input sensor and switch	No.19
2	Motor clutch test	MOTOR&CLTCH TEST	Tests the operation of a motor or clutch.	No.20
3	Test printing	TEST PRINT	Prints a test pattern stored in the PU.	Unavailable
4	Color registration adjustment test	REG ADJUST TEST	Judges the color registration adjustment mechanism as pass or fail.	No.21
5	Density adjustment test	DENS ADJ TEST	Judges the density adjustment mechanism as pass or fail.	No.22
6	Consumable counter display	CONSUMABLE STATUS	Displays the usage of a consumable.	No.24
7	Consumable life counter display	PRINTER STATUS	Displays the life counter of a consumable.	No.24
8	Factory/Shipping mode switching	FACTORY MODE SET	Switches between Factory and Shipping modes	No.3, No.25
9	Fuse status display		Displays the status of a fuse.	No.25
10	Engine parameter setting	SENSOR SETTING	Sets whether to enable or disable error detection performed by each sensor.	No.26
11	Display of LED head serial number	LED HEAD DATA	Displays the serial number of LED head data.	Unavailable
12	NVRAM parameter setting	NVRAM PARAMETER	Must not be used.	Unavailable
13	Contrast adjustment	GRAPHIC PANEL ADJUST	Adjusts the contrast on the panel.	Unavailable
14	Buzzer test	BUZZER TEST	Buzzer sound test	Unavailable

6.3.2.2.1 Entering self-diagnostic mode (level 1)

Note! Entering the System Maintenance mode of C831dn/C841dn requires a password. Refer to table 6-1 for description on it.

1. Turn on the printer while using the **MENU**∧, **MENU**∨ button and **HELP** button combination to enter the System Maintenance mode.
2. Press the **MENU**∧ or **MENU**∨ button more than one time to display “Diagnostic Mode”. Then press the **ENTER** button to display “DIAGNOSTIC MODE”.

```
DIAGNOSTIC MODE
XX.XX.XX  FACTORY/SHIPPING
```

3. XX.XX.XX on the LCD display identifies the PU firmware version. The FACTORY WORKING MODE setting is displayed in the right portion of the lower row. The setting is normally S-MODE, which identifies Shipping.
4. Press the **MENU**∧ and **MENU**∨ button to go to each self-diagnostic step (press the **MENU**∧ or **MENU**∨ button to display the next or preceding menu option).

6.3.2.2.2 Exiting self-diagnostic mode

1. Turn of the printer and, after ten seconds, turn it on.

6.3.2.3 Switch scan test

The switch scan test is used for checking entrance sensors and switches.

1. Enter the self-diagnostic mode (level 1) and, until SWITCH SCAN appears on the upper display, press the **MENU**∧ or **MENU**∨ button (the **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option). Then press the **ENTER** button.

SWITCH SCAN

2. Press the **MENU**∧ or **MENU**∨ button until an option shown in table 6-3 for the unit to test appears on the lower display (the **MENU**∧ button displays the next option and the **MENU**∨ button displays the preceding option).
3. Press the **ENTER** button. The switch scan test starts, the unit's name and current status being displayed

PAPER ROUTE:PU
1=H 2=L 3=H 4=L

   Operate the unit (figure 6-1). Display information on applicable LCD display (the information displayed vary depending on the sensor.
4. Press the **CANCEL** button. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **BACK** button to end the test (the state in step 1 is restored.

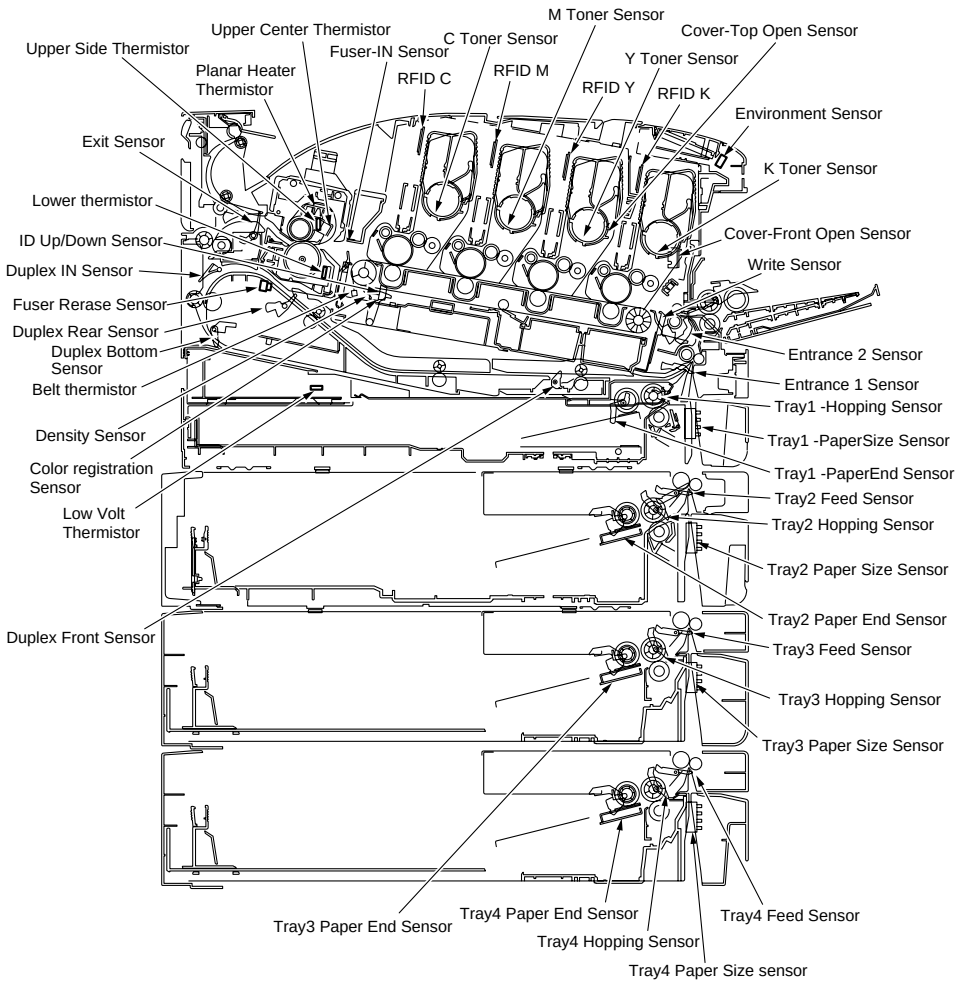


Figure 6-1 Switch sensor locations

Table 6-3 SWITCH SCAN Detail

Lower display shows asterisk (*) when function on upper display is unavailable.

Upper display	1		2		3		4	
	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display
PAPER ROUTE : PU	Entrance 1 Sensor	H: No paper exists. L: Paper exists.	Entrance 2 Sensor	H: No paper exists. L: Paper exists.	Write Sensor	H: No paper exists. L: Paper exists.	Exit Sensor	H: No paper exists. L: Paper exists.
TONER SENS	K Toner Sensor	H: Blocked L: Reflected	Y Toner Sensor	H: Blocked L: Reflected	M Toner Sensor	H: Blocked L: Reflected	C Toner Sensor	H: Blocked L: Reflected
CVO FR TOP	Front Cover Open Switch	H: Close L: Open	Top Cover Open Switch *1	H: Close L: Open				
REG L/R	Color registration L Sensor	AD value: **H	Color registration R Sensor	AD value: **H				
HT THERMISTER	Upper Center Thermistor	AD value: **H	Lower Thermistor	AD value: **H	Upper Side Thermistor	AD value: **H	Planar Heater Thermistor	AD value: **H
HUM_TEMP_DEN	Humidity Sensor	AD value: **H	Temperature Sensor	AD value: **H	Density Black Sensor	AD value: **H	Density Color Sensor	AD value: **H
BELT_LVPS	Belt Thermistor	AD value: **H	Low Volt Thermistor	AD value: **H				
ID UP/DOWN							ID Up/Down Sensor	H: Up. L: Down
1ST TAG	1st-TAG-K UID	UID:. ***H	1st-TAG-Y UID	UID:. ***H	1st-TAG-M UID	UID:. ***H	1st-TAG-C UID	UID:. ***H
2ND TAG	2nd-TAG-K UID	UID:. ***H	2nd-TAG-Y UID	UID:. ***H	2nd-TAG-M UID	UID:. ***H	2nd-TAG-C UID	UID:. ***H
F-RL FI	Fuser release Sensor	H: ON L: OFF	Fuser-In Sensor	H:ON. L:OFF				
T1 PE	TRAY1 Paper End Sensor	H: No paper exists. L: Paper exists.						
T1 HOP	TRAY1 Hopping Sensor	H: No paper exists. L: Paper exists.						
T1 CASETTE SIZE	Tray1 -PaperSize-1 Switch	Port level H, L	Tray1 -PaperSize-2 Switch	Port level H, L	Tray1 -PaperSize-3 Switch	Port Level H, L	Tray1 -PaperSize-4 Switch	Port Level H, L
T2 PE	TRAY2 Paper End Sensor	H: No paper exists. L: Paper exists.						
T2 HOP_LF_FED	TRAY2 Hopping Sensor	H: No paper exists. L: Paper exists.			TRAY2 Entrance Sensor	H: No paper exists. L: Paper exists.		
T2 CASETTE SIZE	Tray2 -PaperSize-1 Switch	Port level H, L	Tray2 -PaperSize-2 Switch	Port level H, L	Tray2 -PaperSize-3 Switch	Port Level H, L	Tray2 -PaperSize-4 Switch	Port Level H, L
T3 PE	TRAY3 Paper End Sensor	H: No paper exists. L: Paper exists.						
T3 HOP _FED	TRAY3 Hopping Sensor	H: No paper exists. L: Paper exists.			TRAY3 Entrance Sensor	H: No paper exists. L: Paper exists.		
T3 CASETTE SIZE	Tray3 -PaperSize-1 Switch	Port level H, L	Tray3 -PaperSize-2 Switch	Port level H, L	Tray3 -PaperSize-3 Switch	Port Level H, L	Tray3 -PaperSize-4 Switch	Port Level H, L
T4 PE	TRAY4 Paper End Sensor	H: No paper exists. L: Paper exists.						
T4 HOP _FED	TRAY4 Hopping Sensor	H: No paper exists. L: Paper exists.			TRAY4 Entrance Sensor	H: No paper exists. L: Paper exists.		
T4 CASETTE SIZE	Tray4 -PaperSize-1 Switch	Port level H, L	Tray4 -PaperSize-2 Switch	Port level H, L	Tray4 -PaperSize-3 Switch	Port Level H, L	Tray4 -PaperSize-4 Switch	Port Level H, L
DUP SNS I_R_F_B	Duplex-In Sensor	H: No paper exists. L: Paper exists.	Duplex-rear Sensor	H: No paper exists. L: Paper exists.	Duplex-front Sensor	H: Paper exists. L: No paper exists.	Duplex-bottom Sensor	H: No paper exists. L: Paper exists.

*1: L is displayed when the cover is open (including in the Sleep mode and power-off status), and H is displayed when the top cover and front cover is closed and warm-up is done.

6.3.2.4 Motor and clutch test

The motor and clutch test is used for testing motors and clutches.

1. Enter the self-diagnostic mode (level 1) and, until MOTOR & CLUTCH TEST appears on the upper display, press the **MENU**∧ or **MENU**∨ button (the **MENU** ∧ button displays the next test option and the **MENU**∨ button displays the preceding test option). Then press the **ENTER** button.
2. Press the **MENU**∧ or **MENU**∨ button until an option shown in table 6-4 for the unit to test appears on the lower display (the **MENU**∧ button displays the next option and the **MENU**∨ button displays the preceding option).

MOTOR & CLUTCH TEST
ID MOTOR

3. Press the **ENTER** button. The motor and clutch test starts, the unit's the name and current status starting to blink, and the unit being driven for ten seconds (refer to figure 6-2).

Note! The state in step 2 is restored after the unit is driven so. The unit is driven again by pressing an appropriate button.

- By usual printing driving, the clutch solenoid repeatedly is turned on and off (its motor is driven together with the solenoid when the solenoid cannot be driven solely for its mechanical structure). * Image drum up-and-down movement continues until the **CANCEL** button is pressed.
- The clutch solenoid is kept driven by holding down the **ENTER** button (two seconds) for a motor to be accepted.

4. Press the **CANCEL** button. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **BACK** button to end the test (the state in step 1 is restored).

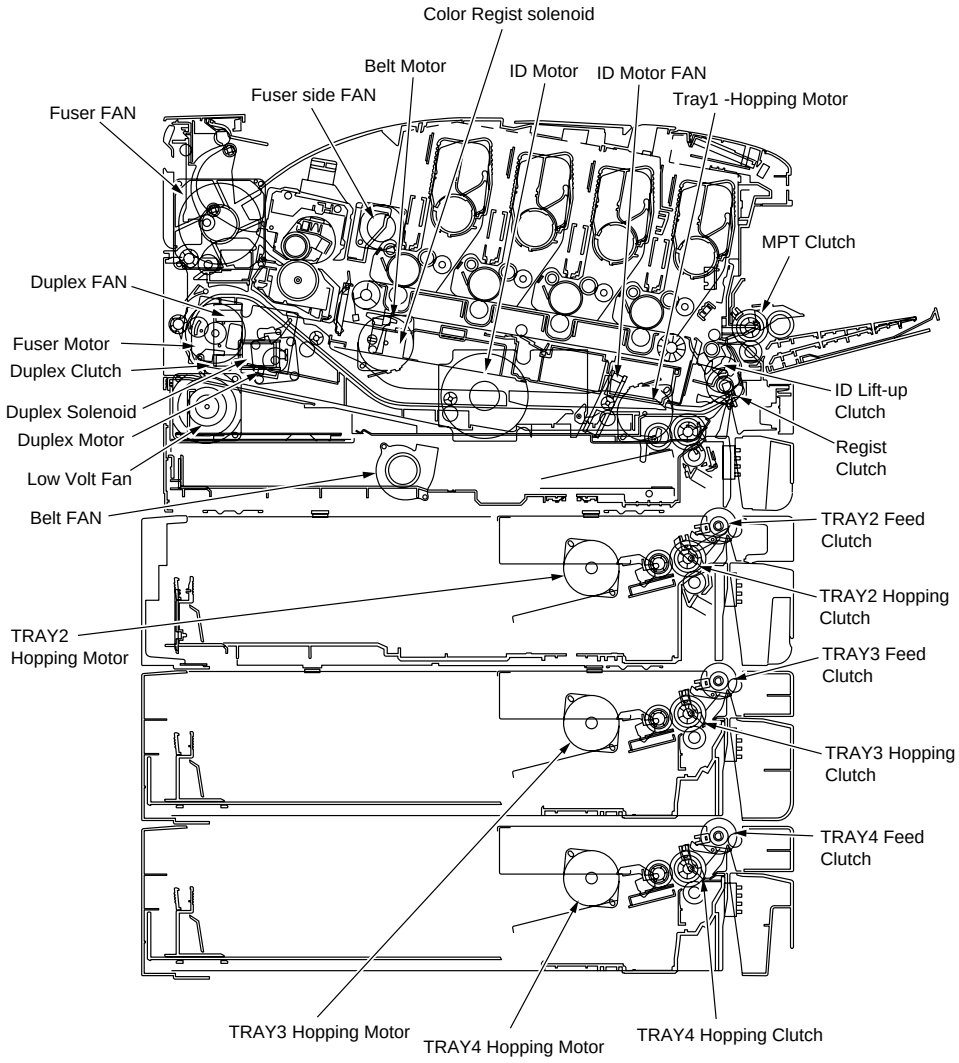


Figure 6-2

Table 6-4

Panel display	Driven unit	Condition
ID MOTOR	ID MOTOR Low Volt Fan ID motor Fan Belt FAN	All ID(K/Y/M/C) are removed
BELT MOTOR	Belt Motor Low Volt Fan ID Motor Fan Belt FAN	All ID(K/Y/M/C) are removed
FUSER MOTOR	Fuser Motor	-
FUSER MTR REV	Fuser Motor	-
FUSER RLS	Fuser Motor	Fuser unit is installed
REGIST MOTOR	Tray 1 Hopping Motor Tray1 Registration Clutch	-
T1 HOPPING MOTOR	Tray 1 Hopping Motor Tray1 Registration Clutch	-
MPT MOTOR	Tray 1 Hopping Motor MPT Clutch	-
REGIST SHUTTER	Color Registration Solenoid	-
EXIT SOLENOID	Duplex Solenoid	Duplex unit is installed
DUPLEX MOTOR	Duplex Motor	Duplex unit is installed
DUPLEX CLUTCH	Duplex Motor Duplex Clutch	Duplex unit is installed
T2 HOPPING MOTOR	Tray2 Hopping Motor Tray2 Hopping Clutch	Tray2 is installed
T2 FEED CLUTCH	Tray2 Hopping Motor Tray2 Feed Clutch	Tray2 is installed
T3 HOPPING MOTOR	Tray3 Hopping Motor Tray3 Hopping Clutch	Tray3 is installed
T3 FEED CLUTCH	Tray3 Hopping Motor Tray3 Feed Clutch	Tray3 is installed
T4 HOPPING MOTOR	Tray4 Hopping Motor Tray4 Hopping Clutch	Tray4 is installed
T4 FEED CLUTCH	Tray4 Hopping Motor Tray4 Feed Clutch	Tray4 is installed

Panel display	Driven unit	Condition
ID UP/DOWN	Tray1 Hopping Motor ID Lift-up clutch	TOP/FRONT Cover is closed
LV FAN TEST	Low Volt Fan	-
FUSER FAN TEST	Fuser FAN	-
FUSER2 FAN TEST	Fuser side FAN	-
DUPLEX FAN TEST	Duplex Fan	Duplex unit is installed
ID FAN TEST	ID Motor Fan	-
BELT FAN TEST	Belt Fan	-

Note! Display while ID UP/DOWN is in progress

```
MOTOR & CLUTCH TEST
ID UP/DOWN      ***
```

***: Identifies the number of times

Display when the REGIST SHUTTER [ENTER] button is pressed long

```
MOTOR & CLUTCH TEST
SHT             ***
```

***: Identifies the number of times

Display while FUSER RLS is in progress

```
MOTOR & CLUTCH TEST
RLS             ***
```

***: Identifies the number of times

6.3.2.5 Test print

The test printing is used for printing test patterns stored in the PU. Other patterns are stored in the controller.

This test print cannot be used to check the print quality.

Diagnosis for the abnormal print image should be performed in accordance with section 8.

1. Enter the self-diagnostic mode (level 1) and, until TEST PRINT appears on the upper display, press the **MENU**∧ or **MENU**∨ button (the **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option). Then press the **ENTER** button.
2. A setting option used only in test printing appears on the lower display. Press the **MENU**∧ or **MENU**∨ button until the option to select appears (the **MENU**∧ button displays the next option and the **MENU**∨ button displays the preceding option). Then press the **ENTER** button. (Go to step 5 when set to its default, the option does not need to be set).
3. Keep pressing the **MENU**∧, **MENU**∨ key, and press the **ENTER** key at the menu item set by step 2. Then, the setting item is displayed in the upper row of display area, and the setting value is displayed in the lower row of display area. Pressing the **MENU**∧ button displays the next setting and pressing the **MENU** ∨ button displays the preceding setting (the setting last displayed takes effect. By pressing the **BACK** button, the setting is accepted, step 2 being restored. Repeat step 3 when necessary.

TEST PATTERN
1

Display	Settings	Default	Function
PRINT EXECUTE	-	-	Starts printing with the press of the ENTER button, and ends printing with the press of the CANCEL button.
TEST PATTERN	0	0	0: Prints a blank page. 1 to 7: - See the next section (pattern printing) - 8 to 15: Print a blank page.
TEST CASSETTE	TRAY1	TRAY1	Select the paper feed source. Not displayed when the tray 2 is not installed. Not displayed when the tray 3 is not installed. Not displayed when the tray 4 is not installed.
	TRAY2		
	TRAY3		
	TRAY4		
	MPT		
PAGE	0000	0000	Sets the number of test copies printed
COLOR	ON	ON	Selects color or monochrome printing. * Each color setting is provided by setting ON.
	OFF		
MEDIA	MEDIA TYPE	PLAIN PAPER	Changes the setting of a TRAY selected in TEST CASSETTE. If CUSTOM SIZE is not selected in MEDIA SIZE, CUSTOM LEN, and CUSTOM WIDTH are not displayed.
	MEDIA WEIGHT	MEDIUM LIGHT	
	MEDIA SIZE	A4(LEF)	
	CUSTOM LEN	210	
	CUSTOM WIDTH	297	
	MEDIA CHECK	ENABLE	Sets ENABLE/ DISABLE of the paper size check.
DUPLEX	2 PAGES STACK	2 PAGES STACK	Prints duplex two pages stack layout printing. 2 PAGES STACK: Disables duplex printing OFF: Performs simplex printing. 1 PAGES STACK: Prints duplex one page stack layout printing. If DUPLEX is not installed, DUPLEX is not displayed.
	OFF		
	1 PAGE STACK		

Notes! PAGE setting:

By pressing [0] to [9] on the numerical keypad, a number is inputted in the blinking line.

The input position is shifted with the **ONLINE** button or **CANCEL** button. This setting is incremented by pressing the **ONLINE** button, and decremented by pressing the **MENU**∨ button. Note the setting 0000 endlessly prints pages.

COLOR setting:

ON displays, with the press of the **ENTER** button, the information shown below.

Print setting for each color:

The input position is shifted with the **MENU**∧ or **MENU**∨ button. This setting is switched between ON and OFF by the press of the **ONLINE** or **CANCEL** button. The display for the setting restored to the previous one with the press of the **BACK** button.

CUSTOM size setting:

By pressing [0] to [9] on the numerical keypad, a number is inputted in the blinking line.

The input position is shifted with the **ONLINE** button or **CANCEL** button. This setting is incremented by pressing the **ONLINE** button, and decremented by pressing the **MENU**∨ button.

* If a display value exceeds the settable range, the setting value is unavailable.

COLOR	→	Y:ON M:ON
ON		C:ON K:ON

MEDIA Setting Options

MEDIA TYPE

Category	Setting value		
MEDIA TYPE	PLAIN PAPER	LABELS	USERTYPE1
	TRANSPARENCY	BOUND	USERTYPE2
	LABEL	RECYCLED	USERTYPE3
	GLOSSY	CARDSTOCK	USERTYPE4
	LETTERHEAD	ROUGH	USERTYPE5

MEDIA WHIGHT

Category	Setting value	
MEDIA WEIGHT	LIGHT	HEAVY
	MEDIUM LIGHT	ULTRA HEAVY1
	MEDIUM	ULTRA HEAVY2
	MEDIUM HEAVY	ULTRA HEAVY3

MEDIA SIZE

Category	Setting value		
MEDIA SIZE	UNIVERSAL PLAIN	POST CARD	KAKUGATA 2(SEF)
	CUSTOM SIZE	RETURN POST CARD	KAKUGATA 3(SEF)
	A3	EXECUTIVE	INDEX CARD(3×5)
	A4(LEF)	LEGAL13	16K(184 × 260)mm (SEF)
	A4(SEF)	LEGAL13.5	16K(195 × 270)mm (SEF)
	A5(LEF)	LEGAL14	16K(197 × 273)mm (SEF)
	A5(SEF)	COM-10 (LEF)	16K(184 × 260)mm (LEF)
	A6(SEF)	DL(LEF)	16K(195 × 270)mm (LEF)
	B4	C5(LEF)	16K(197 × 273)mm (LEF)
	B5(LEF)	C4(LEF)	8K(260 × 368)mm (SEF)
	B5(SEF)	C4(SEF)	8K(270 × 390)mm (SEF)
	B6(SEF)	NAGAGATA 3(LEF)	8K(273 × 394)mm (SEF)
	B6-HALF(SEF)	NAGAGATA 4(LEF)	STATEMENT
	TABLOID	NAGAGATA 40(LEF)	
	LETTER(LEF)	YOUGATA 0(LEF)	
	LETTER(SEF)	YOUGATA 4(LEF)	

4. When the **ENTER** key is depressed With PRINT EXECUTE on the lower display after the operation in step 2, test printing with the setting value set in the steps 2 to 3 is executed.

   The test printing is cancelled by pressing the **CANCEL** button.

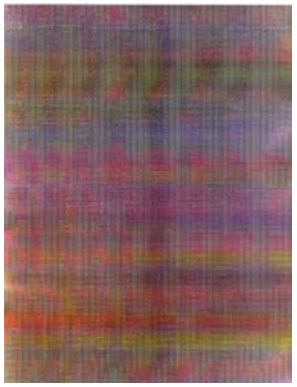
   When detected, an alarm shown in the Detail section of the following list is displayed on the operator panel, causing the printing to stop.

Panel Display	Detail
PAPER END SELECTED TRAY	No paper exists.
REMOVE PAPER OUT OF DUPLEX	An internal error of the duplex unit
INSTALL CASSETTE TRAY OPEN	Cassette is taken out.

Print Patterns (Cannot be used for print quality check.)

Patterns 0 and 8 to 15 ... Prints blank sheet.

Pattern 1

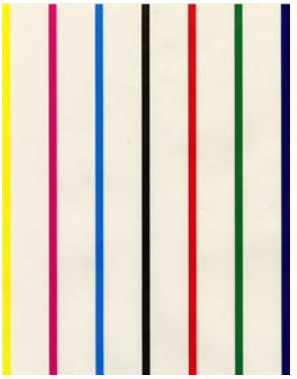


Pattern 2

Pattern 3

Pattern 4

Pattern 5



Pattern 6

Pattern 7

Note! Printing 100% of solid black print (pattern 7) contained in the local printing functions causes an offset.
To prevent this, the colors to print concurrently to produce No. 7 solid print copies must be limited to two or less by making each print color settings as instructed in step 3 of Section 6.3.2.5.

- The following message appears when a test pattern is printed.

```
P=***
W=***
```

P: Number of test-print pages (Unit: sheets)

W: Belt temperature wait time (Unit: seconds)

- The displays are switched to the following by pressing the **MENU**∧ button.

```
U=***[###] H=XXX
L=***[###] S=XXX
```

U: *** = Center thermistor target temperature [Unit: ˚C]
[###] = Center thermistor current temperature [Unit: ˚C]

H: XXX= Heater thermistor current temperature [Unit: ˚C]

L : *** = Lower thermistor target temperature [Unit: ˚C]
[###] = Lower thermistor target temperature [Unit: ˚C]

S: XXX= Site thermistor current temperature [Unit: ˚C]

- The displays are switched to the following by pressing the **MENU**∧ button.

```
T=***
H=***%
```

T: A measured environment temperature [Unit: ˚C]

H: A measured environment humidity [Unit: %]

- The displays are switched to the following by pressing the **MENU**∧ button.

```
KTR=*.** YTR=*.**
MTR=*.** CTR=*.**
```

YTR, MTR, CTR and KTR indicate set transfer voltages for colors, respectively (in kV).

- The displays are switched to the following by pressing the **MENU**∧ button.

```
KR=*.** YR=*.**
MR=*.** CR=*.**
```

KR: BLACK transfer roller resistance value [Unit: uA]

YR: YELLOW transfer roller resistance value [Unit: uA]

MR: MAGENTA transfer roller resistance value [Unit: uA]

CR: CYAN transfer roller resistance value [Unit: uA]

- The displays are switched to the following by pressing the **MENU**∧ button.

```
ETMP=***UTMP=***
REG=****EXT=***
```

ETMP: A parameter for correction of constant hopping motor speed (an environmental temperature) [Unit: DEC].

UTMP: A parameter for correction of constant fuser motor speed (a target fusing temperature) [Unit: DEC].

REG: A hopping motor constant-speed timer value (a set input/output value) [Unit: HEX].

EXT: A fuser motor constant-speed timer value (a set input/output value) [Unit: HEX].

- The displays are switched to the following by pressing the **MENU**∧ button.

```
ID=**** BLT=****
LVTH=xxx(***)
```

ID: ID motor constant-speed timer value (I/O set value) [Unit: HEX]

BLT: Belt motor constant-speed timer value (I/O set value) [Unit: HEX]

LVTH : [xxx] = Low-voltage power temperature [Unit: ˚C]
([***]) = Low-voltage power thermistor scanning AD value [Unit: HEX]

- The displays are switched to the following by pressing the **MENU**∧ button.

BELT=xxx(***)

BELT: xxx = Belt temperature [Unit: ˚C]

*** = Belt thermistor scanning AD value [Unit: HEX]

5. Repeat steps 2 and 4 when necessary.
6. Press the CANCEL button to end the test (the state if step 1 is restored).

6.3.2.6 Color registration adjustment test

The color registration adjustment test is used for adjusting color registration or investigating the cause(s) of color misregistration. Chapter 2 about description on color registration adjustment should be followed for recovery from an error caused by the test.

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

REG ADJUST TEST

2. Press the **ENTER** button. The following message appears. Press the **MENU**∧ or **MENU**∨ button until the intended option appears.

REG ADJUST TEST
REG ADJ EXECUTE

3. Press the **ENTER** button. The displayed option is performed:

   When the displayed option is REG ADJ EXECUTE:

   ① Color registration adjustment test (the ONLINE lamp starts blinking) is performed.

   ② When the test ends, the upper display shows the result of the test (OK or an error name), the lower display shows '****RESULT'.

OK
REG ADJ RESULT

   Pressing the **MENU**∧ button displays the next test result.

   Pressing the **MENU**∨ button displays the preceding test result.

   Press the **BACK** button to return to step 2.

Remark: The following message appears while the printer is initialized or issues an alarm or when the cover is open.

NG
REG ADJ RESULT

   ③ Pressing the CANCEL button during the test cancels the test (turning on the ONLINE lamp), restoring the state of step 2.

When the displayed option is REG ADJ RESULT:

Same as of REG ADJ EXECUTE

When the displayed option is BLT REFLECT TEST:

① Color registration adjustment belt reflection test (the ONLINE lamp starts blinking) is performed.

② When the test ends, the upper display shows the result of the test (OK or a error name), the lower display shows '****RESULT'.

OK
BLT REFLECT RSLT

Pressing the **MENU**∧ button displays the next test result.

Pressing the **MENU**∨ button displays the preceding test result.

Press the **BACK** button to return to step 2.

③ Pressing the CANCEL button during the test cancels the test (turning on the ONLINE lamp), restoring the state of step 2.

When BLT REFLECT RSLT is executed:

Same as the button operation of (2) after execution of BLT REFLECT TEST.

Remark: The following message appears while the printer is initialized or issues an alarm or when the cover is open.

NG
REG REFLECT RSLT

4. Repeat steps 2 and 3 when necessary.
5. Press the **BACK** button to end the test (the state if step 1 is restored).

Color registration correction test items

Display	Function
REG ADJ EXECUTE	Executes color registration adjustment.
REG ADJ RESULT	Displays the result of color registration adjustment.
BLT REFLECT TEST	Judges whether color registration adjustment belt reflection is proper.
BLT REFLECT RSLT	Displays the result of color registration adjustment belt reflection judgment.

Panel display at the completion of color registration correction test

Upper display	Lower display	Details
OK / ERROR NAME	REG ADJ RESULT/ BLT REFLECT RSLT	Displays only "OK" in the upper display when no error occurs. Displays an error name when an error occurs. Displays "**** RESULT" corresponding to the test executed in the lower display

Color registration correction test errors

Displayed error name	Contents
CALIBRATION(L)	Abnormal end of calibration on the left sensor
CALIBRATION(R)	Abnormal end of calibration on the right sensor
DYNAMICRANGE(L)	Insufficient dynamic range of left sensor output
DYNAMICRANGE(R)	Insufficient dynamic range of right sensor output
Y-LEFT	Detects an abnormal color-registration correction value at the yellow left sub-scanning position.
Y-RIGHT	Detects an abnormal color-registration correction value at the yellow right sub-scanning correction position.
Y-HORIZONTAL	Detects an abnormal color-registration correction value in the yellow main scanning correction.
M-LEFT	Detects an abnormal color-registration correction value at the magenta left sub-scanning position.
M-RIGHT	Detects an abnormal color-registration correction value at the magenta right sub-scanning correction position.
M-HORIZONTAL	Detects an abnormal color-registration correction value in the magenta main scanning correction.
C-LEFT	Detects an abnormal color-registration correction value at the cyan left sub-scanning position.
C-RIGHT	Detects an abnormal color-registration correction value at the cyan right sub-scanning correction position.
C-HORIZONTAL	Detects an abnormal color-registration correction value in the cyan main scanning correction.
BELT REFLEX ERR	Fails in the judgment of the reflectance of the color registration correction belt.

Display Items of REG ADJUST RESULT

Upper display	Lower display	Details	Memory
SNS CARIBRAT(L)	DAC=*** Vmax=***	DAC: Luminescence current value [HEX] Vmax: Sensor voltage at DAC [HEX]	SRAM
SNS CARIBRAT(R)	DAC=*** Vmax=***	DAC: Luminescence current value [HEX] Vmax: Sensor voltage at DAC [HEX]	SRAM
D-RANGE(L) Y,M,C	***H,***H,***H	Result of left dynamic range measurement [HEX] Y, M, C, in order of the left.	SRAM
D-RANGE(R) Y,M,C	***H,***H,***H	Result of right dynamic range measurement [HEX] Y, M, C, in order of the left.	SRAM
CRSE ADJ Y L,R,X	***, ***, ***	Yellow LED coarse adjustment value [DEC:1/1200"]	SRAM
CRSE ADJ M L,R,X	***, ***, ***	Magenta LED coarse adjustment value [DEC:1/1200"]	SRAM
CRSE ADJ C L,R,X	***, ***, ***	Cyan LED coarse adjustment value [DEC:1/1200"]	SRAM
FINE ADJ Y L,R,X	***, ***, ***	Yellow LED fine adjustment value [DEC:1/1200"]	SRAM
FINE ADJ M L,R,X	***, ***, ***	Magenta LED fine adjustment value [DEC:1/1200"]	SRAM
FINE ADJ C L,R,X	***, ***, ***	Cyan LED fine adjustment value [DEC:1/1200"]	SRAM
REG ADJ Y L,R,X	***, ***, ***	Yellow LED adjustment value [DEC:1/1200"]	EEPROM
REG ADJ M L,R,X	***, ***, ***	Magenta LED adjustment value [DEC:1/1200"]	EEPROM
REG ADJ C L,R,X	***, ***, ***	Cyan LED adjustment value [DEC:1/1200"]	EEPROM
CRSE ADJ Y [Y-L]	***, ***, ***	Yellow LED coarse adjustment pattern detection value at the sub-scanning left position	SRAM
CRSE ADJ Y [Y-R]	***, ***, ***	Yellow LED coarse adjustment pattern detection value at the sub-scanning right position	SRAM
CRSE ADJ Y [X]	***, ***, ***	Yellow LED coarse adjustment pattern detection value at the main scanning position	SRAM
CRSE ADJ M [Y-L]	***, ***, ***	Magenta LED coarse adjustment pattern detection value at the sub-scanning left position	SRAM
CRSE ADJ M [Y-R]	***, ***, ***	Magenta LED coarse adjustment pattern detection value at the sub-scanning right position	SRAM
CRSE ADJ M [X]	***, ***, ***	Magenta LED coarse adjustment pattern detection value at the main scanning position	SRAM
CRSE ADJ C [Y-L]	***, ***, ***	Cyan LED coarse adjustment pattern detection value at the sub-scanning left position	SRAM
CRSE ADJ C [Y-R]	***, ***, ***	Cyan LED coarse adjustment pattern detection value at the sub-scanning right position	SRAM
CRSE ADJ C [X]	***, ***, ***	Cyan LED coarse adjustment pattern detection value at the main scanning position	SRAM
FINE ADJ Y [Y-L]	***, ***, ***,	Yellow LED fine adjustment pattern detection value at the sub-scanning left position	SRAM
FINE ADJ Y [Y-L]	***, ***		
FINE ADJ Y [Y-R]	***, ***, ***,	Yellow LED fine adjustment pattern detection value at the sub-scanning right position	SRAM
FINE ADJ Y [Y-R]	***, ***		
FINE ADJ Y [X-L]	***, ***	Yellow LED fine adjustment pattern detection value at the main scanning left position	SRAM
FINE ADJ Y [X-R]	***, ***	Yellow LED fine adjustment pattern detection value at the main scanning right position	SRAM
FINE ADJ M [Y-L]	***, ***, ***,	Magenta LED fine adjustment pattern detection value at the sub-scanning left position	SRAM
FINE ADJ M [Y-L]	***, ***		
FINE ADJ M [Y-R]	***, ***, ***,	Magenta LED fine adjustment pattern detection value at the sub-scanning right position	SRAM
FINE ADJ M [Y-R]	***, ***		
FINE ADJ M [X-L]	***, ***	Magenta LED fine adjustment pattern detection value at the main scanning left position	SRAM
FINE ADJ M [X-R]	***, ***	Magenta LED fine adjustment pattern detection value at the main scanning right position	SRAM
FINE ADJ C [Y-L]	***, ***, ***,	Cyan LED fine adjustment pattern detection value at the sub-scanning left position	SRAM
FINE ADJ C [Y-L]	***, ***		
FINE ADJ C [Y-R]	***, ***, ***,	Cyan LED fine adjustment pattern detection value at the sub-scanning right position	SRAM
FINE ADJ C [Y-R]	***, ***		
FINE ADJ C [X-L]	***, ***	Cyan LED fine adjustment pattern detection value at the main scanning left position	SRAM
FINE ADJ C [X-R]	***, ***	Cyan LED fine adjustment pattern detection value at the main scanning right position	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the machine stops due to errors are written.
- The contents in EEPROM are updated only at the normal competition of the test.

Display Items of REG BELT REFLECT RESULT

Upper display	Lower display	Details	Memory
L-SIDE= ** AV= ***	MAX=*** MIN=***	Upper display: Displays a test result on the left side (OK or NG). Displays the average of the sensor output ADC scanning values [HEX] Lower display: Displays the maximum or minimum of the sensor output ADC scanning values [HEX]	SRAM
R-SIDE= ** AV= ***	MAX=*** MIN=***	Upper display: Displays a test result on the right side (OK or NG). Displays the average of the sensor output ADC scanning values [HEX] Lower display: Displays the maximum or minimum of the sensor output ADC scanning values [HEX]	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the machine stops due to errors are written.

6.3.2.7 Density adjustment test

The density adjustment test is used for performing a density adjustment function test and displaying the result of it to judge whether the density adjustment mechanism is proper.

Chapter 2 about description on density adjustment should be followed for recovery from an error.

1. Enter the self-diagnostic-mode(Level1) and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

DENS ADJ TEST

2. Press the **ENTER** button. The following message appears. Press the **MENU**∧ or **MENU**∨ button until the intended option appears.

DENS ADJ TEST
DENS ADJ EXECUTE

3. Press the **ENTER** button. The displayed option is performed:

   When DENS ADJ EXECUTE is executed:

   ① Density adjustment test is performed, and the lower display starts blinking)

   ② When the test ends, the upper display shows the result of the test (OK or an error name), the lower display shows '****RESULT'.

OK
DENS ADJ RESULT

   Pressing the **MENU**∧ button displays the next test result.

   Pressing the **MENU**∨ button displays the preceding test result.

   Press the **BACK** button to return to step 2 ("DANS ADJ RESULT").

   ③ Pressing the **CANCEL** button during the test cancels the test, restoring the state of step 2.

   When DENS ADJ RESULT is executed:

   Same as of REG ADJ EXECUTE

   When DENS ADJ PAR-SET is executed:

   The setting for the density adjustment parameter is displayed.

   When AUTO CALIBRATION is executed:

   ① The density sensor sensitivity adjustment value is automatically set is performed, and the lower display starts blinking.

   ② When the test ends, the upper display shows the result of the test (OK or a error name), the lower display shows '****RESULT'.

OK
DENS ADJ RESULT

   Pressing the **MENU**∧ button displays the next test result.

   Pressing the **MENU**∨ button displays the preceding test result.

   Press the **BACK** button to return to step 2.

   ③ Pressing the **CANCEL** button during the test cancels the test, restoring the state of step 2.

   Note! The fixture specific for execution should be used.

Remark: The following message appears while the printer is initialized or issues an alarm or when the cover is open.

NG
DENS ADJ RESULT

4. Repeat step 3 when necessary.
5. Press the **BACK** button to end the test (the state if step 1 is restored).

Density adjustment test item

Display	Details
DENS ADJ EXECUTE	Executes density adjustment.
DENS ADJ PAR-SET	Sets a control value for auto density adjustment. ***Note)*** Must not use.
DENS ADJ RESULT	Displays the result of density adjustment.
AUTO CALIBRATION	Automatically sets a density sensor sensitivity correction value. ***Note)*** Must not use.

Display at the completion of density adjustment test

Upper display	Lower display	Details
OK / ERROR NAME	DEN ADJ RESULT	Displays only “OK” in the upper display when no error occurs. Displays an error name when errors occur. Displays “**** RESULT” corresponding to a test executed in the lower display.

Errors of the density adjustment test

Error name displayed	Contents
CALIBRATION ERR	Abnormal end of the calibration of a sensor
DENS SENSOR ERR	Detects an abnormal sensor output during the continuous density detection.
DENS SHUTTER ERR	Detects an abnormality when opening and closing the shutter during the continuous density detection.
DENS ID ERR	Detects the out of focus of the LED head or dirt due to ID failure.

Display Items of DENS ADJ RESULT

Upper display	Lower display	Details	Memory
LEV0 V/D OUT YMC	V1=***H V1DA=***H	V1=***H: Color density sensor output when the LED current of the density sensor is 0[A]. [HEX] V1DA=***:DA setting value of the LED current of the density sensor at the color density detection determined by the color calibration of the density sensor. [HEX]	SRAM
LEV0 V/D OUT K	V2=***H V2DA=***H	V2=***H: Black density sensor output when the LED current of the density sensor is 0[A]. [HEX] V1DA=***:DA setting value of the LED current of the density sensor at the black density detection determined by the black calibration of the density sensor. [HEX]	SRAM
LEV0 V/D OUT RD	V3=***H V3DA=***H	V3=***H: Detected voltage value when the LED current of YMC density sensor is 0[A]. [HEX] V3DA=***: DAC setting value at YMC multiple points [HEX]	SRAM
LEV0 V/D OUT YMC	V4=***H	Value after subtracting V1 from the CMY sensor output [HEX] If a value after subtracting is a negative value, it is regarded as ‘0’.	SRAM
LEV0 V/D OUT K	V5=***H	Value after subtracting V1 from the K sensor output [HEX] If a value after subtracting is a negative value, it is regarded as ‘0’.	SRAM
H_DUTY DENS-K	V1=***H S1=***H	Not used	SRAM
H_DUTY DENS-Y	V1=***H S1=***H	Not used	SRAM
H_DUTY DENS-M	V1=***H S1=***H	Not used	SRAM
H_DUTY DENS-C	V1=***H S1=***H	Not used	SRAM
L_DUTY DENS-K	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		
L_DUTY DENS-Y	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		

Upper display	Lower display	Details	Memory
L_DUTY DENS-M	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		
L_DUTY DENS-C	V01=***HS01=***H	01-03:First processing for averaging density 04-06: Second processing for averaging density V0X: Density sense value [HEX] S0X: Density detection value [HEX]	SRAM
	V02=***HS02=***H		
	V03=***HS03=***H		
	V04=***HS04=***H		
	V05=***HS05=***H		
	V06=***HS06=***H		
FINAL DENS-K	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-K	SRAM
FINAL DENS-Y	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-Y	SRAM
FINAL DENS-M	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-M	SRAM
FINAL DENS-C	VX=***H SX=***H	The same value as V06 and HS06 of L_DUTY DENS-C	SRAM
DB DENS VALUE	VK=**** VY=****	Not used	SRAM
DB DENS VALUE	VM=**** VC=****	Not used	SRAM
DELTA-K 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-K 04=****	05=**** 06=****	Not used	SRAM
DELTA-K 07=****	08=**** 09=****	Not used	SRAM
DELTA-Y 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-Y 04=****	05=**** 06=****	Not used	SRAM
DELTA-Y 07=****	08=**** 09=****	Not used	SRAM
DELTA-M 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-M 04=****	05=**** 06=****	Not used	SRAM
DELTA-M 07=****	08=**** 09=****	Not used	SRAM

Upper display	Lower display	Details	Memory
DELTA-C 01=****	02=**** 03=****	01:Light adjustment value [DEC] 02: DB adjustment value (First)[DEC] 03: DB adjustment value (Second) [DEC]	SRAM
DELTA-C 04=****	05=**** 06=****	Not used	SRAM
DELTA-C 07=****	08=**** 09=****	Not used	SRAM
DENS-K 100%=***H	OD= **.****	Result of Black detections at multiple points	SRAM
DENS-K 85%=***H			
DENS-K 70%=***H			
DENS-K 50%=***H			
DENS-K 30%=***H			
DENS-K 15%=***H			
DENS-Y 100%=***H	OD= **.****	Result of Yellow detections at multiple points	SRAM
DENS-Y 85%=***H			
DENS-Y 70%=***H			
DENS-Y 50%=***H			
DENS-Y 30%=***H			
DENS-Y 15%=***H			
DENS-M 100%=***H	OD= **.****	Result of Magenta detections at multiple points	SRAM
DENS-M 85%=***H			
DENS-M 70%=***H			
DENS-M 50%=***H			
DENS-M 30%=***H			
DENS-M 15%=***H			
DENS-C 100%=***H	OD= **.****	Result of Cyan detections at multiple points	SRAM
DENS-C 85%=***H			
DENS-C 70%=***H			
DENS-C 50%=***H			
DENS-C 30%=***H			
DENS-C 15%=***H			
BEFORE STD=***H	DET=***H ADJ=**H	Standard value before sensitivity adjustment, measured value, adjustment value	SRAM
AFTER STD=***H	DET=***H	Standard value after sensitivity adjustment, measured value,	SRAM

- Results will be stored as described in memory filed.
- The contents in SRAM are deleted when the test starts, and values detected at the normal competition or until the machine stops due to errors are written.

6.3.2.8 Consumable counter display

The consumable counter display is used for viewing the usage of consumables.

1. Enter the self-diagnostic mode and, until CONSUMABLE STATUS appears, press the **MENU**∧ or **MENU**∨ button (the **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option). Then press the **ENTER** button.
2. Pressing the **MENU**∧ or **MENU**∨ button displays the usage of each consumable (pressing the **ONLINE** or **CANCEL** button is disabled).
3. Press the **BACK** button to end the option (the state in step 1 is restored).

Upper Display	Lower Display	Format	Unit	Detail
K-ID UNIT	******** IMAGES	DEC	Images	Each displays the number of turns performed by each image drum unit from the first-time installation of it until present, *1
Y-ID UNIT	******** IMAGES	DEC	Images	
M-ID UNIT	******** IMAGES	DEC	Images	
C-ID UNIT	******** IMAGES	DEC	Images	
K-ID USED	******** %	DEC	%	Displays the usage of ID of each color.
Y-ID USED	******** %	DEC	%	
M-ID USED	******** %	DEC	%	
C-ID USED	******** %	DEC	%	
FUSER UNIT	******** PRINTS	DEC	Prints	Displays the number of prints made from the first-time installation of a fuser unit until present *2
TR BELT UNIT	******** IMAGES	DEC	Images	Displays the number of prints made to date from the first-time installation of a belt unit until present *3

*1 One third of the number of drum turns inA4 (A4 portrait) three-pages-per-job printing is regarded as one count.

*2 Based on the paper length of Legal 13, if the sheet is the legal 13 length or less, it is regarded as one count, and if the sheet length exceeds the Legal 13 length, the number of counts is determined by how many times as large is the Legal 13 length as that of the sheet. (the decimal is rounded out.)

*3 One third of the number of belt turns in A4 (A4 portrait) three-pages-per-job printing is regarded as one count.

Upper Display	Lower Display	Format	Unit	Detail
K-TONER (FULL)	******** %	DEC	%	Each displays the usage of toner of a color.
Y-TONER (FULL)	******** %	DEC	%	
M-TONER (FULL)	******** %	DEC	%	
C-TONER (FULL)	******** %	DEC	%	
M-WASTE TNR CNT	******** TIMES	DEC	Times	Each displays the amount of waste toner. Counts by the number of TC replacements of colors on the near side
C-WASTE TNR CNT	******** TIMES	DEC	Times	
K OVER RIDE CNT	******** TIMES	DEC	Times	Each displays the extension life counter value of a toner cartridge.
Y OVER RIDE CNT	******** TIMES	DEC	Times	
M OVER RIDE CNT	******** TIMES	DEC	Times	
C OVER RIDE CNT	******** TIMES	DEC	Times	

6.3.2.9 Print counter display

The print counter display is used for viewing print counter values.

1. Enter the self-diagnostic mode and, until PRINTER STATUS appears, press the **MENU**∧ or **MENU**∨ button (the **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option). Then press the **ENTER** button.
2. Pressing the **MENU**∧ or **MENU**∨ button displays each count printed (pressing the **ONLINE** or **CANCEL** button is disabled).
3. Press the **BACK** button to end the option (the state in step 1 is restored).

Upper Display	Lower Display	Format	Unit	Function
K-IMPRESSIONS	******** PRINTS	DEC	Prints	Each displays the number of each color's images printed.
Y-IMPRESSIONS	******** PRINTS	DEC	Prints	
M-IMPRESSIONS	******** PRINTS	DEC	Prints	
C-IMPRESSIONS	******** PRINTS	DEC	Prints	
TOTAL SHEET CNT	******** PRINTS	DEC	Prints	Displays the total number of images printed.

*1 Tow counts apply to duplex print.

6.3.2.10 Factory-Shipping mode switching

The Factory-Shipping mode switching is used for switching from the Factory to Shipping mode.

1. Enter the self-diagnostic mode and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

FACTORY MODE SET

2. Press the **ENTER** button. The following message appears. Press the **MENU**∧ or **MENU**∨ button until the option to set (refer to the table shown below) appears

FACTORY MODE
SHIPPING MODE *

3. A setting for the option can be selected by pressing the **ENTER** button with the option on the display.
4. Hold down the **ENTER** button (for three seconds) with the setting on the display. The setting is stored in the EEPROM. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **BACK** button to end the option (the state in step 1 is restored).

Option	Settings	Function
FACTORY MODE	FACTORY MODE	Establishes the Factory mode (a fuse-cut disabling mode).
	SHIPPING MODE	Deselects the Factory mode to enable the fuse-cut function.
FUSE INTACT ***Note:*** ****** is either INTACT or BLOWN.	BELT UNIT XXXXXX	Displays the fuse status of the transfer belt unit.
	FUSE UNIT XXXXXX	Displays the fuse status of the fuser.

6.3.2.11 Self-diagnostic function setting

The self-diagnostic function setting is used for enabling or disabling the error detection by sensors. The detection can be enabled or disabled temporarily for troubleshooting. Allowing for setting engine operation options for which expert knowledge is required to be handled. This self-diagnostic should be used carefully. Be sure to restore the default settings of used options of the self-diagnostic.

1. Enter the self-diagnostic mode and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

SENSOR SETTING

2. Press the **ENTER** button. The following message appears. Press the **MENU**∧ or **MENU**∨ button until the option to set (refer to the table shown below) appears.

TONER SENSOR
ENABLE *

3. The setting on the lower display can be selected by pressing the **ENTER** button. The **MENU**∧ button displays the next setting and the **MENU**∨ button displays the preceding setting.
4. Hold down the **ENTER** button (for three seconds) with the desired setting on the display. The setting is stored in the EEPROM. The state in step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press the **BACK** button to end setting the option (except where not in step 4) (the state in step 1 is restored).

Option	Set Settings	Setting Operation	Function
TONER SENSOR	ENABLE	Enables detection.	Enables or disables toner sensor operation.
	DISABLE	Disables detection.	
BELT UNIT CHECK	ENABLE	Enable checking.	Enables or disables belt installation checking operation.
	DISABLE	Disables checking.	
ID UNIT CHECK	ENABLE	Enable checking.	Enables or disables image drum installation checking.
	DISABLE	Disables checking.	
REG ADJUST ERROR	ENABLE	Has the printer to pause.	Has or does not have the printer to pause with an error due to color misregistration detection.
	DISABLE	Does not have the printer to pause.	
DRUM OVER LIFE	STOP	Does not extend life.	Sets whether to enable or disable extending image drum life at the end of the life.
	CONTINUANCE	Extends life	
WR POINT REV TBL=**H± *.***mm	00H~FFH	A correction value.	Adds a correction value for the default writing point.
BOTTOM WRT POINT TBL=**H± *.***mm	00H~FFH	A tear-off position value.	Sets a tear-off length from the bottom edge of paper.

Default is in hatched area.

6.3.2.12 LED head serial number display

The LED head serial number display is used for viewing whether downloaded data about LED heads agrees with the serial numbers marked on the LED heads.

1. Enter the self-diagnostic mode and, until LED HEAD DATA appears, press the **MENU**∧ or **MENU**∨ button (the **MENU**∧ button displays the next test option and the **MENU**∨ button displays the preceding test option). Then press the **ENTER** button.
2. Pressing the **MENU**∧ or **MENU**∨ button displays each of the K, Y, M and C LED head data serial numbers.
3. Press the **BACK** button to end the option (the state in step 1 is restored).

K ** ** ** ****
xxxxxxxxxxxxx

** ** ** **** : A revision number
① ② ③ ④

xxxxxxxxxxxxx : A serial number
④

① : Head type data
② : Light amount data
③ : Length data
④ : Head serial No.

Note! If the serial number of the LED head data is not ASCII code (0x3X/0x4X/0x5X), it is indicated by ' . '.

6.3.2.13 Contrast adjustment

This contrast adjustment is used for the adjustment of the panel contrast.

1. Enter the self-diagnostic mode (Level 1) and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

GRAPHIC PANEL ADJUST

2. Pressing the **ENTER** button displays the adjustment item in the upper display, and the current setting value in the lower display.

   Hold down the **MENU**∧ or **MENU**∨ button until the value you want to set is displayed.

   CONTRAST … **MENU**∧ : The setting value is incremented.
   MENU∨ : The setting value is decremented.

CONTRAST ADJUST
1CH

3. Repeat step 2 when necessary.
4. Press the **BACK** button to end this function (the state in step 1 is restored).

Contrast and lightness adjustment (GRAPHIC PANEL ADJUST)

Display	Setting	Default	Function
CONTRAST ADJUST	0 - 3FH	1CH	Setting of contrast

* Options set are effective in this test mode. (the options are not written in EEPROM)

In addition, when returning to the normal operation mode, the contrast setting of the CU side is applied.

6.3.2.14 BUZZER TEST

The BUZZER TEST function is used for the buzzer test.

1. Enter the self-diagnostic mode (Level 1) and, until the following message appears, press the **MENU**∧ or **MENU**∨ button.

BUZZER TEST

2. Pressing the **ENTER** button displays the following message.
   Hold down the **MENU**∧ or **MENU**∨ button until the target option is displayed.

BUZZER TEST
SMALL VOLUME

3. By pressing the **ENTER** button, the buzzer test starts and the lower display starts to blink.
   * Usually, it stops in 1 second after pressing the Enter button.
   * The status is returned to Step 2 after the buzzer for one second, and the buzzer starts again by pressing the **ENTER** button again.
4. Pressing the **CANCEL** button stops the buzzer.
5. Repeat steps 2 through 4 when necessary.
6. Press the **BACK** button to end the buzzer test (the state in step 1 is restored).

BUSSER TEST

Display	Function
SMALL VOLUME	Buzzer volume is small.
LARGE VOLUME	Buzzer volume is large.

6.3.3 Printing on stand-alone basis

C831dn/C841dn can perform the following printing on a stand-alone-basis.

Settings	Prints information, including printer menu settings, program versions and control block configuration.
Network	Prints network-related information, including a MAC address and IP address.
Demo page	Prints demo pages.
File list	Prints a list of files stored in a file system.
PostScript font list	Prints a PostScript fonts list.
PCL font list	Prints a PCL emulation fonts list.
Print statistic results	Prints a statistic usage result. * The result is displayed when Print Statistics Menu-User Report is set to Enable.
Error log	Prints an error log.
Color profiles list	Prints a color profiles list.

Printing Procedure:

① Verify that the message stating the printer is ready to print is showing on the operator panel, and press the **ENTER** button to display FUNCTION

② Press the **MENU**∨ button to select the option to print printer information. Press the **ENTER** button.

③ Press the **MENU**∨ button to select the item to print. Press the **ENTER** button.

④ Press the **ENTER** button to print the item (the button must be pressed twice to print a demo page).

6.3.4 Functions of buttons after power-on

After the printer is turned on, buttons on the operator panel of C831/C841 function as described below. When held down until the upper and lower displays on the panel show RAM CHECK and three or four asterisks (****), respectively, the following buttons are enabled:

(1) **MENU**∧, **MENU**∨ and **HELP** buttons

Start the System Maintenance menu.

(2) **BACK**, **MENU**∨ and **ENTER** buttons

Ignoring all warnings and errors, start the printer, always placing it to an online mode.

(3) **ENTER** button

Starts the Boot menu.

(4) **BACK** button

Starts the Print Statistic Menu.

6.4 Setup after part replacement

The following describes the adjustments necessary after part replacement:

Replaced part	Adjustment
LED head	Not necessary.
Drum cartridge (yellow, magenta, cyan or black)	Not necessary.
Fuser unit	Not necessary.
Belt unit	Not necessary.
CU/ PU board	Copying information stored in EEPROM, which requires utility software.

6.4.1 Notes on CU/ PU board replacement

1. When the EEPROM on a board to be removed can be accessed (when SERVICE CALL 104 (Engine EEPROM Error), or 40 (EEPROM Error) is not displayed):

   (1) Using the board replacement function of Maintenance Utility (Maintenance Utility operation manual, section 2.4.1.1.9 about Board replacement functionality), take out the information of the EEPROM on PU and Information of the EEPROM settings on CU from the board to be removed, and temporarily store it onto an HDD of the computer.

   (2) Using the board replacement function of Maintenance Utility (Maintenance Utility operation manual, section 2.4.1.1.9 about Board replacement functionality), copy the information of the EEPROM on PU stored in HDD of the computer and the information of EEPROM settings on CU onto the EEPROM of a board to be newly installed.

   (3) Even when either information of EEPROM on PU or information of the EEPROM settings on CU is taken out, using the board replacement function of Maintenance Utility (Maintenance Utility operation manual, section 2.4.1.1.9 about Board replacement functionality), copy either information of EEPROM on PU or information of the EEPROM settings on CU which can be stored in the HDD of the computer onto EEPROM of a board to be newly installed.

   Information that cannot be taken out is separately set up in the same function.

   When the information of EEPROM on PU cannot be taken out, make a setting of the serial number on PU (Maintenance utility operation manual, section 2.4.1.1.9.5) and a setting of switching to the Shipping mode (Maintenance utility operation manual, section 2.4.1.1.9.6) on the setup screen.

   When the information of EEPROM settings on CU cannot be taken out, make a setting of the information about a serial number on CU (Maintenance utility operation manual, section 2.4.1.1.9.4) on the setup screen.

Note! When taking out or writing information from/into EEPROM by using Maintenance Utility, use the procedure shown below to place the printer to the Forced ONLINE mode before accessing the EEPROM. An error message is displayed even in the forced ONLINE mode when the printer has an error.

i. When turning on the printer, press and hold down the [1] Switch and [>] Switch in combination until all the function key LEDs are tuned off after being turned on.

ii. When the printer operates properly, the operator panel shows “Ready to Copy”(when the copy is the standby mode).However, when the printer has an error, it indicates an error, but the printer is internally online, being ready to communicate.

2. When the EEPROM on a board to be removed cannot be accessed:

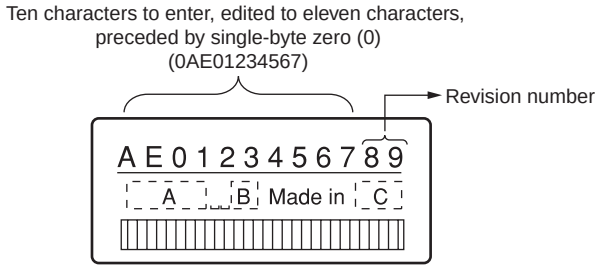
   When SERVICE CALL 104 (Engine EEPROM Error), or 40 (EEPROM Error) is displayed, or data cannot be read from the EEPROM, after replacing the board to a new one, follow the following procedure to perform operation by using Maintenance Utility:

   (1) Serial number information setting (applicable Maintenance Utility operation manual, section 2.4.1.1.10.3 about PU board setup)

   A SAP serial number is assigned to the printer. The number is placed at the top of the serial number label of the printer, consisting of total twelve characters -- two characters that indicates a production place, two characters that indicates a month and year, six characters that indicates a manufacture number (sequence number) and two characters that indicates revision number.

   - For the printer serial number, “PU serial number2 should be selected, and for the output mode, “Display the serial number only” should be selected.
   - The PU serial number is ten characters from the SAP serial number. The rest two characters are the revision number.
   - The PU serial number is set in the PU serial number setting window described in section 2.4.1.1.10.3 of the Maintenance Utility operation manual in the section 2.4.1.1.10 about Board setup functionality.

- To assign a PU serial number to the printer, in the PU serial number setting window, enter eleven characters, i.e. ten characters preceded by a singlebyte zero (0) (note a read PU serial number is ten characters). As shown in the following serial number label example, the ten characters are the printer's the SAP serial number excluding the revision number.



Serial number label example

- The PU serial number is shown at Printer Serial Number in the header of the printer's configuration report (a Menu Map) output from the printer. After the PU serial number is changed, it can be checked by printing the report from the printer.

(2) Switching to Shipping mode

When the CU/PU control board is replaced with a new one, the printer is placed in the Factory mode. Switch the printer to the Shipping mode.

- To switch, use the Factory/Shipping mode window described in section 2.4.1.1.10.4 Factory/ Shipping Mode in the section 2.4.1.1.10 about board setup functionality of the Maintenance Utility operation manual.

Note! Replacing the EEPROM (the PU control board) with a new one clears life information about consumables, including the belt, and toner. Note that, until the consumables are replaced, this makes differences between their displayed consumed and consumed lives. Such life information cleared is as shown below. Upon replacement of the consumables, the information (counts) except the total number of printed sheets are cleared, and differences between the counts and consumed lives of the consumables are cleared.

Option	Description	Count description
FUSER UNIT	A fuser life count.	The number of prints made from the first-time installation of a fuser unit until present *1
Belt Unit	A belt unit life count	The number of prints made to date from the first-time installation of a belt unit until present *2
Total number of printed sheets	A printer life count.	The total number of printed sheets from the beginning of use of the printer*3
Prints Black Prints Yellow Prints Magenta Prints Cyan	The total number of printed sheets in each color	The total number of printed sheets in each color from the beginning of use of the printer *3

*1 Based on the paper length of Legal 13, if the sheet is the legal 13 length or less, it is regarded as one count, and if the sheet length exceeds the Legal 13 length, the number of counts is determined by how many times as large is the Legal 13 length as that of the sheet. (The decimal is rounded out.)

*2 One third of the number of belt turns in A4 (A4 portrait) three-pages-per-job printing is regarded as one count.

*3 Tow counts apply to duplex print.

6.5 Manual density adjustment setting

C831/C841 is shipped with the auto density adjustment mode enabled. When the mode is disabled by a user, the printer may print density out of adjustment while being used. Manually perform density adjustment setting when the printer prints an improper density.

Note! The setting must be performed with the printer in a static state. Do not perform it while the printer warms up.

(1) Press the **MENU**∧ or **MENU**∨ button more than one time. Press the **ENTER** button when Calibration appears.

(2) Press the **MENU**∧ or **MENU**∨ button to select Adjust Density Execute. Press the **ENTER** button.

(3) Press the **ENTER** button.

Auto density adjustment starts, the operator panel display providing a message stating that density is being adjusted.

6.6 Boot Menu List

To display Boot Menu, turn on the printer while holding down the **ENTER** button.

Memo Displaying Boot Menu requires entry of a password. The password defaults to six as (aaaaaa).

Category	Option	Settings	Function
	Enter Password	**********	Enters a password to display Boot Menu. The default is “aaaaaa”. The password is six to twelve digits of lower-case alphanumeric characters
Parallel Setup *1	Parallel	Enable Disable	Sets whether to enable or disable the Centronics parallel interface.
	Bi-Direction	Enable Disable	Sets whether to enable or disable the bi-directional Centronics parallel interface.
	ECP	Enable Disable	Sets whether to enable or disable the ECP mode.
	Ack Width	Narrow Medium Wide	Sets the compatible-reception ACK width.
	Ack/Busy Timing	Ack in Busy Ack while Busy	Sets the order of outputting compatible-reception BUSY and ACK signals.
	I-Prime	3 microseconds 50 microseconds Disable	Sets an I-PRIME signal valid time period or disable I-Prime signals.
	Offline Receive	Enable Disable	Sets whether to enable or disable the functionality that maintain a state ready for reception without changing interface signals even when an alarm is issued.
USB Setup	USB	Enable Disable	Sets whether to enable or disable the USB interface.
	Speed	480Mbps 12Mbps	Sets the maximum USB interface transmission speed.
	Soft Reset	Enable Disable	Sets whether to enable the Soft Reset command
USB Setup	Offline Receive	Enable Disable	Sets whether to enable or disable the functionality that maintain a state ready for reception without changing interface signals even when an alarm is issued.
	Serial Number	Enable Disable	Sets whether to enable or disable the USB serial number.
Security Setup	Job Limitation	Off Encrypted Job	Job limitation mode control Ignores other than specified jobs (currently, only encrypted authentication printing can be specified.) [Display conditions] • SD memory card is installed.
	Make Secure SD Card	Execute	Enables the encryption function of data stored in SD memory card. [Display conditions] • SD memory card is installed, the encryption function of SD memory card is disabled, and [Storage Setup] – [Enable Initialization] is Yes.
	Make Normal SD Card	Execute	Disables the encryption function of data stored in SD memory card. [Display conditions] • SD memory card is installed, the encryption function of SD memory card is disabled, and [Storage Setup] – [Enable Initialization] is Yes.
	Reset Cipher Key	Execute	Reproduces a cipher key used for the SD memory card for encryption. [Display conditions] • SD memory card is installed, the encryption function of SD memory card is disabled, and [Storage Setup] – [Enable Initialization] is Yes.
Storage Setup	Check File System	Execute	Resolves a mismatch between the actual (available) and displayed available space of the file system and restores management data (FAT information). [Display conditions] • SD memory card is installed.

Category	Option	Settings	Function
Storage Setup	Check All Sectors	Execute	Restores improper SD memory card sector information and corrects a mismatch between the actual and displayed available space of the file system. [Display conditions] • SD memory card is installed.
	Enable SD Card	No Yes	Sets whether to enable or disable the SD memory card. [Display conditions] • SD memory card is installed.
	Erase SD Card	Execute	Erases all data stored on SD memory card so as that it cannot be restored. [Display conditions] • SD memory card is installed.
	Enable Initializa-tion	No Yes	Disables changes involving the BlockDevice (SD memory card, FLASH) initialization
Process Setup *2	Custom Process	Full Color Monochrome Custom Color	Full Color: Limited color print function is not used. Monochrome: Limited color print function is used to regard all jobs as monochrome jobs. Custom Color: Limited color function is used to separately remove image drums of each color.
	Check C Drum	No Yes	Switches to Yes or No for the installation check of CYAN image drum. [Display conditions] • "Boot Menu"-"Process Setup"-"Custom Process" is set to Custom Color
	Check M Drum	No Yes	Switches to Yes or No for the installation check of MAGENTA image drum. [Display conditions] • "Boot Menu"-"Process Setup"-"Custom Process" is set to Custom Color
	Check Y Drum	No Yes	Switches to Yes or No for the installation check of YELLOW image drum. [Display conditions] • "Boot Menu"-"Process Setup"-"Custom Process" is set to Custom Color
Langu-age Setup	Language Initialize	Execute	Erases the message file in the flash memory.
System Setup	High Humid Mode	Mode1 Mode2 Off	Sets the curl reduction mode to ON or OFF.
	Moisture Control	On Off	Sets whether to enable or disable the dew condensation control
	Narrow Paper Speed	Normal Slow	Sets the print speed for narrow paper. Normal: Print speed is not switched for narrow paper. Slow: Print speed is switched to SLOW for narrow paper.
	Slow Print Mode	On Off	Sets the slow print mode to improve fusing margin.
	Menu Lockout	On Off	Sets the menu lockout function to ON or OFF.

*1 It is displayed only when the Centronics parallel interface is activated. Since the interface is not activated in the default setting, it is not displayed.

*2 When the custom process function is not supported, the [Process Setup] category is not displayed. It will be enabled by sending an activation PJL command.

7. CLEANING

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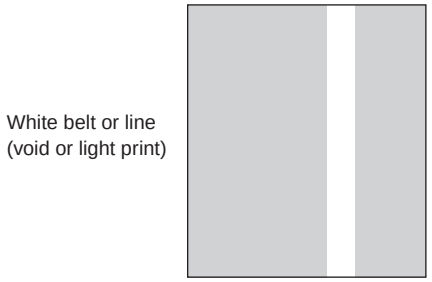
7.1 Cleaning

The inside and outside of the printer must be cleaned with a waste cloth and a handy vacuum cleaner when necessary.

Note! Do not directly touch the image drum terminals, LED lens array and the LED head connectors.

7.2 LED lens array cleaning

The LED lens array must be cleaned when a vertical white belt or line (void or light print) occurs on the printed side.



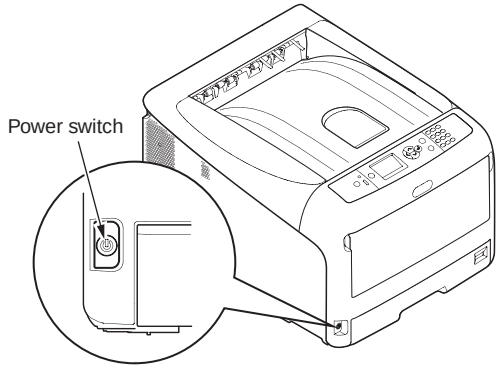
LED head cleaning

When a white line or blurred text is printed, perform the following steps shown below.

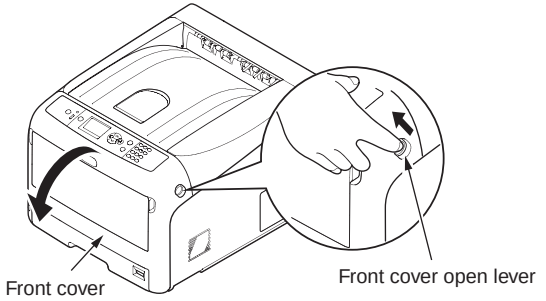
(1) Press the power switch for about one second.

The message, “Shutting down… Please wait for a while. The printer will be automatically turned off.”, is displayed, and the LED lamp of the power switch lights up at intervals of one second. Then, the printer is automatically turned off, and the LED lamp of the power switch is turned off.

Make sure to disconnect the power cable, Ethernet cable, and USB cable.



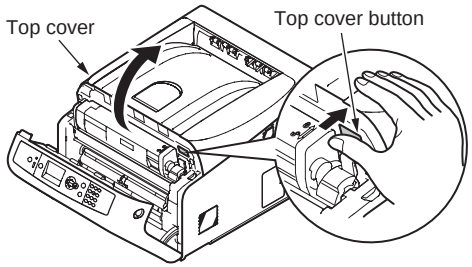
(2) Insert your finger into the depressed area on the right side of the printer, and pull the front cover open lever to pull the front cover open.



(3) Press the top cover button to open the top cover.

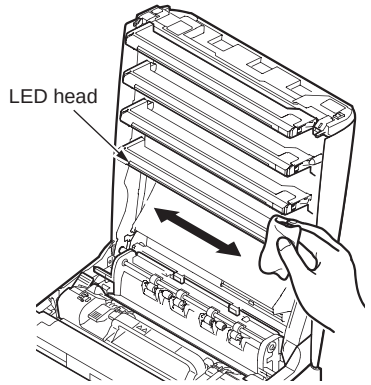
⚠Caution	Burn injury hazard.	

Do not touch the fuser unit. It is hot.



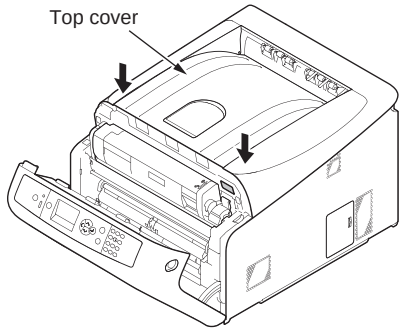
(4) Lightly wipe the (four) LED head lens surfaces with soft tissue paper.

Note! Solvents, such as methyl alcohol or thinner, damage the LED heads. Do not use them.



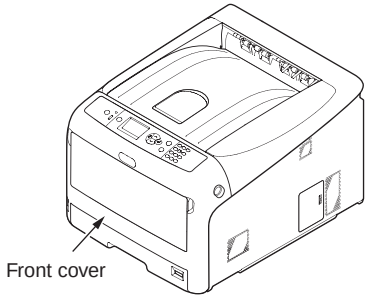
Memo Parts may be damaged due to static electricity. Make sure to remove the static electricity charged on you by touching the metals connected, before doing this task.

(5) Close the top cover and then, press the both sides firmly.



(6) Close the front cover.

Note! Note that the front cover cannot be certainly closed unless the top cover is closed.



7.3 Paper feed roller cleaning

The paper feed rollers (three rollers) must be cleaned when a vertical line occurs on the printed side.

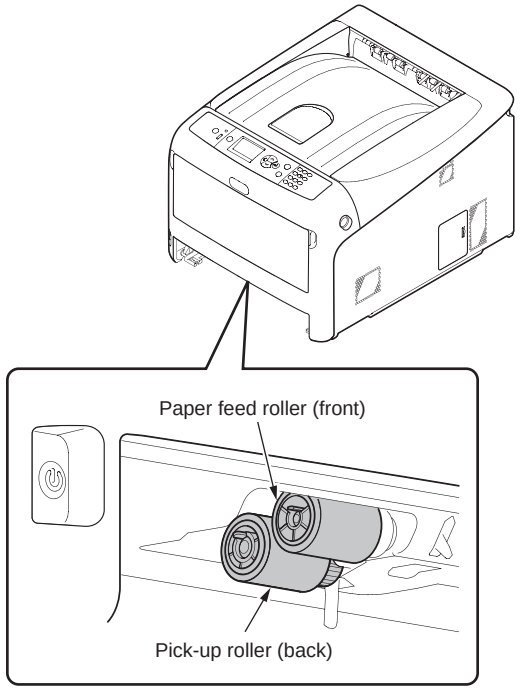
Note! Use a soft cloth to clean the paper feed rollers so as not to damage their surfaces.

Paper feed roller cleaning

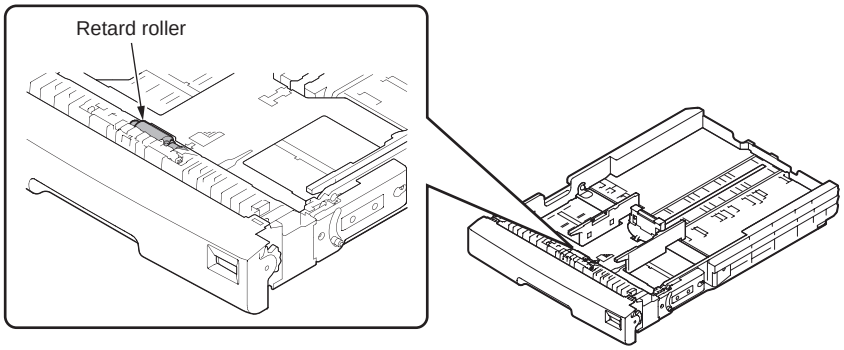
When 'Open Cassette Paper Jam ' messages occur frequently, perform the following steps shown below.

(1) Pull out the paper cassette of the tray being displayed.

(2) Wipe the paper feed rollers (front) and pick-up roller (back) with a cloth tightly wrung out with water.



(3) Wipe the retard roller of the paper cassette with a cloth tightly wrung out with water.



Note! When 'Open Cover Paper Jam Front Cover' messages occur frequently, clean the paper feed roller of the multi-purpose tray in the same manner as described above.

8. TROUBLESHOOTING PROCEDURE

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8.1 Important notes to start the repair work

(1) Read the basic check/inspection points described in User's Manual.

(2) Get information from customers in detail as much as possible about problem occurrence conditions.

(3) Carry out checking under the conditions that are similar to those at occurrence of the problem.

8.2 Matters to be checked before taking corrective actions against abnormalities

(1) The operation environment of the printer is appropriate.

(2) Consumable items (toner cartridges and image drums) have been replaced properly.

(3) Print media (paper) has no problem. Refer to paper specifications in User's Manual.

(4) The image drums are installed correctly.

8.3 Precautions when taking corrective actions against abnormalities

(1) Do not touch the OPC drum surface with your hand and do not allow any foreign materials to touch it.

(2) Do not expose the OPC drum to the direct sunlight.

(3) The fuser unit is extremely hot. Do not touch.

(4) Do not expose image drums to any light for 5 minutes or longer at room temperature.

8.4 Preparation for troubleshooting

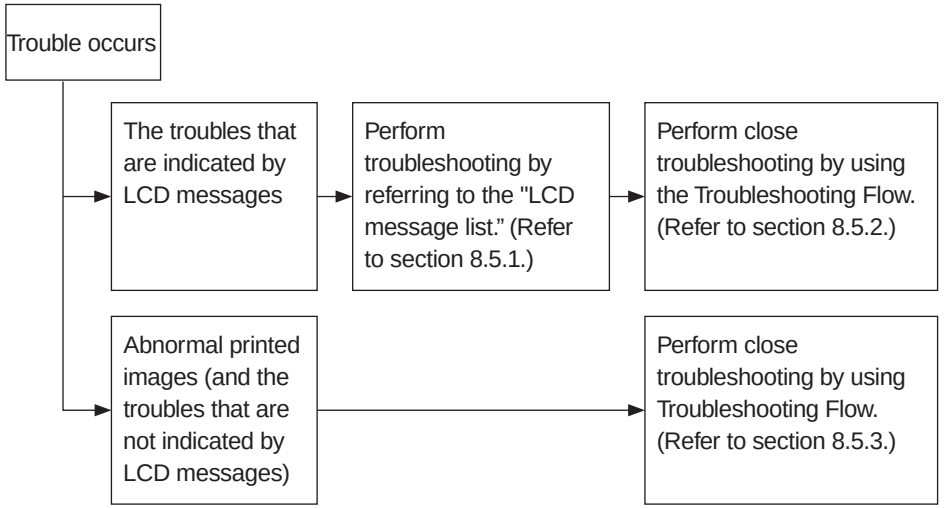
(1) Display on the operator panel

Error status of this printer is displayed on the LCD (Liquid crystal display) screen of the operator panel.

Take appropriate troubleshooting actions by following the message displayed on the LCD screen.

8.5 Troubleshooting methods

When a trouble occurs with this printer, perform troubleshooting by following the steps described below.



8.5.1 LCD message list

Initializing

Panel display	READY indicator	ATTEN-TION indicator	Beep	Details
Initializing	Off	Off	–	It is displayed until the system display language is determined immediately after the power is turned on.
Restarting	Off	Off	–	Indicates a restart by a press of the RESTART button.
Initializing	Off	Off	–	Indicates the controller side is initializing.
EEPROM Reset	Off	Off	–	Indicates that the EEPROM of the controller side is being reset. The conditions for resetting the EEPROM are as follows: • Change of CU ROM (when disagreement of the CU F/W version is detected) • Change of destination • Forced initialization of the EEPROM (system maintenance menu) • OEM setting by PJL commands
RAM Check nnn%	Off	Off	–	Indicates that RAM is being checked. Percentage of the checked portion against the total capacity is shown in the second line.
Flash Memory Format	Off	Off	–	Indicates that the flash memory is being formatted. If a resident/optional flash memory that is not yet formatted is detected, it is displayed when the menu item [Format Flash ROM] is selected from [Maintenance Menu] of the system maintenance menu. Because the above processing is secret to users, this status does not occur in a user environment.

Panel display	READY indicator	ATTEN-TION indicator	Beep	Details
Checking File System	Off	Off	–	Indicates that the SD Card File System is being checked. The checking process of File System can be started from [Storage Setup] - [Check File System] of Boot Menu.
Erasing SD Card	Off	Off	–	Indicates that it is in elimination process for SD Card. The erasure process for SD Card can be started from [Storage Setup] of Boot Menu - [Erase SD Card].
Checking Sectors nnn%	Off	Off	–	Indicates that the sector of SD Card is being checked. The sector check process can be started from [Storage Setup] of Boot Menu - [Check All Sectors] ***nnn*** The percentage of checked portions
PU Flash Error	Off	Off	–	Indicates that the PU firmware has not started up successfully. This error can occur in a user environment. If this error occurs, maintenance by a maintenance engineer is required.
Communication Error	Off	Off	–	Indicates that communication with the PU firmware during initialization has failed. This error can not occur in a user environment. If this error occurs, maintenance by a maintenance engineer is required.

Normal

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
Ready To Print	On	Off	–	Indicates that the printer is in the online state.
Offline	Off	Off	–	Indicates that the printer is in the offline state. * The READY LED indicator stays off during offline.
File Accessing	Varies	Varies	–	Indicates that a file system (SD/HDD/FLASH) is being accessed.
Data Arrive	Varies	Varies	–	Indicates that data is being received, and processing has not started yet. This message is displayed mainly during processing of PJL without text print data or during job spooling.
Processing	Blink	Varies	–	Indicates that data is being received or output.
Data Present	Varies	Varies	–	Indicates that unprinted data remains in the buffer. The printer is waiting for data to follow.
Printing (%TRAY%)	Varies	Varies	–	Indicates that the printer is printing. ***%TRAY%*** Tray 1 Tray 2 Tray 3 Tray 4 MP Tray
Print Demo Page	Varies	Varies	–	Indicates that the printer is printing demo page.
Printer Font List	Varies	Varies	–	Indicates that the printer is printing the list of fonts.
Print Network Config	Varies	Varies	–	Indicates that the printer is printing the network configuration.
Print Configuration	Varies	Varies	–	Indicates that the printer is printing menu map.
Printer File List	Varies	Varies	–	Indicates that the printer is printing a list of files (except hidden files) that are stored in a file system (SD/FLASH/HDD).
Print Error Log	Varies	Varies	–	Indicates that error logs are being printed.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
□ □ Collate Copy iii/jjj	Varies	Varies	–	Indicates that the printer is printing collated sets of copies. ***iii*** indicates the number of copy being printed, and ***jjj*** indicates the total number of printed copies to make. When the total number of copies is 1, the normal message “PRINTING” is displayed.
□ □ Copy kkk/lll	Varies	Varies	–	Indicates that the printer is performing copy printing. ***kkk*** indicates the number of copy being printed, and ***lll*** indicates the total number of printed copies to make. When the total number of copies is 1, the normal message “PRINTING” is displayed.
Verifying Job	Blink	Varies	–	Indicates that the integrity (corruption or tempering) of print data for encrypted authentication is being verified.
Cancelling Job	Blink	Varies	–	Indicates that job cancellation has been instructed, and data is being ignored until job completion.
Cancelling Job	Blink	Varies	–	This message is displayed if jam occurs when Jam Recovery if Off. Job cancellation has been instructed, and data is being ignored until job completion.
Cancelling Job	Blink	Varies	–	Indicates that a job is being cancelled due to no print permission. (Related to JobAccount) 1. When a job from a user who is not authorized to print is received. 2. When a color job from a user who is not authorized to color print is received.
Cancelling Job	Blink	Varies	–	Indicates that a job is being cancelled because the log storage area of the printer has been used up, and also “Cancel job” is specified as an operation at the time of Log Full. (Related to JobAccount)
□ Calibrating	Varies	Varies	–	Indicates the period of reading from or writing to the memory tags in toner cartridge/image drum unit.
□ Adjusting Temp.	Varies	Varies	–	Shows cooling down status. Note that this message “Adjusting Temp.” ends with a period “.”

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
□ Adjusting Temp	Varies	Varies	–	Indicates that the printer is warming up.
□ Optimizing Temp	Varies	Varies	–	Indicates that printing has been suspended for a while due to high temperature of a drum, or the printer is in a wait state to cope with heat at the time of switching to narrow paper to wide paper.
□ Power Save	Varies	Varies	–	Indicates that the printer is in the power save mote. When the printer enters the power save mode, the LCD backlight turns off. When it exits the power save mode, the LCD backlight turns on. If the switch is pressed while the backlight is off (in the power save mode), the backlight turns on, and then turns off in 30 seconds. However, the power save mode is not cancelled. It stays on during shut-down (Priority 365). When the sleep mode timeout occurs in the power save mode, the printer enters the sleep mode.
Invalid Operation	Varies	Varies	On	This message pops up with a press of the power save button when the printer is unable to enter the power save mode, and in three seconds, it returns to the previous display.
□ Sleep Mode	Varies	Varies	–	Indicates that the printer has entered the sleep mode. Actually, the printer enters the sleep mode immediately after this message is displayed; therefore, it is not easy to read this message.
□ Color Adjusting	Varies	Varies	–	Indicates that automatic color adjustment is being executed.
□ Density Adjusting	Varies	Varies	–	Indicates that automatic density correction is being executed. The status code 10988 corresponds to the density read-out (Leisus – STSDEN #1) and 10994 corresponds to the density correction (Leisus – STSDEN #0).

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details
Flash Download	Varies	Varies	–	Indicates that the PU firmware program data is being downloaded. Since downloading of the PU firmware is opened internally only and not disclosed to users, the status does not occur in a user environment.
Please wait Executing Maintenance	Varies	Blink	–	Maintenance is being carried out. Panel operation is not available in this status. (This message is displayed during MPS function-related maintenance, but objects are not limited to MPS.)

Warning

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ %COLOR% Toner Low	Varies	On (Blink) (Off)	– (On)	Indicates that amount of toner is low. When the MENU button > [Menus] > [System Adjust] > [Low Toner] is set to [Cancel], the ATTENTION indicator blinks, a beep sounds, and the printer goes into off-line. When the ON LINE button is pressed, or when an error is cleared, the print exits the off-line mode and continues printing until TONER EMPTY is detected. If a TONER LOW error has occurred when the power is turned on and also the MENU button > [Menus] > [System Adjust] > [Low Toner] is set to [Stop], the ATTENTION indicator blinks, a beep sounds, and the printer goes into off-line at the timing when initialization is completed. By pressing the ON LINE button, the printing can continue until TONER EMPTY is detected. When [Admin Setup] > [System Setup] > [Near Life LED] is set to [Disable], the ATTENTION indicator goes out. ***%COLOR%*** Yellow Magenta Cyan Black	–
□ %COLOR% Waste Toner Full. Replace Toner.	Varies	On	–	This warning is displayed when the cover is opened & closed or the power is cycled after a Waste Toner Full error occurs (but not for Yellow or Black). This warning is displayed in combination with another message in the first line. While this warning is being displayed, a Waste Toner Full error occurs whenever approx. 20 pages are printed, and the printer enters off-line and stops. ***%COLOR%*** Magenta Cyan	Replace the toner cartridge of the indicated color.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTENTION indicator	Beep	Details	Remedial measure
□ Non OEM %COLOR% Toner Detected, Incompatible %COLOR% Toner, Non Genuine %COLOR% Toner	Varies	On	–	A proper toner cartridge is not installed.	Urge the user to use proper toner cartridges.
□ %COLOR% Toner Sensor Error	Varies	On	–	Something is wrong with the toner sensor. ***%COLOR%*** Yellow Magenta Cyan Black	–
□ Error Postscript	Blink	Varies	–	Indicates that PostScript interpreter has detected an error due to the following reason. - The job has a grammatical error. - The page is complicated, and VM was used up.	–
□ %COLOR% Image Drum Near Life	Varies	On (Off)	–	Indicates that the image drum is near the end of its life. Printing can continue until the image drum reaches the end of its life. When [Admin Setup] > [System Setup] > [Near Life LED] is set to [Disable], the ATTENTION indicator goes out. ***%COLOR%*** Yellow Magenta Cyan Black	–
□ Fuser Unit Near Life	Varies	On (Off)	–	Indicates that the fuser is near the end of its life. When [Admin Setup] > [System Setup] > [Near Life LED] is set to [Disable], the ATTENTION indicator goes out.	–
□ Belt Unit Near Life	Varies	On (Off)	–	Indicates that the transfer belt is near the end of its life. Because this is just a warning, printing is not stopped. When [Admin Setup] > [System Setup] > [Near Life LED] is set to [Disable], the ATTENTION indicator goes out.	–
□ Change Fuser Unit	Varies	On	–	Indicates that the fuser has reached the end of its life (warning). This status message is displayed when the cover is opened & closed or the power is restored after a fuser life error occurs.	Replace the fuser with a new fuser.
□ Change Belt Unit	Varies	On	–	Indicates that the transfer belt has reached the end of its life (warning). This status message is displayed when the cover is opened & closed or the power is restored after a transfer belt life error or belt waste toner full error occurs.	Replace the belt unit with a new belt unit.
□ %COLOR% Toner Empty	Varies	On	–	Indicates that toner has run out. This status message (warning) is displayed when the cover is opened & closed or the power is restored after a toner empty error occurs. ***%COLOR%*** Yellow Magenta Cyan Black	Replace the toner cartridge with a new toner cartridge.
□ %COLOR% Toner Empty	Varies	On	–	Indicates that toner has run out. This message is displayed when no print data exists with toner empty. ***%COLOR%*** Yellow Magenta Cyan	Replace the toner cartridge with a new toner cartridge.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ %COLOR% Toner Not Installed	Varies	On	–	Indicates that the toner cartridge is not installed. ***%COLOR%*** Yellow Magenta Cyan Black	Install the toner cartridge. Remember that the toner cartridge supplied with the product cannot be used if the toner cartridge of other supply is used.
□ Non OEM %COLOR% Image Drum Detected, Incompatible %COLOR% Image Drum, Non Genuine %COLOR% Image Drum	Varies	On	–	A proper image drum is not installed. ***%COLOR%*** Yellow Magenta Cyan Black	Urge the user to use proper image drums.
□ %COLOR% Image Drum Life	Varies	On	–	Indicates that the image drum has reached the end of its life. This status message (warning) is displayed when the printer is recovered from an Image Drum Life end error temporarily by opening & closing the cover. ***%COLOR%*** Yellow Magenta Cyan Black	Replace with an image drum of indicated color.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ %COLOR% Image Drum Life, %PAGES% Pages Left	Varies	On	–	The image drum already reached the end of its life and is in a life-prolonging period temporarily. Although another %PAGES% pages can be printed, but it is requested to replace the image drum immediately. ***%COLOR%*** Yellow Magenta Cyan Black ***%PAGES%*** 1 to 500 (The upper limit is subject to change without notice in the future.)	Replace with an image drum of indicated color.
□ %COLOR% Image Drum Life, Print Quality Not Guaranteed	Varies	On	–	The image drum already reached the end of its life and is in the second life-prolonging period temporarily. Print quality is not guaranteed. ***%COLOR%*** Yellow Magenta Cyan Black	Replace with an image drum of indicated color.
□ %TRAY% Empty	Varies	On	–	Indicates that the tray runs out of paper. It is handled as a warning until the tray that ran out paper is specified for printing. ***%TRAY%*** Tray 1 Tray 2 Tray 3 Tray 4 MP Tray	Load paper in the indicated tray.
□ File System is Full	Varies	On	–	Indicates that the file system built on the storage device (SD/HDD/FLASH) runs out of free space. Because this is a temporary warning, it remains displayed until the end of the job and then disappears.	Explain the user that no remedial measure is required.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ File System is Write Protected	Varies	On	–	Indicates that an attempt to write data into a write-protected file of the file system built on the storage device (SD/HDD/FLASH) was made. Because this is a temporary warning, it remains displayed until the end of the job and then disappears.	Explain the user that no remedial measure is required.
□ File Erasing	Varies	On	–	Indicates that a confidential file is being erased.	–
□ Deleting Encrypted Job	Varies	On	–	Indicates that deletion of an encrypted authentication print job and storage of a deletion request for job saving file are being processed.	–
□ Erased Data Full	Varies	On	–	Indicates that a confidential file waiting to be erased is full.	–
□ USB Hub Unsupported Please detach it	Varies	Varies	–	Indicates that a USB Hub not supported by this printer is connected. This message remains displayed until the USB Hub not supported by this printer is removed.	Remove the USB Hub.
□ Unsupported USB Device Detected Please detach it	Varies	Varies	–	Indicates that a USB device not supported by this printer is connected. This message remains displayed until the USB device not supported by this printer is removed.	Remove the USB device.
□ Collate Fail: Too Many Pages Press ONLINE Button	Varies	Varies	–	Indicates that the COPY data caused a memory overflow. This message remains displayed until the ON LINE button is pressed.	Reduce the number of pages that are going to be printed at a time.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTEN-TION indicator	Beep	Details	Remedial measure
□ Color Restricted. Mono Printed Press ONLINE Button	Varies	On	–	Notifies the user that the job has been printed in monochrome because color printing is not allowed. (Related to JobAccount) This message remains displayed until the ON LINE button is pressed.	–
□ Color Restricted. Job Rejected Press ONLINE Button	Varies	On	–	Notifies the user that the job has been cancelled because color printing is not allowed. (Related to JobAccount) This message remains displayed until the ON LINE button is pressed.	–
□ Print Restricted. Job Rejected Press ONLINE Button	Varies	On	–	Notifies the user that the job has been cancelled because printing is not allowed. (Related to JobAccount) This message remains displayed until the ON LINE button is pressed.	• Set the user ID of the job account in the printer driver. • If the user ID has been set in the driver, check the user ID and its setting with the job account administ-rator.
□ Log Buffer is Full. Job Rejected Press ONLINE Button	Varies	On	–	Notifies the user that the job has been cancelled because the log buffer is full. (Related to JobAccount) This message remains displayed until the ON LINE button is pressed.	Execute [Acquire immediate-ly] on the server PC with the print job accounting.

LCD Status Message (□ represents a blank line.)	READY indicator	ATTENTION indicator	Beep	Details	Remedial measure
□ File System Operation Error <nnn> Press ONLINE Button	Varies	On	–	Indicates that a file system error, other than any of the above-described file system related status errors, has occurred. Processing that does not use the file system is operable. ***%FS_ERR%*** =0..... GENERAL ERROR =1..... VOLUME NOT AVAILABLE =3..... FILE NOT FOUND =4.....NO FREE FILE DESCRIPTORS =5..... INVALID NUMBER OF BYTES =6..... FILE ALREADY EXISTS =7..... ILLEGAL NAME =8..... CANT DEL ROOT- =9..... NOT FILE =10... NOT DIRECTORY =11... NOT SAME VOLUME =12... READ ONLY =13... ROOT DIR FULL =14... DIR NOT EMPTY =15... BAD DISK =16... NO LABL =17... INVALID PARAMETER =18... NO CONTIG SPACE =19... CANTCHANGE ROOT =20... FD OBSOLETE =21... DELETED =22... NO BLOCK DEVICE =23... BAD SEEK =24... INTERNAL ERROR =25... WRITE ONLY	Replace the SD card.
□ Invalid Secure Data Press ONLINE Button	Varies	Varies	–	Indicates that an integrity check in authentication printing found data corruption of the job, so the job has been deleted.	Press the ON LINE button.

When the printer detects an unrecoverable error, the following service call error is displayed on the LCD.

Service call
nnn: error

Note! nnn indicates an error code.

When a service call error is displayed, the error code and the associated error information are displayed in the lines under that on the LCD screen at the same time.

Be sure to take note of this error information (numerals indicating address and so on) and inform it to the related departments because the information is used for trouble analysis and solution. Meaning of error codes and remedial measures are shown in Tables 8-1-1 and 8-1-2.

Table 8-1-1 Operator alarm

LCD Status Message	READY indicator	ATTENTION indicator	Beep	Details	Error code
Install Paper MPTray %MEDIA_SIZE% Press ONLINE Button	On	Off	–	Indicates that a print request by manual paper feed was issued. Prompts the user to manually feed the paper indicated by %MEDIA_SIZE%. The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: "<Width> x <Length> <unit>" ex : 210 x 297 mm 8.5 x 11.0 inch	Error (ONLINE)

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Change Paper in %TRAY% %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	On	Indicates disagreement between the media type set to the tray and the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after insertion of the tray and rise of the lever.) Error 661: Tray 1 Error 662: Tray 2 Error 663: Tray 3 Error 664: Tray 4 The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: “<Width> x <Length> <unit>” ex : 210 x 297 mm 8.5 x 11.0 inch When the user presses the ON LINE button, the printer ignores the error only for this job and performs printing.	Error 661 662 663 664
Change Paper in MPTray %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	On	Indicates disagreement between the media type set to the tray and the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after insertion of the tray and rise of the lever.) Error 660: MP Tray The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: “<Width> x <Length> <unit>” ex : 210 x 297 mm 8.5 x 11.0 inch The user needs to press the ON LINE button after replacement of the paper.	Error 660

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Change Paper in %TRAY% %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	On	Indicates that either the paper size set to the tray or the paper size/media type of paper does not agree with the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after insertion of the tray and rise of the lever.) Error 461: Tray 1 Error 462: Tray 2 Error 462: Tray 3 Error 464: Tray 4 The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: “<Width> x <Length> <unit>” ex : 210 x 297 mm 8.5 x 11.0 inch When the user presses the ON LINE button, the printer ignores the error only for this job and performs printing.	Error 461 462 463 464

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Change Paper in MPTray %MEDIA_SIZE% %MEDIA_TYPE% Press ONLINE Button Please see HELP for details	Off	Blink	On	Indicates that either the paper size set to the tray or the paper size/media type of paper does not agree with the print data. Prompts the user to load proper paper in the tray. (It takes time until the statue is cleared after insertion of the tray and rise of the lever.) Error 460: MP Tray The unit of paper size in the Custom mode follows the unit for display (menu setting) specified for MP Tray unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. Paper size display in the Custom mode: “<Width> x <Length> <unit>” ex : 210 x 297 mm 8.5 x 11.0 inch The user needs to press the ON LINE button after replacement of the paper.	Error 460
Install Paper MPTray %MEDIA_SIZE% Press ONLINE Button Please see HELP for details	Off	Blink	On	Indicates that a print request has been issued to the MP tray that has run out of paper. Error 490: MP Tray The unit of paper size in the Custom mode follows the unit for display specified by the menu unless otherwise specified by the driver. If specified by the driver, paper size is displayed in the unit specified by the driver. This error occurs when no paper is feed by paper feed retry.	Error 490

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Press ONLINE Button for Restoration Memory Overflow Please see HELP for details	Off	Blink	On	Indicates the memory overflowed due to any of the following reasons. Processing can continue by pressing the ON LINE button. Install an add-on RAM or reduce the amount of data. The cause is occurrence of any of the following: • A single page contains too much print data. • There is too much macro data. • There is too much DLL data. • It overflows after compression of frame buffer.	Error 420
Protec Paper Error	Off	Blink	On	This error occurs when a received job doesn’t meet the security level set by the administrator of the printer. The person printing the job is not using the printer driver specified by the security manager of the printer. The printer displays the alarm on the operator panel while waiting a press of a button. The printer doesn’t print the job being processed. (This is the same behavior as that of job reset.)	Error 421
Protec Paper Error	Off	Blink	On	The density of the image on pages where the woven pattern to be embedded is too high relative to the density value of the pattern. The user is required to use “increasing the pattern density” or “decreasing the input image density.” The printer displays this alarm on the operator panel while waiting a press of a button. The printer doesn’t print the job being processed. (This is the same behavior as that of job reset.)	Error 422

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Trust Paper Error	Off	Blink	On	This error occurs when the size of the specified data to be embedded has exceeded the capacity for pattern embedment. The printing person must reduce the size of the data to be embedded. The printer displays this alarm on the operator panel while waiting a press of a button. The printer doesn't print the job being processed. (This is the same behavior as that of job reset.)	Error 423
Trust Paper Error	Off	Blink	On	The density of the image on pages where the woven pattern to be embedded is too high relative to the density value of the pattern. The user is required to use "increasing the pattern density" or "decreasing the input image density." The printer displays this alarm on the operator panel while waiting a press of a button. The printer doesn't print the job being processed. (This is the same behavior as that of job reset.)	Error 424
Trust Paper Error	Off	Blink	On	The specified tampering verification range is incorrect. This error occurs when the range goes beyond the image or specifies an unprintable area.	Error 425
Protec Paper Error	Off	Blink	On	The size of the data to be embedded is too large relative to paper size. The size of data to be embedded must be reduced or use larger paper to print.	Error 426
Protec Paper Error	Off	Blink	On	NTP server setting is incorrect. As it has been judged impossible to embed correct time, the print job is going to be cancelled. Set the NTP sever definitely.	Error 427
Wait a Moment Network Initializing	Varies	Varies	–	When the network related setting items are updated, contents of them are saved in the flash memory.	Error (ONLINE) Normal
Wait a Moment Message Data Processing	Varies	Varies	–	Indicates that the message data to be updated is being processed.	Error (ONLINE) Normal
Wait a Moment Message Data Writing	Varies	Varies	–	Indicates that the message data to be updated is being written.	Error (ONLINE) Normal
Power Off/On Message Data Received OK	Varies	Varies	–	Indicates that the writing of the message data to be updated has been completed successfully.	Error (ONLINE) Normal
Check Data Message Data Write Error <%CODE%>	Varies	Varies	On	Indicates that writing of the message data for upgrading has failed. %CODE% is a decimal value (single digit) indicating cause of the writing failure. =1...FAIL Cause of the failure is unknown. =2...DATA_ERROR Hash check error during data read/write. FLASH error. =3...OVERFLOW Download failure because the FLASH capacity became full during writing or reading the language file. =4...MEMORY FULL Failed to secure memory space. =5...UNSUPPORTED_DATA Download of the data that is not supported by the printer.	Error (ONLINE)
Install Paper %TRAY% %MEDIA_SIZE% Please see HELP for details	Off	Blink	On	Indicates that a print request is issued to the tray that has run out of paper. Prompts the user to refill it with paper. Error 491: Tray 1 Error 492: Tray 2 Error 493: Tray 3 Error 494: Tray 4 The unit of paper size in the Custom mode follows the unit for display specified by the menu unless otherwise specified by the driver.	Error 491 492 493 494
Install Paper Cassette %TRAY% Please see HELP for details	Off	Blink	On	In an attempt of printing from Tray 2 to Tray 4, the cassette of the tray that works as the paper path is removed. Error 440: Tray 1 Error 441: Tray 2 Error 442: Tray 3	Error 440 441 442

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Install Paper Cassette %TRAY% Please see HELP for details	Off	Blink	On	Indicates that paper cannot be fed because the cassette of the tray specified for printing is removed. Error 430: Tray 1 Error 431: Tray 2 Error 432: Tray 3 Error 433: Tray 4	Error 430 431 432 433
Replace Toner %COLOR% Waste Toner Full Please see HELP for details	Off	Blink	On	Indicates that waster toner has filled. Opening & closing the cover changes the status to the warning status. Error 415: Magenta Error 416: Cyan (This error does not occur for yellow or black toner.)	Error 415 416
Install Toner For Maximum Performance Always Use %COMPANY_ NAME% Original	–	–	–	Only when ENABLE is set for the pertinent printer setting, this warning message is displayed following the toner empty error status message.	–
Install Toner %COLOR% Please see HELP for details	Off	Blink	On	Indicates that the printer has run out of toner. When the cover is opened & closed, it changes to the toner empty warning status. If the print job data is cleared (cancelled), it changes to a toner empty (no print data) warning status. Error 410: Yellow Error 411: Magenta Error 412: Cyan	Error 410 411 412
Install Toner %COLOR% Please see HELP for details	Off	Blink	On	Indicates that the printer has run out of toner. When the cover is opened & closed, it changes to the toner warning status. As for K, different from Y/M/C, a warning is not issued by deletion (cancellation) of the print data. Error 413: Black	Error 413

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Install Toner Or Press Online %COLOR% Please see HELP for details	Off	Blink	On	Indicates that a toner empty error occurred after power on. Opening & closing the cover does not change this status to the warning status. Pressing the ON LINE button changes this to a toner empty (no print data) warning. Error 410: Yellow Error 411: Magenta Error 412: Cyan This status is provided only for Y/M/C. This message is not displayed when a K toner cartridge becomes empty because Error 413 occurs instead.	Error 410 411 412
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	On	Indicates that a toner cartridge not suitable for this printer is installed. Error 554: Yellow Error 555: Magenta Error 556: Cyan Error 557: Black	Error 554 555 556 557
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	On	Indicates that a toner cartridge not suitable for this printer is installed. Error 614: Yellow Error 615: Magenta Error 616: Cyan Error 617: Black	Error 614 615 616 617
Incompatible Toner %COLOR% Please see HELP for details	Off	Blink	On	Indicates that a toner cartridge not suitable for this printer is installed. Error 620 : Yellow Error 621 : Magenta Error 622 : Cyan Error 623 : Black	Error 620 621 622 623

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Non Genuine Toner %COLOR% Please see HELP for details	Off	Blink	On	Indicates that a toner cartridge not suitable for this printer is installed. Error 550 : Yellow Error 551 : Magenta Error 552 : Cyan Error 553 : Black Opening & closing the cover makes the engine check for detection, and if the toner cartridge has not been replaced, the status changes to Warning allowing printing of another 20 pages.	Error 550 551 552 553
Toner Not Installed %COLOR% Please see HELP for details	Off	Blink	On	Indicates that a toner cartridge is not installed. Error 610: Yellow Error 611: Magenta Error 612: Cyan Error 613: Black Opening & closing the cover makes the engine check for detection, and if the toner cartridge has not been replaced, the status changes to Warning allowing printing of another 20 pages.	Error 610 611 612 613
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	On	An image drum not suitable for this printer is installed. Error 690: Yellow Error 691: Magenta Error 692: Cyan Error 693: Black	Error 690 691 692 693
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	On	An image drum not suitable for this printer is installed. Error 700: Yellow Error 701: Magenta Error 702: Cyan Error 703: Black	Error 700 701 702 703
Incompatible Image Drum %COLOR% Please see HELP for details	Off	Blink	On	An image drum not suitable for this printer is installed. Error 704: Yellow Error 705: Magenta Error 706: Cyan Error 707: Black	Error 704 705 706 707
Non Genuine Image Drum %COLOR% Please see HELP for details	Off	Blink	On	An image drum not suitable for this printer is installed. Error 684: Yellow Error 685: Magenta Error 686: Cyan Error 687: Black	Error 684 685 686 687
Image Drum Not Installed %COLOR% Please see HELP for details	Off	Blink	On	Indicates that the installed image drum was not detected. Error 694: Yellow Error 695: Magenta Error 696: Cyan Error 697: Black	Error 694 695 696 697
Open Cover Paper Remain Front Cover Please see HELP for details	Off	Blink	On	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 637: J0: Paper Feed Path	Error 637
Open Cover Paper Remain Top Cover Please see HELP for details	Off	Blink	On	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 638 : J1: Paper Transport Path	Error 638
Open Cover Paper Remain Fuser Unit Please see HELP for details	Off	Blink	On	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 639 : J2: Paper Exit Path Error 640 : J4: Duplex Entry Path	Error 639 640

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Check Duplex Unit Paper Remain Please see HELP for details	Off	Blink	On	Indicates due to occurrence of a paper jam, the successively fed paper remains in the printer. Error 641: J5: Duplex Reversal Path Error 642: J3: Duplex Transport Path	Error 641 642
Toner Sensor Error %COLOR% Please see HELP for details	Off	Blink	On	Indicates that the toner sensor has detected an abnormality. This status message is available in the Shipping Mode. If the same abnormality is detected in the Factory Mode, this error is displayed as Service call 163. Error 540: Yellow Error 541: Magenta Error 542: Cyan Error 543: Black	Error 540 541 542 543
Check Paper Paper Multi Feed %TRAY% Please see HELP for details	Off	Blink	On	Alerts that too long paper has been fed from the tray. Check if multiple sheets of paper have been fed at a time. After the cover is opened & closed, the printer performs recovery printing and continues operation.	Error 401
Check Paper Paper Size Error %TRAY% Please see HELP for details	Off	Blink	On	Alerts that paper of nonconforming size has been fed from the tray. Check paper in the tray, or check if multiple sheets of paper have been fed at a time. After the cover is opened & closed, the printer performs recovery printing and continues operation.	Error 400
Open Cover Paper Jam Front Cover Please see HELP for details	Off	Blink	On	Indicates that a jam occurred during paper feed from MP Tray. Error 390: MP Tray	Error 390

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Open Cassette Paper Jam %TRAY% Please see HELP for details	Off	Blink	On	Indicates that a jam occurred during paper feed from the tray. Error 391: Tray 1 Error 392: Tray 2 Error 393: Tray 3 Error 394: Tray 4	Error 391 392 393 394
Open Cover Paper Jam Front Cover Please see HELP for details	Off	Blink	On	Indicates that a jam has occurred in the paper path. Error 380: Feed	Error 380
Open Cover Paper Jam Top Cover Please see HELP for details	Off	Blink	On	Indicates that a jam has occurred in the paper path. Error 381: Transport	Error 381
Open Cover Paper Jam Top Cover Please see HELP for details	Off	Blink	On	Indicates that a jam has occurred in the paper path. Error 382: Exit Error 383: Duplex Entry Error 385: Fuser Unit	Error 382 383 385
Check Duplex Unit Paper Jam Please see HELP for details	Off	Blink	On	Indicates that a jam has occurred nearby the duplex unit. Error 370: Duplex Reversal Error 371: Duplex Input Error 373: Duplex Multifeed	Error 370 371 373
Open Cover Paper Jam Front Cover Please see HELP for details	Off	Blink	On	Indicates that a jam has occurred nearby the duplex unit. Error 372: Duplex Misfeed	Error 372
Install Duplex Unit Please see HELP for details	Off	Blink	On	The duplex unit is removed. When this error is detected, printing stops.	Error 360

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Install New Image Drum Image Drum Life %COLOR% Please see HELP for details	Off	Blink	On	Alerts (alarms) the end of the image drum life. Opening & closing the cover changes this status to the warning status. Error 350: Yellow Error 351: Magenta Error 352: Cyan Error 353: Black	Error 350 351 352 353
Install New Image Drum Image Drum Life %COLOR% Please see HELP for details	Off	Blink	On	Alerts (alarms) the end of the image drum life. This message remains displayed until the image drum is replaced. Error 560: Yellow Error 561: Magenta Error 562: Cyan Error 563: Black	Error 560 561 562 563
Install New Image Drum Image Drum Life %COLOR% To Exceed the Life, Press Online Button Please see HELP for details	Off	Blink	On	It is the time to replace the image drum. Error 564: Yellow Error 565: Magenta Error 566: Cyan Error 567: Black By pressing the ON LINE button, the life can be prolonged temporarily, but the print quality is not guaranteed.	Error 564 565 566 567
Install New Image Drum Printing disabled due to low threshold of Image Drum life. %COLOR% Please see HELP for details	Off	Blink	On	The extended service life of the image drum has expired. Error 680: Yellow Error 681: Magenta Error 682: Cyan Error 683: Black	Error 680 681 682 683
Install New Fuser Unit Fuser Unit Life Please see HELP for details	Off	Blink	On	Alerts the end of the fuser unit life. This error shows that the fuser has reached the end of its life according to the counter, and printing will stop. Opening & closing the cover changes this status to the warning status.	Error 354
Install New Belt Unit Belt Unit Life Please see HELP for details	Off	Blink	On	Alerts the end of the transfer belt life. This error shows that the belt has reached the end of its life according to the counter, and printing will stop. Opening & closing the cover changes this status to the warning status.	Error 355
Check Fuser Unit Please see HELP for details	Off	Blink	On	Indicates that an error occurred with the release position sensor of the fuser. The printer recovers from this error if the release position sensor can read out the data in a retry after the cover is closed. If the printer still cannot recover from this error, replacement of the fuser is required.	Error 348
Install New Belt Unit Belt Unit Life Please see HELP for details	Off	Blink	On	Indicates that waster toner has filled. Opening & closing the cover changes this status to the warning status.	Error 356
Check Toner Cartridge Improper Lock Lever Position %COLOR% Please see HELP for details	Off	Blink	On	Indicates that toner is not supplied (toner cannot be detected). The toner cartridge was installed with its lever unlocked or the protective tape was not removed; therefore toner has not been supplied and caused this error. Error 544: Yellow Error 545: Magenta Error 546: Cyan Error 547: Black	Error 544 545 546 547
Check Image Drum %COLOR% Please see HELP for details	Off	Blink	On	Indicates that the image drum is not installed correctly. Error 340: Yellow Error 341: Magenta Error 342: Cyan Error 343: Black	Error 340 341 342 343

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Check Fuser Unit Please see HELP for details	Off	Blink	On	Indicates that the fuser is not Installed correctly.	Error 320
Check Belt Unit Please see HELP for details	Off	Blink	On	Indicates that the belt is not installed correctly.	Error 330
Close Cover %COVER% Please see HELP for details	Off	Blink	On	Indicates that the cover is open. Error 310: Top cover Error 311: Front cover	Error 310 311
Wait a Moment Rebooting <n>	Off	On	–	Indicates that the controller unit is being rebooted. %CODE% is a decimal value (single digit) indicating the cause of the reboot. =0....Reboot that is resulted from a cause other than the below. =1....Reboot by the PJL command =2....Reboot caused by the menu change =3....Reboot based on quit operator of PostScript Language =4....Reboot caused by the network utilities (including web)	Error
Shutting down Please wait. Printer will turn off automatically.	Off	Off	–	Indicates that the printer is shutting down. The shut-down process is started by holing down the power switch for more than one second upon completion of the printer initialization process.	Error

LCD Status Message	READY indicator	ATTEN-TION indicator	Beep	Details	Error code
Turn off power Shutdown completed	Off	Off	–	Indicates that the shut-down process of the printer has complete. (The LCD backlight shuts off.) * This message is displayed for a moment just before the power switches off automatically.	Error
Power Off and Wait for a while 126:Condensing Error	Off	Blink	On	Dew condensation error (This error is handled in the same way as the service call error though display is different.)	Fatal 126
Power Off/On nnn: Error, Service call nnn: Error	Off	Blink	On	Indicates that a fatal error has occurred. For details refer to Table 8-1-2 “Service Call Error List.”	Fatal <nnn>
Service call nnn: Error*	Off	Blink	On	Indicates that a fatal error has occurred. For details refer to Table 8-1-2 “Service Call Error List.” “*” indicates the detailed information of the error.	Fatal 70 73 75 203 204 096 231 128 166 168 169
Power Off/On 209: Download Error	Off	Blink	On	Indicates failure of the Media table downloading to the PU. (Related to Custom Media Type)	Fatal 209

Table 8-1-2 Service Call Error List

Panel display	Cause	Check details	Result	Solution
Service call 001: Error	Machine Check Exception hardware fault detection (board failure or poor power supply)			Replace the CU/ PU board.
Power Off/On 002: Error to 007: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Power Off/On 009: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Power Off/On 010: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Power Off/On 011: Error PC: nnnnnnnn LR: nnnnnnnn FR: nnnnnnnn	CPU unexpected exception	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Service call 020: Error	CU Program ROM Hash Check Error	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Service call 023: Error	CU Font ROM Hash error	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Service call 030: Error	CU RAM Check error	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.
Service call 031: Error	CU Optional RAM Check error	Is implementation of the RAM DIMM normal? Does replacement of the program RAM DIMM restore the printer?	No Yes No	Re-implement the RAM DIMM. Replace the RAM DIMM. Replace the CU/ PU board.
Service call 036: Error	CU RAM DIMM spec. is not supported.	Is the RAM DIMM genuine? Is implementation of the RAM DIMM normal? Does replacement of the program RAM DIMM restore the printer?	No No Yes No	Use a genuine RAM DIMM. Re-implement the RAM DIMM. Replace the RAM DIMM. Replace the CU/PU board (EEPROM replacement required).
Service call 040: Error	CU EEPROM error	Does this error message reappear?	Yes	Cycle the power. Replace the CU/ PU board.

Panel display	Cause	Check details	Result	Solution
Service call 042: Error, 043: Error, 045: Error	Flash File System error	Failed to access to the Flash ROM that is directly mounted on the CU board.		Format the Flash forcibly. (This requires caution as it erases NIC-F/W. The NIC-F/W must be written with the maintenance utility after formatting.) Execute system maintenance menu > MAINTENANCE MENU > FLASH FORMAT. After FLASH FORMAT is displayed, release the button and wait until the ON LINE is displayed (about 2 minutes). If the error remains, replace the CU/PU board.
Service call 049: Error	Incompatibility between the CU and the engine head type (resolution)			1) Replace the CU/PU board with the one for the proper head. 2) Replace with a head of proper resolution.
Power off/on 052: Error	A DMA Abort error was detected with the Image Processor.	Does this error message reappear?	Yes	Cycle the power. Replace the CU/PU board.
Service call 067: Error	A communication error was detected during communication with the Sleep Mode interface supervisor program.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Service call 068: Error	The Sleep Mode interface supervisor program was not found.	Does this error recur after power restoration?	Yes	Program writing by service personnel.

Panel display	Cause	Check details	Result	Solution
Service call 069: Error	Malfunction of the NIC chip was detected.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Power off/on 070: Error	A PSE firmware error was detected.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Power off/on 072: Error	I/F error between PU and CU	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Power off/on 073: Error	An error was detected during image data expansion.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Power off/on 075: Error	An error was detected during image data expansion.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Power off/on 077: Error	An error was detected during image data expansion.	Does this error recur?	Yes	Replace the CU/PU board
Service call 081: Error	Normal reading/writing of EEPROM or Flash has become impossible.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Service call 104: Error	The engine EEPROM implementation check at power on showed no problem, but after that a read/write error was detected.	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Service call 106: Error	Abnormal engine control logic	Does this error recur?	Yes	Cycle the power. Replace the CU/PU board.
Service call 111: Error	A duplex unit for another model was detected.	Is a duplex unit provided for this model installed?	No	Install a correct duplex unit.

Panel display	Cause	Check details	Result	Solution
Service call 112: Error	A 2nd Tray for another model was detected.	Is a 2nd Tray provided for this model installed?	No	Install a correct 2nd Tray.
Service call 113: Error	A 3rd Tray for another model was detected.	Is a 3rd Tray provided for this model installed?	No	Install a correct 3rd Tray.
Service call 114: Error	A 4th Tray for another model was detected.	Is a 4th Tray provided for this model installed?	No	Install a correct 4th Tray.
Service call 121: Error	High voltage power supply interface error	Is the cable connecting the CU board to the high voltage power supply unit connected properly? Is there any defective contact point?	No Yes No	Re-connect them properly. Check for defective contact points of the high voltage system. Replace the high voltage power supply unit.
Service call 122: Error	Low voltage FAN error	Is the FAN (bottom right of the front) of the low voltage power supply block working? Is the FAN connector connected correctly?	No Yes No Yes	Check to make sure connection of the FAN connector. Replace the low voltage power supply unit. Replace the FAN motor. Replace the low voltage power supply unit.
Service call 123: Error	Abnormal environment humidity or unconnected humidity sensor	Does this error recur?	Yes	Cycle the power. Replace the control panel board (PCQ board).
Service call 124: Error	Abnormal environment humidity	Does this error recur?	Yes	Cycle the power. Replace the control panel board (PCQ board).

Panel display	Cause	Check details	Result	Solution
Power off/on 126: Error	Dew condensation in the printer was detected.	This error tends to occur after a printer is carried in from the outsides. Leave the printer for 2 hours to half a day at room temperature, and turn on the power. Does this error recur?	 Yes	After leaving the printer at room temperature, turn on the power again. Replace the control panel board (PCQ board).
Service call 127: Error	Fuser FAN error	Is the FAN connector connected properly? Does this error recur?	No Yes Yes	Re-connect it properly. Replace the FAN motor. Replace the CU/PU board.
Service call 128: Error	Fan motor abnormality 04: Belt FAN 05: Fuser side FAN 08: ID motor FAN	Is the cable to respective fans connected properly? Does this error recur? Does this error recur?	No Yes Yes	Connect the FAN connector properly. Replace the FAN. Replace the CU/PU board.
Service call 131: Error to 134: Error	LED head detection error (131=Y, 132=M, 133=C, 134=K)	Is the LED head connected properly? Is the LED HEAD fuse brown? Does this error recur?	No Yes Yes No Yes	Install the LED head unit properly. Check the LED HEAD fuse. Replace the fuse. Restore the power. Replace the LED head unit.
Service call 142: Error	Image drum Up/Down position detection error	Is the image drum unit caught by anything when it is removed or re-installed? Does this error recur at power on? Is the cable connected properly?	Yes Yes No Yes	Re-install the image drum unit. Check connection through the CU/PU board, the relay connector, and the ID up/down clutch. Connect it properly. Replace the CU/PU board.

Panel display	Cause	Check details	Result	Solution
Service call 154: Error	The belt unit fuse blown out.	Is the belt unit connected properly?	No	Re-install the belt unit.
			Yes	Restore the power.
		Does this error recur?	Yes	After checking for cable connection, replace the CU/PU board.
Service call 155: Error	The fuser unit fuse blown out.	Is the fuser unit installed properly?	No	After cleaning the connector of the fuser unit, re-install the fuser unit.
			Yes	Restore the power.
		Does this error recur?	Yes	After checking for cable connection, replace the CU/PU board.
Service call 160: Error to 163: Error	Toner sensor detection error (160=Y, 161=M, 162=C, 163=K) This error does not occur with the factory default settings.	Is the toner cartridge installed?	No	Install the toner cartridge.
		Is the lock lever of the toner set?	No	Move the lock lever of toner cartridge to the lock position.
		Does this error recur?	Yes	Replace the toner sensor assembly.

Panel display	Cause	Check details	Result	Solution
Service call 166: Error	An abnormality was detected with the power supply temperature thermistor. 01: Short 02: Open 03: High temp. 04: Low temp.	01, 02:		Restore the power.
		Does this error recur?	Yes	Replace the low voltage power supply unit.
		Does this error recur?	Yes	Replace the CU/PU board.
		Does this error recur?	Yes	Replace the cable between the low voltage power supply unit and the CU/PU board.
		03:		Remove anything obstructing the ventilation slots if any and restore the power.
		Does this error recur?	Yes	Replace the low voltage power supply unit.
		Does this error recur?	Yes	Replace the CU/PU board.
		Does this error recur?	Yes	Replace the cable between the low voltage power supply unit and the CU/PU board.
		04:		Raise the room temperature and restore the power.
		Does this error recur?	Yes	Replace the low voltage power supply unit.
		Does this error recur?	Yes	Replace the CU/PU board.
		Does this error recur?	Yes	Replace the cable between the low voltage power supply unit and the CU/PU board.
Service call 167: Error	Temperature difference error with Upper Center Thermistor and Planar Heater Thermistor	Is the error message displayed?	Yes	Restore the power.
		Does this error recur?	Yes	Replace the fuser unit.

Panel display	Cause	Check details	Result	Solution
Service call 168: Error	Planar Heater Thermistor Error 01: Short 02: Open 03: High temp. 04: Low temp.	Is the error message displayed? Does this error recur?	Yes Yes	Restore the power. Replace the fuser unit.
Service call 169: Error	Upper Side thermistor error 01: Short 02: Open 03: High temp. 04: Low temp.	Is the error message displayed? Does this error recur?	Yes Yes	Restore the power. Replace the fuser unit.
Service call 170: Error, 171: Error	Short circuit or open circuit of the Upper Center Thermistor was detected.	Does this error recur?	Yes	Restore the power. Replace the fuser unit.
Service call 172: Error, 173: Error	An either temperature aberration (a high-temperature or cold temperature) of Upper Center Thermistor, Lower Thermistor, Upper Side Thermistor, Planar Heater Thermistor was detected.	Does this error recur?	Yes	Restore the power. Replace the fuser unit.
Service call 174: Error, 175: Error	Short circuit or open circuit of the Lower Thermistor was detected.	Does this error recur?	Yes	Restore the power. Replace the fuser unit.
Service call 176: Error, 177: Error	An abnormal (high or low) temperature of the Lower Thermistor was detected.	Does this error recur?	Yes	Restore the power. Replace the fuser unit.
Service call 181: Error to 184: Error	Option unit I/F error (181=Duplex Unit, 182 to 184=Optional Tray)	Does this error recur?	Yes	Restore the power. Check to make sure the contact points of the connector and replace the optional unit.

Panel display	Cause	Check details	Result	Solution
Power off/on 190: Error	System memory overflow	Does this error recur?	Yes	Restore the power. Install an add-on RAM DIMM.
Service call 200: Error to 202: Error	PU Firmware Download error	An error occurred during rewriting of the PU firmware.		Restore the power and retry download. (This error doesn't occur because this process is not performed in normal operation.)
Power off/on 203: Error, 204: Error	CU program error (not occur in normal operation)	The CU program executed abnormal processing.		Restore the power.
Power off/on 207: Error, 208: Error	CU program error (not occur in normal operation)	The CU program executed abnormal processing.		Restore the power.
Power off/on 209: Download Error	Custom Media Type table downloading failed.	Custom Media Type table downloading failed.		After turning on the power again, perform downloading again. (This error does not occur during the normal operation because this processing is not carried out in normal operation.)
Power off/on 213: Error, 214: Error	CU program error (not occur in normal operation)	The CU program executed abnormal processing.		Restore the power.
Service call 230: Error	RFID Reader not Installed	RFID read device error Does this error recur?	Yes Yes	Check the FFC connecting the RFID R/W board and the CU/PU board. Replace the CU/PU board and the RFID R/W unit (top cover).

Panel display	Cause	Check details	Result	Solution
Service call 231: Error	01: RFID Reader I/F Error 05: K reader (TC/ID) - Tag interface connection error 06: Y reader (TC/ID) - Tag interface connection error 07: M reader (TC/ID) - Tag interface connection error 08: C reader (TC/ID) - Tag Interface connection error 11: K reader (TC/ID) - Tag interface connection error 12: Y reader (TC/ID) - Tag interface connection error 13: M reader (TC/ID) - Tag interface connection error 14: C reader (TC/ID) - Tag interface connection error	01: Is the FFC connected properly? Does this error recur? Does this error recur? 05 to 08, 11 to 14: Does this error recur after the power restoration? Does this error recur after the power restoration? Is the antenna cable connected properly? Is the antenna set in the holder correctly? Does this error recur after the power restoration?	 Yes Yes Yes Yes Yes No No Yes	Check the FFC connecting the RFID R/W board and the CU/PU board. Connect the FFC properly. Replace the CU/PU board. Replace the RFID R/W unit (top cover). Move electronic equipment away from the printer is any on the printer, and restore the power. Replace the toner cartridge or ID of the indicated color. Check the antenna cable of the indicated color. Connect the cable properly. Adjust the antenna to the correct position. Replace the RFID R/W unit (top cover).
Service call 232: Error	More than one image drum tag of the same color was detected.	Is more than one image drum installed?	Yes	Cycle the power. Replace the image drum in question.
Power off/on 250: Error	An encrypted file erasing error was detected.	Did the user accept to execute Erase SD Card?		Inform the user that it is necessary to execute Disk ERASE to restore the SD card defaults in order to delete the encrypted file.

Panel display	Cause	Check details	Result	Solution
Service call 251: Error	An error was detected during SD Card Erase.	Does this error message reappear?	Yes	Cycle the power. Replace the SD card.
Service call 254: Error	An unexpected error occurred during initialization in the Security mode.	Does this error message reappear?	Yes	Cycle the power. Regenerate an encryption key. If it doesn't solve the problem, replace the CU/PU board or encrypted SD card.
Service call 257: Error	An unexpected error occurred during initialization of the SD card.	Does this error message reappear?	Yes	Cycle the power. Format the SD card again. If it does not solve the problem, replace the SD card.
Power off/on 901: Error, 902: Error	Short circuit or open circuit with the bent thermistor was detected.	Is the belt thermistor cable connected properly? Does this error recur after power restoration?	No Yes	Re-connect the cable properly. Replace the belt thermistor.
Power off/on 903: Error, 904: Error	The belt thermistor detected abnormal (too high or too low) temperature.	Is the belt thermistor cable connected properly? Does this error recur?	No Yes	Re-connect the cable properly and restore the power. Replace the belt thermistor, after a lapse of 30 minutes, turn on the power.
Power off/on 918: Error	Duplex FAN error	Does this error recur after power restoration? Does this error recur after power restoration? Does this error recur after power restoration?	Yes Yes Yes	Check if the duplex unit is installed properly. Check if the FAN is connected properly. Replace the FAN.

Panel display	Cause	Check details	Result	Solution
Power off/on 923: Error	The ID motor is not running normally.			Check if the image drum is installed properly.
		Does this error message reappear after power restoration?	Yes	Replace the image drum unit.
		Does this error message reappear after power restoration?	Yes	Replace the ID motor.
Power off/on 928: Error	The fuser motor is not running normally.			Check if the fuser is installed properly.
		Does this error message reappear after power restoration?	Yes	Replace the fuser.
		Does this error message reappear after power restoration?	Yes	Replace the fuser motor.
Power off/on 931: Error	Duplex unit CPU clock frequency error	Does this error message reappear after power restoration?	Yes	Replace the unit.
		Does this error message reappear after power restoration?	Yes	Replace the CU/ PU board.
Power off/on 933: Error	Tray 2 CPU clock frequency error	Does this error message reappear after power restoration?	Yes	Replace the unit.
		Does this error message reappear after power restoration?	Yes	Replace the CU/ PU board.
Power off/on 934: Error	Tray 3 CPU clock frequency error	Does this error message reappear after power restoration?	Yes	Replace the unit.
		Does this error message reappear after power restoration?	Yes	Replace the CU/ PU board.
Power off/on 935: Error	Tray 4 CPU clock frequency error	Does this error message reappear after power restoration?	Yes	Replace the unit.
		Does this error message reappear after power restoration?	Yes	Replace the CU/ PU board.

Panel display	Cause	Check details	Result	Solution
Power off/on 941: Error	A watch dog timer error was detected.	Does this error recur?	Yes	Cycle the power. Replace the CU/ PU board.
Power off/on 942: Error	An undefined interruption was detected.	Does this error recur?	Yes	Cycle the power. Replace the CU/ PU board.
Power off/on 943: Error	PU CPU ran away out of control due to noise etc.	Does this error recur?	Yes	Cycle the power. Replace the CU/ PU board.
Power off/on 944: Error	Dcon circuit access failed.	Does this error recur?	Yes	Cycle the power. Replace the CU/ PU board.
Power off/on 945: Error	SDRAM access at power on failed.	Does this error recur?	Yes	Cycle the power. Replace the CU/ PU board.
Power off/on 980: Error	An abnormal temperature of the fuser unit was detected.	Does this error recur?	Yes	Cycle the power. Replace the fuser unit.
Service call 982: Error	Excessive trays beyond the specification are installed.	Are many trays beyond the specification installed?	Yes	Use trays as many as specified.
Service call 983: Error	More than one toner cartridge tag of the same color was detected.	Does this error recur?	Yes	Cycle the power. Replace the CU/ PU board.
Service call 984: Error.	A format tag not matching with the K position was detected.	Does this error recur?	Yes	Cycle the power. Replace the K toner cartridge or image drum.
Service call 985: Error	A format tag not matching with the Y position was detected.	Does this error recur?	Yes	Cycle the power. Replace the Y toner cartridge or image drum.
Service call 986: Error	A format tag not matching with the M position was detected.	Does this error recur?	Yes	Cycle the power. Replace the M toner cartridge or image drum.
Service call 987: Error	A format tag not matching with the Cposition was detected.	Does this error recur?	Yes	Cycle the power. Replace the C toner cartridge or image drum.

Panel display	Cause	Check details	Result	Solution
Service call 999: Error	The CU/PU firmware has a problem with its compatibility.	Does an error occur at cycling the power?	Yes	Replace the CU/PU board or start printer by forced ONLINE (see Chapter 6) and rewrite the firmware.
Power off/on F0C, F0D: Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	CU program error	Does this error recur?	Yes	Restore the power. Replace the CU/PU board.
Power off/on FFE: Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	CU program error	Does this error recur?	Yes	Restore the power. Replace the CU/PU board.
Power off/on FFF: Error PC:nnnnnnnn LR:nnnnnnnn FR:nnnnnnnn	CU program error	Does this error recur?	Yes	Restore the power. Replace the CU/PU board.

Note) Service call errors, Error: 171, Error: 175, Error: 903 and Error: 904, can occur when the printer temperature is under 0°C; therefore, if the printer temperature is low, turn on the printer after the printer temperature has risen enough.

8.5.2 Preparation for troubleshooting

(1) LCD display error 8-28
(1-1) LCD does not display anything. 8-28
(1-2) Error message related to the control panel 8-29
(1-3) “RAM checking” or “Initializing” remains displayed. 8-29
(2) Abnormal operations of the printer after the power is turned on 8-29
(2-1) Any operation does not start at all. 8-29
(2-2) Abnormal sound is heard. 8-30
(2-3) Bad odors are generated. 8-31
(2-4) Rise-up time is slow. 8-31
(3) Paper feed jam (Error 391: 1st Tray) 8-40
(3-1) Jam occurs immediately after the power is turned on. (1st tray) 8-40
(3-2) Jam occurs immediately after the paper feed is started. (1st tray) 8-40
(4) Feed jam (Error 380) 8-41
(4-1) Jam occurs immediately after the power is turned on. 8-41
(4-2) Jam occurs immediately after the paper feed is started. 8-42
(5) Paper feed jam (Error 390: MP Tray) 8-43
(5-1) Jam occurs immediately after the power is turned on. (Multipurpose tray) 8-43
(5-2) Jam occurs immediately after paper feed is started. (Multipurpose tray) 8-43
(6) Paper running jam (Error 381) 8-44
(6-1) Jam occurs immediately after the power is turned on. 8-44
(6-2) Jam occurs immediately after a paper is taken into printer. 8-45
(6-3) Jam occurs in the middle of paper running path 8-46
(6-4) Jam occurs immediately after paper has reached the fuser. 8-46
(7) Paper unloading jam (Error 382) 8-47
(7-1) Paper unloading jam occurs immediately after the power is turned on. 8-47
(7-2) Paper unloading jam occurs after a paper is taken into printer 8-47
(7-3) Paper unloading jam occurs in the middle of paper running path. 8-48
(8) Two-sided printing jam (Errors 370, 371, 372, 373 and 383) 8-48
(8-1) Two-sided printing jam occurs immediately after the power is turned on 8-48
(8-2) Two-sided printing jam occurs during taking in the paper into Duplex unit 8-48
(8-3) Two-sided printing jam occurs during transporting paper inside the Duplex unit 8-49
(8-4) Paper is not supplied from the Duplex unit to the regist roller. 8-49
(9) Paper size error (Errors 400 and 401) 8-49
(9-1) Jam occurs when paper end is located near the IN1 sensor. 8-49
(10) ID unit Up/Down error (Service call 142) 8-50
(10-1) Error occurs during the Up movement of the ID unit 8-50
(10-2) Error occurs during the Down movement of the ID unit 8-50
(11) Fuser unit error (Errors 167 to 177) 8-51
(11-1) Error occurs immediately after the power is turned on. 8-51
(11-2) Error occurs approx. 1 minute after the power is turned on 8-51
(12) Motor fan error (Errors 122, 127, 128, 918 and 051) 8-52
(12-1) The low voltage power supply fan does not rotate immediately after the power is turned on. 8-52
(12-2) Duplex fan does not rotate during the Duplex printing 8-52
(12-3) All fans of the printer do not rotate. 8-53
(13) Print speed is slow. (Performance is low.) 8-53
(13-1) Print speed decreases 8-53
(14) Option unit cannot be recognized. 8-53
(14-1) Duplex unit cannot be recognized. 8-53
(14-2) Option try unit cannot be recognized 8-53
(15) LED head cannot be recognized. (Errors 131, 132, 133 and 134) 8-54
(15-1) Errors 131 to 134 (LED HEAD Missing) 8-54
(16) Toner cartridge cannot be recognized. (Errors 540, 541, 542 and 543) 8-55
(16-1) Error caused by the consumable items. 8-55
(16-2) Error caused by the toner sensor 8-55
(16-3) Error caused by the defective mechanism 8-56
(17) Fuse cut error (Errors 154 and 155) 8-56
(17-1) Fuse cut error 8-56
(18) Humidity sensor error (Error 123) 8-57
(18-1) Humidity sensor error 8-57
(19) Wiring diagram 8-58

Note! When replacing the CU/PU board, load the EEPROM chip contents of the old board first, and copy them to the new board upon completion of the replacement. (Refer to section 5.4.1 Precautions when replacing the engine control board.)

8.5.2 (1) LCD display error

Memo For the numbers from ① to ㉝ after the name of the respective connectors, refer to section 8.5.2 (19) “Wiring diagram”.

(1-1) LCD does not display anything.

Check item	Check work	Actions to be taken at NG
(1-1-1) Check the fuse.		
Fuse of the CU/PU board	Check if F3 or F5 has blown out.	Replace the CU/PU board.
(1-1-2) Check the system connection		
Connection between the low voltage power supply unit and the CU/PU board	Check if the cable from the low voltage power supply to the POWER connector ⑪ of the CU/PU board is normally connected or not. Check if the connector is connected only in the half-way or not, and check if the connector is inserted in slanted angle or not.	Re-connect the cable normally.
Cable assembly connecting the low voltage power supply unit and the CU/PU board	Check if the cable is half-open circuit. Check if sheath of the cable has not peeled off or not. Check if the cable assembly is defective such as internal wires are disconnected or not.	Replace the cable with the normal cable.
Connection between the CU/PU board and the control panel board	Check if the 10-conductor FFC is connected to the OPE connector ⑲ of the CU/PU board normally or not. Check if the 10-conductor FFC is connected to the OPE connector ㉑ of the control panel board normally or not. Check if the connector is connected in the halfway only or not, and check if the connector is inserted in a slanted angle or not.	Re-connect the cable normally.
FFC connecting the CU/PU board and the control panel board	Check if the cable has open circuit or not with VOM. Check if sheath of the cable has not peeled off or not by visual inspection.	Replace the FFC with the normal FFC.
(1-1-3) Check the peripherals of the power supplies		
AC power that is supplied to the printer	Check the supplied voltage of the AC power source.	Supply the AC power.
5V power that is supplied to the CU/PU board	Check for 5V power supply at pin-1, -3 and -4 of the POWER connector ⑪ of the CU/PU board.	Replace the low voltage power supply unit.
3.3V power that is supplied to the CU/PU board	Check for 3.3V power supply at pin-22 of the POWER connector ⑪ of the of the CU/PU board.	Replace the low voltage power supply unit.
3.3V power that is supplied to the control panel board	Check for 3.3V power supply at pin-4 of the OPE connector ㉑ of the control panel board.	Replace the CU/PU board.
(1-1-4) Check that power supply circuit has no short-circuit.		
5V power and 24V power that are supplied to the CU/PU board.	Check that power supply circuit has no short-circuit at the POWER connector ⑪ of the CU/PU board. The follow voltage must appear respectively. pin-9, -10, -11 and -12: 24V pin-1, -3 and -4: 5V pin-5, -6, -7 and -8: 0VL pin-13, -14, -15 and -16: 0VP If any voltage does not appear and short-circuit is detected, locate the source of the short-circuit as follows: Disconnect the cables that are connected to the CU/PU board one cable after another until location of the short-circuit is found out.	Replace the part causing short-circuit.
(1-1-5) LSI operation check		
I/F signal supplied from the CU/PU board to the control panel board.	Check if signals are output to the OPE connector ⑲ of the CU/PU board. Pin-5: Send data (Sending data from the CU/PU board)	Replace the CU/PU board.
I/F signal supplied from the CU/PU board to the control panel board.	Check if signals are output to the OPE connector ⑲ of the CU/PU board. Pin-7: Send data (Sending data from the CU/PU board) If it is normal, signals are output always.	Replace the control panel board.

(1-2) Error message related to the control panel

Check item	Check work	Actions to be taken at NG
(1-2-1) Error message		
Error message	Check the error contents by referring to the Error Message List.	Follow the instruction.

(1-3) “RAM checking” or “Initializing” remains displayed.

Check item	Check work	Actions to be taken at NG
(1-3-1) Control panel displays freezes.		
Control panel display	The control panel keeps displaying “RAM checking” or “Initializing.”	Replace the CU/PU board. If the problem remains unsolved after an optional RAM or SD memory card is removed, replace the CU/PU board.

8.5.2.(2) Abnormal operations of the printer after the power is turned on

(2-1) Any operation does not start at all.

Check item	Check work	Actions to be taken at NG
(2-1-1) Check the peripherals of the power supplies		
AC power that is supplied to the printer	Check the supplied voltage of the AC power source.	Supply the AC power.
5V power and 24V power that are supplied to the CU/PU board	Check the power supply voltages at the POWER connector ⑪ of the CU/PU board. Pin-9, -10, -11 and -12: 24V Pin-1, -3 and -4: 5V Pin-5, -6, -7 and -8: 0VL Pin-13, -14, -15 and -16: 0VP	Replace the low voltage power supply unit.
(2-1-2) Power switch LED check		
Power switch LED	Check if the LED light stays off.	Replace one of the following: low voltage power supply unit, CU/PU board, power SW board, the cable between the low voltage power supply unit and the CU/PU board, the cable between CU/PU board or the power SW board. When blinking: Replace one of the following: low voltage power supply unit, CU/PU board, power SW board, or the cable between the low voltage power supply unit and the CU/PU board board.

Check item	Check work	Actions to be taken at NG
(2-1-3) Check the system connection		
Connection condition of the control panel	Check contents of (1-1). The printer will not start operation until the control panel is detected and its operation is started.	Follow the contents of (1-1).

(2-2) Abnormal sound is heard.

Check item	Check work	Actions to be taken at NG
(2-2-1) Check loss of synchronization of motor (Driver error)		
Condition of the motor cable	Check for normal wiring conditions of the respective motors. Perform the visual check and measure resistance at open circuit with VOM as follows. Remove the motor cable at the board end. Measure resistance between the respective pins of the removed cable and FG with VOM.	Replace the motor cable. Re-connect the cable for normal conditions.
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzzer" sound when an error occurs.	Replace the CU/PU board.
(2-2-2) Check loss of synchronization of motor (Abnormal load of the consumable item)		
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzzer" sound when an error occurs.	Replace the corresponding consumable item. If any attempt of using new part as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(2-2-3) Check the jumping phenomena of gear tooth. (Abnormal load of the consumable item)		
Operating conditions of the respective motors	Check if operations of the respective motors are normal or not by using the self-diagnostic mode. Check if any load exists or not. "Buzz buzz" sound is generated when an error occurs.	Replace the corresponding consumable item. If any attempt of using new part as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Installation condition of each consumable item	Check by visual inspection if the respective consumable items are installed in their normal positions in which gears of the consumable items engage accurately or not.	Replace an appropriate mechanical part as required, or adjust or repair
(2-2-4) Check the wiring conditions of cables		
Wiring conditions of the cables in the vicinity of the respective cooling fans	Check if the cable contacts with the fan blade because wiring conditions of the cables near fan is poor or not. "Clap, clap" sound is generated when an error occurs.	Correct the wiring conditions of the cable.

(2-3) Bad odors are generated.

Check item	Check work	Actions to be taken at NG
(2-3-1) Locating the exact position of generating bad odor		
Fuser unit	Remove the fuser unit and check the odor.	Implement section (2-3-2).
Low voltage power supply unit	Remove the low voltage power supply unit and check the odor.	Replace the low voltage power supply unit
(2-3-2) Check conditions of the fuser unit		
Life count of fuser unit	Check the life count of the fuser unit by using the self-diagnostic mode.	The fuser close to the new fuser unit smells some odors.
Check that no foreign material exists in fuser unit.	Check that no foreign materials such as paper are stuck inside of the fuser unit.	Remove the foreign material.

(2-4) Rise-up time is slow.

Check item	Check work	Actions to be taken at NG
(2-4-1) Check the fuser unit		
Heater	Confirm the voltage specification on the label on the rear of the fuser unit.	Replace the fuser unit.
(2-4-2) Check the optional parts ***Note!***		
Add-on memory	Install the optional parts (add-on memory) again and re-check the operations.	Replace the optional part.
SD memory casd	Install the optional part (SD memory card) again and recheck the operations.	Replace the optional part.

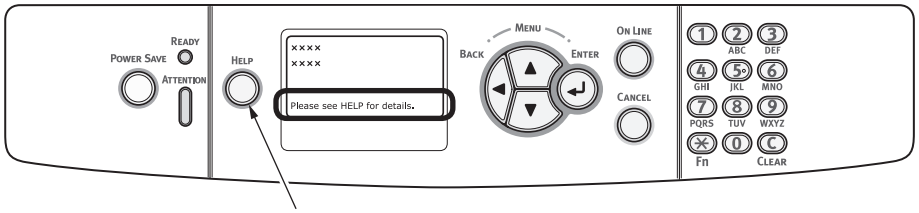
Note! If any troubles such as printer does not start up normally occurs, remove the CU options (RAM, SD memory card) and check if the trouble symptom changes or not.

(3) Error code numbers and locations of paper jams

When paper jams occur or paper remains in the printer, “Paper Jam”, or “Paper Remain” is displayed on the operation panel.

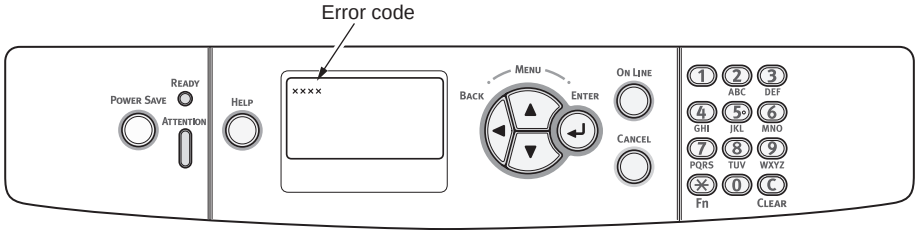
By pressing the Help button, a method to remove the paper is displayed, so remove the paper in the printer according to [Action].

In addition, refer to paper removal methods described on the reference pages given in the table on the right.



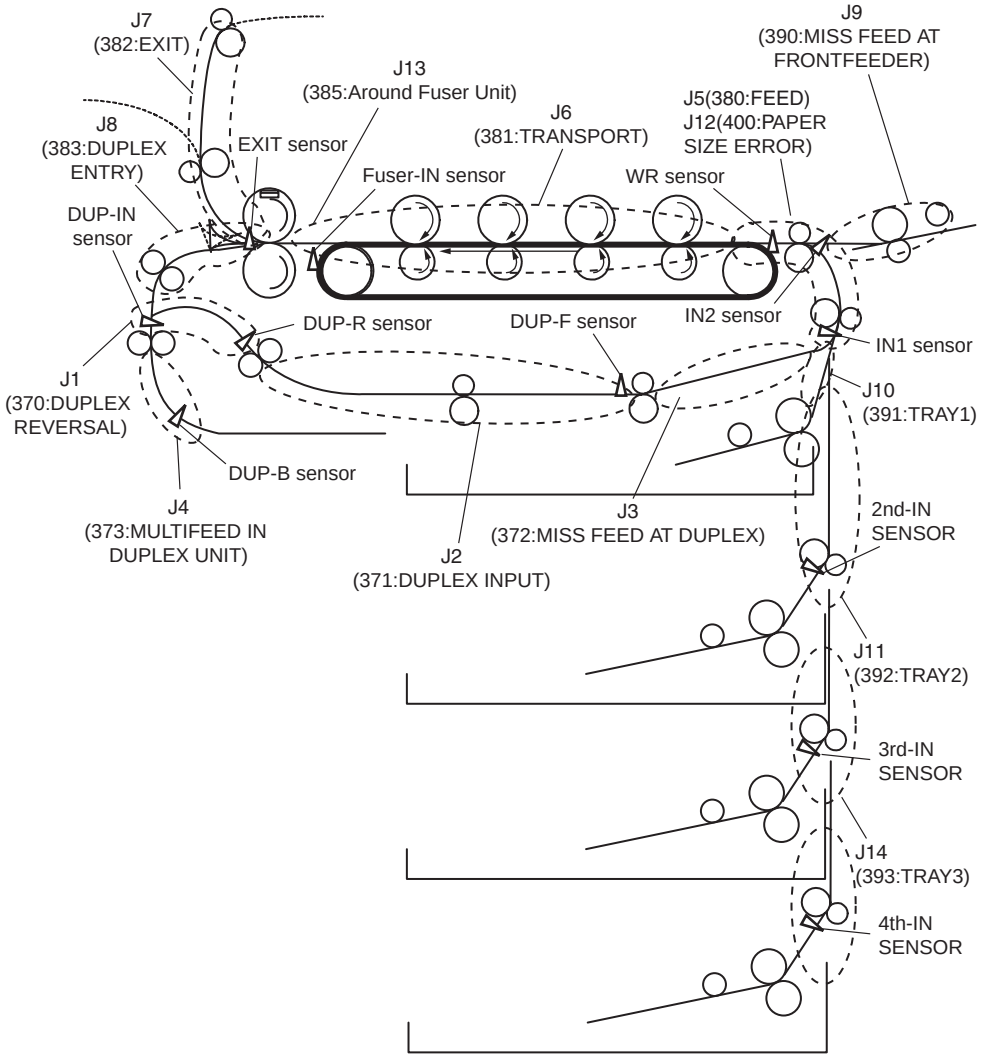
By pressing this button, a method to remove paper is displayed.

LCD message displayed when the HELP button is pressed



Message on the display screen	Error code(s)	Reference page
Open Cassette Paper Jam %Tray%	391, 392, 393, 394	8-34
Open Cassette Paper Remain %Tray%	631, 632, 633, 634	
Open Cover Paper Jam Front Cover	372, 380, 390	8-35
Open Cover Paper Remain Front Cover	637	
Open Cover Paper Jam Top Cover	381	8-36
Open Cover Paper Remain Top Cover	638	
Open Cover Paper Jam Top Cover	382, 383, 385	
Open Cover Paper Remain Top Cover	639, 640	
Check Duplex Unit Paper Jam	370, 371, 373	8-39
Check Duplex Unit Paper Remain	641, 642	

Outline drawing of jam locations

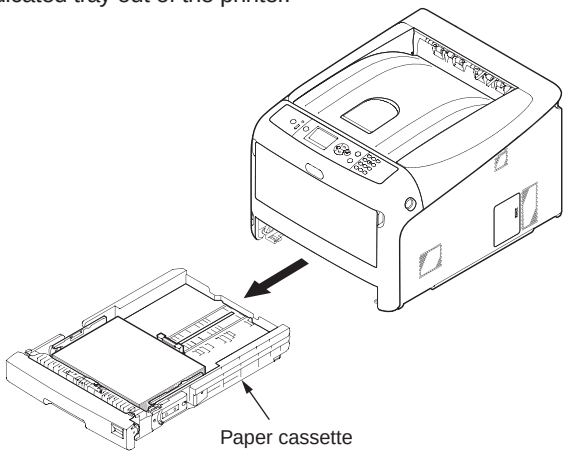


634, 632, 633, 634 Open Cassette Paper Remain %Tray%	391, 392, 393, 394 Open Cassette Paper Jam %Tray%

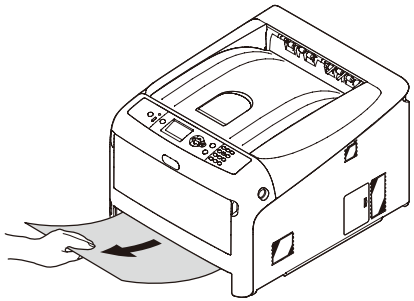
Remedy when the above messages are displayed

Tray1 is applied here as an example.

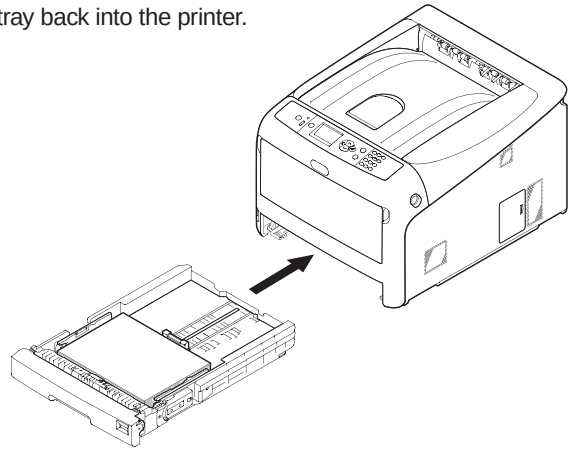
(1) Pull the indicated tray out of the printer.



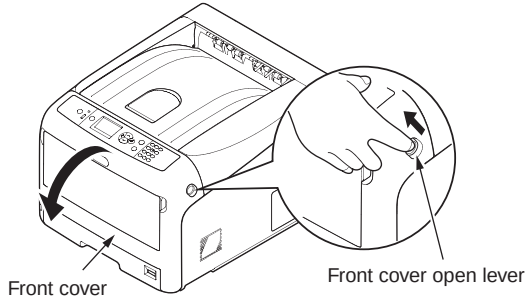
(2) Remove the jammed paper.



(3) Place the tray back into the printer.



(4) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



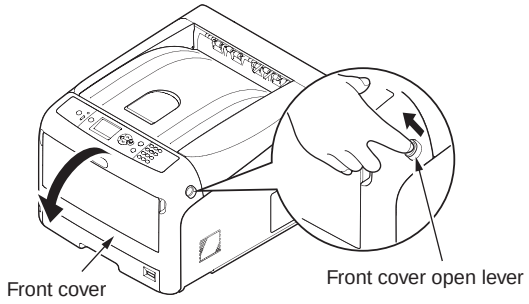
(5) Close the front cover.

Memo Keep it in mind that the error message is not cleared unless the front cover is opened and closed following removal of the jammed paper.

372 Open Cover Paper Jam Front Cover	637 Open Cover Paper Remain Front Cover

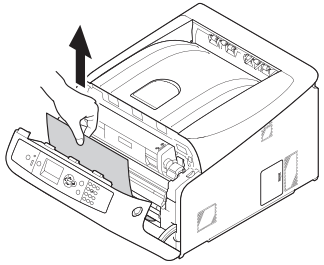
Remedy when the above messages are displayed

(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



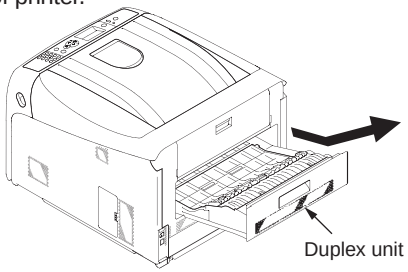
(2) Remove the jammed paper gently.

① If an edge of jammed paper can be seen

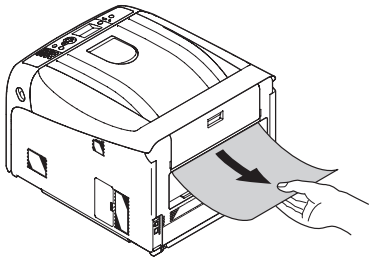


② If you cannot find the jammed paper

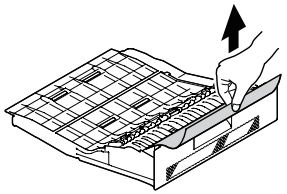
1. Take out the duplex unit by pulling it obliquely upward while holding the center recess on the back of printer.



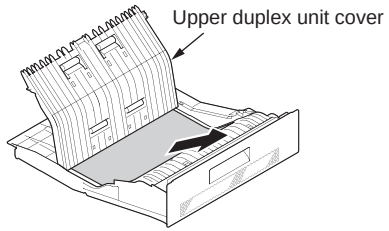
2. Check for jammed paper inside the printer. If jammed paper remains, remove it.



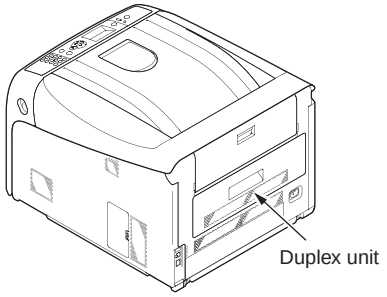
3. Check for jammed paper in the duplex unit. If jammed paper remains, pull it out gently.



4. Open the upper duplex unit cover and check for jammed paper. If jammed paper remains, pull it out gently and close the cover.



5. Replace the duplex unit into the printer.

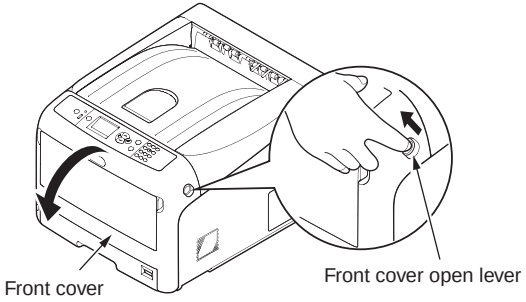


(3) Close the front cover.

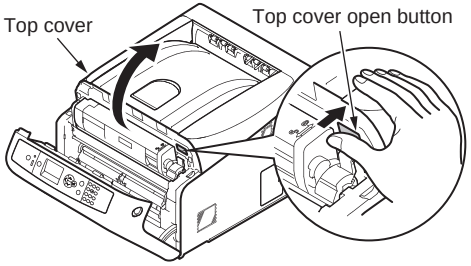
381 Open Cover Paper Jam Top Cover	368 Open Cover Paper Remain Top Cover
382 Open Cover Paper Jam Top Cover	369 Open Cover Paper Remain Top Cover

Remedy when the above messages are displayed

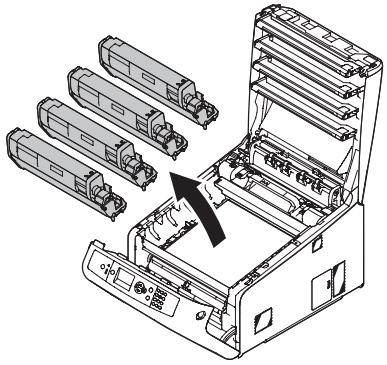
(1) Insert your finger into the recess on the right side of the printer and pull the front cover open lever to open the front cover forward.



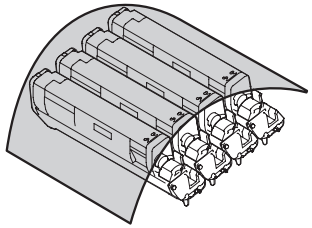
(2) Press the top cover open button and open the top cover.



(3) Remove all four image drums and place them on new paper etc. on a flat surface.

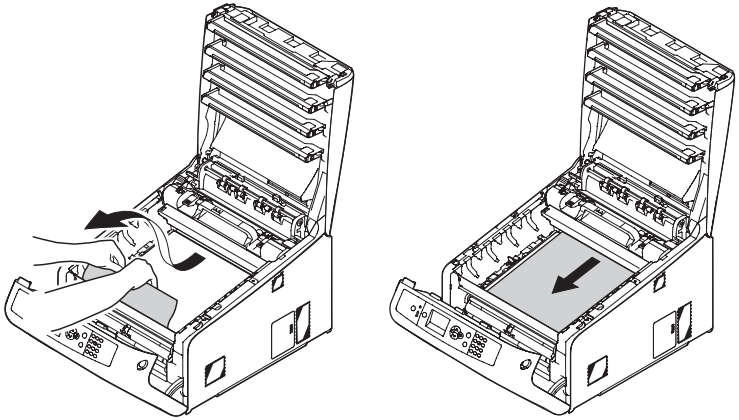


(4) Cover the removed image drums with black paper so that the image drums are not exposed to light.



(5) ① If an edge of jammed paper can be seen

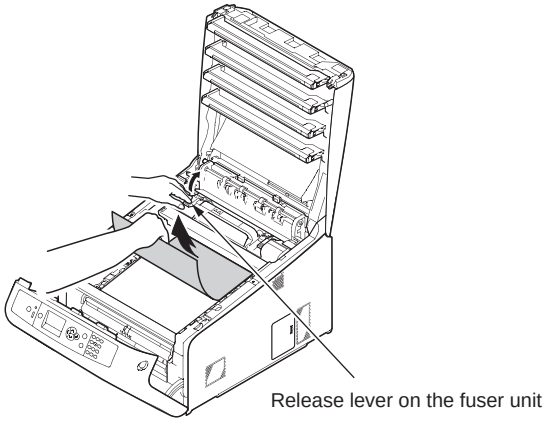
Pull out the jammed paper gently to the rear of the printer (the direction of the arrow).



② If an edge of jammed paper cannot be seen

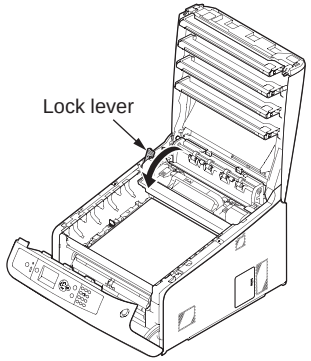
Pull out the jammed paper gently while lifting the release levers on the fuser unit.

If an edge of jammed paper still remains inside the unit, pull out the jammed paper gently to the rear of the printer.

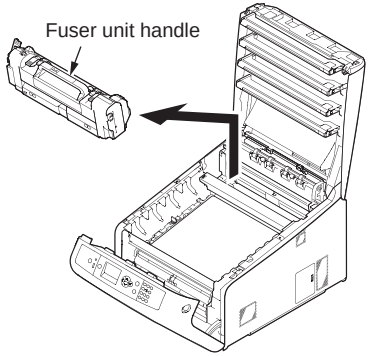


③ When paper jams in the fuser.

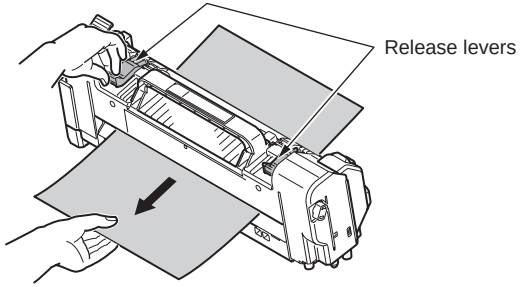
1. Lift the left lock lever of the fuser unit forward.



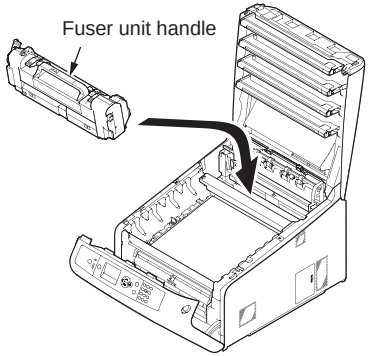
2. Hold the fuser unit handle and lift the fuser unit out of the printer.



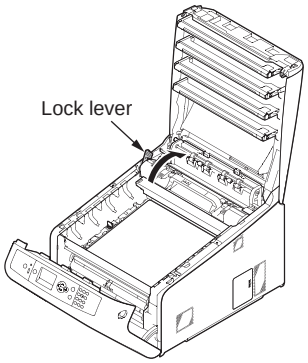
3. Lift the release levers on the fuser unit, and pull out the jammed paper forward gently.



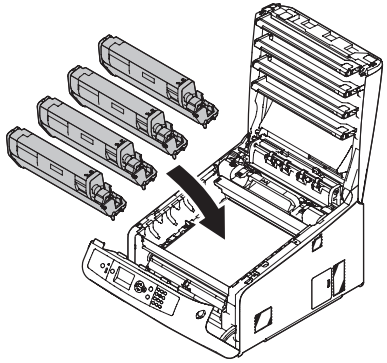
4. Hold the fuser unit handle and place the fuser unit into the printer.



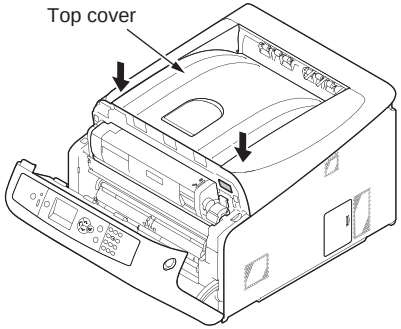
5. Push the left lock lever of the fuser unit backward.



(6) Return all four image drums into the printer carefully.



(7) Close the top cover by pushing the both sides of the cover firmly.



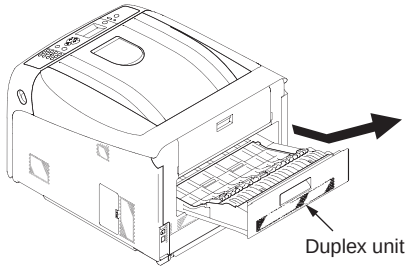
(8) Close the front cover.

Note! Cannot close the front cover securely if the top cover is not closed.

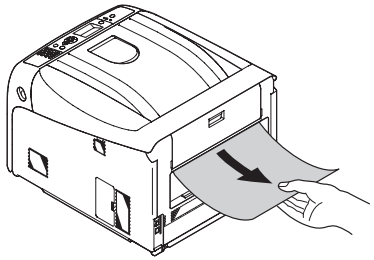
370 Check Duplex Unit Paper Jam	641 Check Duplex Unit Paper Remain

Remedy when the above messages are displayed

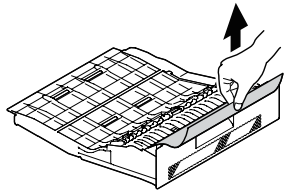
(1) Take out the duplex unit by pulling it obliquely upward while holding the center recess on the back of printer.



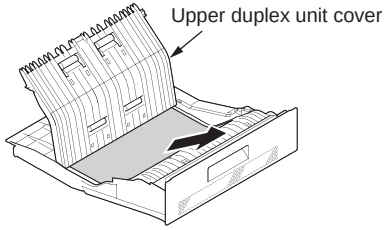
(2) Check for jammed paper inside the printer. If jammed paper remains, remove it.



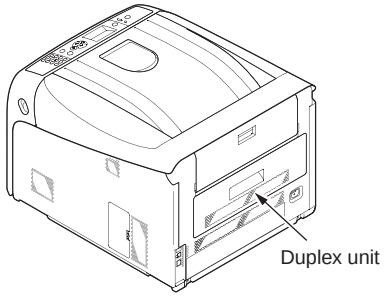
(3) Check for jammed paper in the duplex unit. If jammed paper remains, pull it out gently.



(4) Open the upper duplex unit cover and check for jammed paper. If jammed paper remains, pull it out gently and close the cover.



(5) Replace the duplex unit into the printer.



8.5.2.(3) Paper feed jam (Error 391: 1st Tray).

(3-1) Jam occurs immediately after the power is turned on. (1st tray)

Check item	Check work	Actions to be taken at NG
(3-1-1) Check condition of the paper running path		
Paper running path of the front unit	Open the front cover check if paper is not jammed in the paper running path.	Remove the jammed paper.
(3-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1 and the paper entrance sensor 2.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(3-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the Maintenance Menu SWITCH SCAN function.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check output signal level of the paper entrance sensor 1 and that of the paper entrance sensor 2.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-4: Paper entrance sensor 1 Pin-3: Paper entrance sensor 2 Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (RSF PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(3-2) Jam occurs immediately after the paper feed is started. (1st tray)

Check item	Check work	Actions to be taken at NG
(3-2-1) Check condition of the paper running path		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(3-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1 and the paper entrance sensor 2.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
Check the feed roller, pickup roller and the retard roller assembly of the tray.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller or the pickup roller has worn out or not.	Replace the feed roller, the pickup roller and the retard roller assembly of the tray.
(3-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board or the paper feed motor.
Paper feed motor driver	Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector side. Several MΩ between pin-5 – FG. Several MΩ between pin-6 – FG. Several MΩ between pin-7 – FG. Several MΩ between pin-8 – FG.	Replace the CU/PU board.

Check item	Check work	Actions to be taken at NG
(3-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector ① of the CU/PU board and check the following at the cable side. Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Remove the MOTERCL connector ① of the CU/PU board and check that approx. 3.4Ω can be measured between pin-5 -pin-6 and pin-7 -pin-8 respectively at the cable end.	Replace the paper feed motor.
(3-2-5) Clutch operation check		
Paper feed clutch, registration clutch	Check to make sure that the paper feed clutch or registration clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode. Open the front cover so that the rollers can be seen to check.	Replace the CU/PU board, or replace the paper feed solenoid.
(3-2-6) Check the system connection		
Clutch cable for paper feed	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Cable for paper feed clutch	Check that any cable is not pinched during assembling of the printer. Remove the HOPLC connector ② of the CU/PU board and check the following at the cable side. Short circuit between pin-1 – FG Remove the HOPCL connector ② of the CU/PU board and check that approx. 240Ω can be measured between pin-1 and pin-2.	Replace the clutch and assembly it again correctly.

8.5.2.(4) Feed jam (Error 380)

(4-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(4-1-1) Check condition of the paper running path		
Paper running path of the front unit	Open the front cover check if paper is not jammed in the paper running path.	Remove the jammed paper.
(4-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(4-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the Maintenance Menu SWITCH SCAN function.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check the output signal levels of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR sensor.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-4: Paper entrance sensor 1 Pin-3: Paper entrance sensor 2 Pin-2: WR sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(4-2) Jam occurs immediately after the paper feed is started.

Check item	Check work	Actions to be taken at NG
(4-2-1) Check condition of the paper running path		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(4-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 1, that of the paper entrance sensor 2 and that of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(4-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board, or replace the paper feed motor.
Paper feed motor driver	Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector side. Several MΩ between pin-5 – FG. Several MΩ between pin-6 – FG. Several MΩ between pin-7 – FG. Several MΩ between pin-8 – FG.	Replace the CU/PU board.
(4-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector ① of the CU/PU board and check the following at the cable side. Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Remove the MOTERCL connector ① of the CU/PU board and check that approx. 3.4Ω can be measured between pin-5 -pin-6 and pin-7 -pin-8 respectively at the cable end.	Replace the paper feed motor.

8.5.2.(5) Paper feed jam (Error 390: MP Tray)

(5-1) Jam occurs immediately after the power is turned on. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
(5-1-1) Check condition of the paper running path		
Paper running path of the multipurpose tray	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(5-1-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 2 and the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
(5-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check the sensor output signal level of the paper entrance sensor 2 and the WR sensor.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-2: WR sensor Pin-3: Paper entrance sensor 2 Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(5-2) Jam occurs immediately after paper feed is started. (Multipurpose tray)

Check item	Check work	Actions to be taken at NG
(5-2-1) Check condition of the paper running path		
Paper running path of the multipurpose tray	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
Sheet Receive of the multipurpose tray	Confirm that the Sheet Receive has moved up normally. Confirm that the support spindle and spring of the Sheet Receive have been installed in the specified positions normally.	Correct installation of the above parts so that the Sheet Receive moves up to the specified position normally.
(5-2-2) Check condition of the mechanical parts		
Check the sensor levers of the paper entrance sensor 2 and the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor with the good sensor lever.
Front cover	Confirm that the locks in the right and left of the front cover are locked normally.	Replace the font cover assembly
Check the feed roller, the pickup roller, and the retard roller.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller has worn out or not.	Replace the feed roller.
(5-2-3) Motor operation check		
Paper feed motor	Confirm that the paper feed motor works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the CU/PU board, or replace the paper feed motor.
Paper feed motor driver	Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector side. Several MΩ between pin-5 – FG. Several MΩ between pin-6 – FG. Several MΩ between pin-7 – FG. Several MΩ between pin-8 – FG.	Replace the CU/PU board.
MPT clutch	Carry out Motor & Clutch Test to check if the MPT clutch works normally.	

Check item	Check work	Actions to be taken at NG
(5-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cable. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector ① of the CU/PU board and check the following at the cable side. Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Remove the MOTERCL connector ① of the CU/PU board and check that approx. 3.4Ω can be measured between pin-5 -pin-6 and pin-7 -pin-8 respectively at the cable end.	Replace the paper feed motor.

8.5.2.(6) Paper running jam (Error 381)

(6-1) Jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(6-1-1) Check condition of the running path.		
Paper running path of the front unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(6-1-2) Check condition of the mechanical parts		
Check the sensor lever of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(6-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace either the CU/PU board or the front sensor board (RSG PCB) or connection cable.
Check the sensor lever of the WR sensor.	Check for the following signals at the FSNS connector ⑱ of the CU/PU board. Pin-2: WR sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the front sensor board (RSG PCB)
Check the power voltages supplied to the front sensor board (RSG PCB)	Check the 5V power at the FSNS connector ㉕ of the front sensor board (RSG PCB). Pin-1: 5V power supply Pin-5: 0VL	Replace the connection cable.

(6-2) Jam occurs immediately after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(6-2-1) Check condition of the paper running path		
Paper running path on the belt.	Remove the ID unit and check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(6-2-2) Check condition of the mechanical parts		
Check the sensor lever of the WR sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(6-2-3) Motor operation check		
Paper feed motor driver, belt motor driver and ID motor	Confirm that the paper feed motor, belt motor and ID motor work normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board, or replace the defective motor among paper feed motor, belt motor and ID motor, or replace the ID unit or belt unit. If any attempt of using new ID unit or new belt unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Paper feed motor, belt motor	Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector side. Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG Several MΩ between pin-5 – FG Several MΩ between pin-6 – FG Several MΩ between pin-7 – FG Several MΩ between pin-8 – FG	Replace the CU/PU board.

Check item	Check work	Actions to be taken at NG
(6-2-4) Check the system connection		
Paper feed motor drive cable, ID motor drive cable, belt motor drive cable, fuser motor drive cable	Check the connection condition of the cables. CU/PU board MOTERCL connector ①, DCID connector ③, DCHEAT connector ④, MOTERCL connector ①, RELAY connector ⑨. Check if the connector is connected in the halfway only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Normalize the connection condition. Replace the cable with the normal cable.
Paper feed motor drive cable, belt motor drive cable, hopping clutch drive cable	Check that any cable is not pinched during assembling of the printer. Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG Short circuit between pin-5 – FG Short circuit between pin-6 – FG Short circuit between pin-7 – FG Short circuit between pin-8 – FG Remove the HOPCL connector ② of the CU/PU board and check the following at the cable side. Short circuit between pin-1 – FG Short circuit between pin-2 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor, belt motor, hopping clutch	Remove the respective connectors from the board, and confirm that the following resistance exists between the corresponding pins, at the cable side. CU/PU board MOTERCL connector ① Between pin-1 - pin-2: Approx. 3.4Ω Between pin-3 - pin-4: Approx. 3.4Ω Between pin-5 - pin-6: Approx. 3.4Ω Between pin-7 - pin-8: Approx. 3.4Ω CU/PU board HOPCL connector ② Between pin-1 - pin-2: Approx. 240Ω	Replace the paper feed motor or ID Up motor.

(6-3) Jam occurs in the middle of paper running path.

Check item	Check work	Actions to be taken at NG
(6-3-1) Motor operation check		
Paper feed motor driver, belt motor driver and ID motor	Confirm that the paper feed motor, belt motor and ID motor work normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board, or replace the defective motor among paper feed motor, belt motor and ID motor, or replace the ID unit or belt unit. If any attempt of using new ID unit or new belt unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Paper feed motor, belt motor	Remove the MOTERCL connector ① of the CU/PU board and check the following at the connector side. Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG Several MΩ between pin-5 – FG Several MΩ between pin-6 – FG Several MΩ between pin-7 – FG Several MΩ between pin-8 – FG	Replace the CU/PU board.

(6-4) Jam occurs immediately after paper has reached the fuser.

Check item	Check work	Actions to be taken at NG
(6-4-1) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board. Replace the fuser motor. Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(6-4-2) Temperature control while fuser belt running		
Detected temperatures of the fuser belt and the backup roller	Check temperatures detected at the fuser belt and the backup roller in the self-diagnostic mode. Has abnormally low (lower than the room temperature) or high (250°C) temperature been detected?	Replace the fuser unit, relay board (P6Z PCB) or CU/PU board. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the system maintenance menu FUSE KEEP MODE.
(6-4-3) Check the installation condition of fuser unit		
Fuser unit	Check that the fuser unit is installed normally. (Is it pushed in down to the bottom-most point?)	Install the fuser unit correctly in a printer.

8.5.2.(7) Paper unloading jam (Error 382)

(7-1) Paper unloading jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(7-1-1) Check condition of the paper running path		
Paper running path of the paper unloading unit	Check if paper is jammed or not in the paper running path.	Remove the jammed paper.
(7-1-2) Check condition of the mechanical parts		
Check the sensor lever of the paper exit sensor.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(7-1-3) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the CU/PU board or EXIT sensor or its cable or its connection cable.
Check the output signal level of the EXIT sensor.	Check for the following signals at the RELAY connector ⑨ of the CU/PU board. Pin-11: EXIT sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the EXIT sensor.
Check the power voltages supplied to the relay board.	Check the 5V power voltage at the EXIT connector ㉙ of the relay board. Pin-1: 5V power supply Pin-3: 0VL	Replace the connection cable.
(7-1-4) Check the system connection		
Signal cable for relay board, EXIT sensor cable	Check that FFC is normally inserted at the RELAY connector ⑨ of the CU/PU board and at the PU IF connector ㉘. Check that the relay board and the EXIT sensor are normally connected.	Normalize the connection condition.
Signal cable for relay board, EXIT sensor cable	Confirm that the cables are not pinched, sheathes are not peeled off, and they are assembled normally.	Replace the connecting cable and normalize the assembled condition.

(7-2) Paper unloading jam occurs after a paper is taken into printer.

Check item	Check work	Actions to be taken at NG
(7-2-1) Check condition of the paper running path		
Face Up Stacker Cover	Confirm that it is either fully opened or fully closed	Eliminate any in-between condition of the cover between the fully open position and fully closed position.
Duplex pull-in gate	Confirm that the Duplex pull-in gate works normally by using the Motor & Clutch Test of the self-diagnostic mode. Is it set to the paper unloading side normally?	Replace the Duplex pull-in gate or the Duplex solenoid
Rear panel	Check that the installation condition of the rear panel hampers smooth movement of a paper in the paper running path, or not.	Remove the rear panel and re-install it.
Paper running path of unloading unit	Check that any mechanical load does not exist that hampers the smooth movement of paper in the paper running path of the paper unloading unit, by the visual inspection. Check if the paper unloading motor becomes difficult to rotate or not.	Correct the portion that becomes mechanical load.
(7-2-2) Check condition of the mechanical parts		
Sensor lever of the paper exit sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(7-2-3) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board or fuser motor or fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(7-2-4) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Visually check the CU/PU board DCHEAT connector ④ for half-way connection, slanted angle insertion, and abnormal cord assembly. Also check the connector connected with the fuser motor in the same manner.	Replace the cable with the good cable that normalizes the connection condition.

(7-3) Paper unloading jam occurs in the middle of paper running path.

Check item	Check work	Actions to be taken at NG
(7-3-1) Motor operation check		
Fuser motor	Confirm that the fuser motor works normally by using the Motor & Clutch Test of the self-diagnostic mode. Check if any load exists or not.	Replace the CU/PU board or fuser motor or fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

8.5.2.(8) Two-sided printing jam (Errors 370, 371, 372, 373 and 383)

(8-1) Two-sided printing jam occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(8-1-1) Check condition of electrical parts		
Check the detection condition of the sensor signal.	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode. For all sensors except the Dup-IN sensor, check the detection condition of the respective sensor in the two status: One is the status in which paper remains inside the Duplex unit. The other is the status in which paper is removed from the Duplex unit.	Replace the Duplex board (GOH PCB), or replace the defective sensor or connection cable.

(8-2) Two-sided printing jam occurs during taking in the paper into Duplex unit.

Check item	Check work	Actions to be taken at NG
(8-2-1) Solenoid operation check		
Duplex clutch	Confirm that the duplex clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode.	Replace the GOH board or clutch.
Separator solenoid (Paper unloading/ DUP paper taking in switching gate located immediately after the fuser unit)	Check visually movement of the gate by using the Motor & Clutch Test of the self-diagnostic mode. Check if movement is unsmooth or not, if amount of open/close is abnormal or not.	Replace the separator solenoid.
(8-2-2) Sensor lever operation check		
Dup-IN sensor lever	Remove the duplex unit. Touch the Dup-IN sensor lever to check if its movement is unsmooth or not.	Replace the Dup-IN sensor lever
Dup-Bottom sensor lever	Remove the duplex unit and check the movement of the sensor lever.	Replace the sensor lever.
DUP-IN sensor Dup-Bottom sensor	Check the sensitivity of each sensor in the two conditions: one is the status in which paper remains in the duplex unit, and the other is the status in which no paper remains in the duplex unit. Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the Duplex board (GOH PCB), or replace the defective sensor or connection cable.

Check item	Check work	Actions to be taken at NG
(8-2-3) Check condition of the paper running path		
Paper inverting transport path	Check that any foreign materials such as paper chip or blue do not exist that hampers the smooth movement of paper in the paper inverting transport path.	Remove the foreign material.

(8-3) Two-sided printing jam occurs during transporting paper inside the Duplex unit.

Check item	Check work	Actions to be taken at NG
(8-3-1) Sensor lever operation check		
Dup-F sensor lever	Remove the Duplex unit and check movement of the Dup-F sensor lever.	Replace the Dup-F sensor lever.
Dup-R sensor lever	Remove the Duplex unit and check movement of the Dup-R sensor lever.	Replace the Dup-R sensor lever.
(8-3-2) Sensor check		
Check the detection condition of the sensor signal	Check the sensitivity of each sensor in the two conditions: one is the status in which paper remains in the duplex unit, and the other is the status in which no paper remains in the duplex unit. Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the Duplex board (GOH PCB), or replace the defective sensor or connection cable.

(8-4) Paper is not supplied from the Duplex unit to the regist roller.

Check item	Check work	Actions to be taken at NG
(8-4-1) Clutch operation check		
Duplex clutch	Confirm that the Duplex clutch works normally by using the Motor & Clutch Test of the self-diagnostic mode.Confirm it by listening to the sound.	Replace the GOH board or clutch.

8.5.2.(9) Paper size error (Errors 400 and 401)

(9-1) Jam occurs when paper end is located near the IN1 sensor.

Check item	Check work	Actions to be taken at NG
(9-1-1) Check paper feed condition		
Multifeed of papers	Open the front cover and check if multifeed of papers occurs or not.	If multi-feed occurs again after the jammed paper is removed, replace the retard roller of the tray in use.
Paper size	Does the paper size specified for print match the paper size of paper stuck in the tray.	Change the specified paper size or size of paper inside the tray.
Paper entrance sensor 1, paper entrance sensor 2	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.

8.5.2.(10) ID unit Up/Down error (Service call 142)

(10-1) Error occurs during the Up movement of the ID unit

Check item	Check work	Actions to be taken at NG
(10-1-1) Check the mechanical load during the Up movement		
Mechanical load during installation and removal of the ID unit	Check if abnormal heavy load is applied when removing the ID unit.	IReplace the ID unit, or replace the right/left side plate. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Greasing to the right and left Up/ Down link levers	Check if the slant surface of the link lever is coated by grease or not.	Apply grease.
Assembled condition of the right and left Up/ Down link levers	Check if any part exists or not in the vicinity of link lever, that hampers movement of the link lever.	Assemble them correctly.
(10-1-2) Up/Down mechanism		
Assembled condition of the peripheral mechanism of the link lever	Is the mechanism assembled so that the link lever is connected to the planetary driving gear?	Assemble them correctly.
Right and left link levers	Check if the link lever is set in the correct position that enables the specified engagement of gears. (Check if the link lever is set in the wrong position that results in the wrong engagement of gears by several teeth.)	Assemble them correctly.
(10-1-3) Sensor check		
Up/Down sensor lever (unified structure with the left link lever)	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the left link lever.
Up/Down sensor	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode. Check if the SCAN state changes or not when the incoming light is interrupted/passed by using a piece of paper or the like for the transparent type sensor.	Replace the high voltage board.

(10-2) Error occurs during the Down movement of the ID unit

Check item	Check work	Actions to be taken at NG
(10-2-1) Check the mechanical load during the Down movement		
Mechanical load during installation and removal of the ID unit	Check if abnormal heavy load is applied when removing the ID unit.	Replace the ID unit, or replace the right/left side plate.
Greasing to the right and left Up/ Down link levers	Check if the slant surface of the link lever is coated by grease or not.	Apply grease.
Assembled condition of the right and left Up/ Down link levers	Check if any part exists or not in the vicinity of link lever, that hampers movement of the link lever.	Assemble them correctly.

8.5.2.(11) Fuser unit error (Errors 167 to 177)

(11-1) Error occurs immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(11-1-1) Thermistor is defective Note)		
Upper thermistor, lower thermistor, side thermistor, heater thermistor	Check the respective thermistors if they are shorted or opened internally. Check the resistance value at the connector pins in the bottom of the fuser unit. (Refer to section 9.1 Resistance value (fuser unit).)	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Installed condition of fuser unit.	Check if the fuser nit is pressed in until the connector in the bottom of the fuser unit is surely connected.	Re-set the fuser unit.

Note! Service calls 171: Error and 175: Error can occur when the printer temperature is below 0˚C. Turn on the power again after the printer temperature has increased.

(11-2) Error occurs approx. 1 minute after the power is turned on.

Check item	Check work	Actions to be taken at NG
(11-2-1) Temperature increase of fuser unit		
Thermostat, heater	Heater of the fuser unit is controlled of its temperature. Check if the fuser unit gets hot or not by touching it with hands. If the fuser unit temperature does not increase and remains cold, check that the resistance between pin-1 and pin-4 and between pin-3 and pin-4 is about 4 to 7Ω, between pin-1 and pin-2 and between pin-3 and pin-2 is about 1 to 3Ω respectively. (Refer to section 9.1 Resistance value (fuser unit).)	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(11-2-2) Temperature increase of fuser unit		
Installation position of the Lower thermistor	The Lower thermister must be installed while contacting with the fuser unit. Check if the lower thermister is installed in the far position from the specified position or not causing detection of the lower temperature than the actual temperature of fuser unit.	Replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check work	Actions to be taken at NG
(11-2-3) AC power input for the fuse		
AC power voltage from the low voltage power supply	Check if the AC voltage for heater is normally supplied or not. Power supply J2 connector ㉜, between pin-1 and pin-2, and between pin-3 and pin-4.	Replace the low voltage power supply.
Heater ON signal that is output from PU to the low voltage power supply	Check that the heater ON signal goes active at the warming up timing, or not. "L" active while ON. Power connector ⑪ of the CU/PU board, between pin-18 and pin-19.	Replace the CU/PU board.

8.5.2.(12) Motor fan error (Errors 122, 127, 128, 918 and 051)

(12-1) The low voltage power supply fan does not rotate immediately after the power is turned on.

Check item	Check work	Actions to be taken at NG
(12-1-1) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the low voltage power supply fan and those of the fuser fan	Check if the connectors are connected normally or not. Check if extra length of the cables does not touch the fan blade or not.	Correct the connection condition of the connectors. Correct the cable wiring route. Replace the fan.

(12-2) Duplex fan does not rotate during the Duplex printing.

Check item	Check work	Actions to be taken at NG
(12-1-2) Cable connection condition and wiring condition		
Cable connection condition and wiring condition of the Duplex fan	Check if the connectors are connected normally or not. Check if extra length of the cables does not touch the fan blade or not.	Correct the connection condition of the connectors. Correct the cable wiring route. Replace the fan.
24V fuse F501 of the Duplex board (GOH PCB)	Check if the fuse F501 has blown out or not.	Replace the Duplex board (GOH PCB).
24V power supplied to the Duplex board (GOH PCB).	Check if the fuse F503 of the CU/PU board has blown out or not.	Replace the CU/PU board.

(12-3) All fans of the printer do not rotate.

Check item	Check work	Actions to be taken at NG
(12-3-1) 24V power supply		
CU/PU board fuses F1, F503	Check if the fuses F1 and F503 are not open-circuit or not.	Replace the CU/PU board.
24V power that is supplied to the CU/PU board.	Check the power supply voltages at the POWER connector ⑪ of the CU/PU board. The follow voltage must appear respectively. Pins-9, 10, -11 and -12: 24V Pins-13, -14, -15 and -16: 0VP	Replace the low voltage power supply.

8.5.2.(13) Print speed is slow. (Performance is low.)

(13-1) Print speed decreases.

Check item	Check work	Actions to be taken at NG
(13-1-2) Media Weight setting		
Media Weight that is specified for the print	Check if the wrong Media Weight has been specified or not.	Correct the Media Weight.

8.5.2.(14) Option unit cannot be recognized.

(14-1) Duplex unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(14-1-1) Duplex board		
Duplex unit	Check if the Duplex unit of C831dn/C841dn specification is being used or not.	Replace the Duplex unit.
(14-1-2) Check the system connection		
Check the system connection from the CU/PU board to the Duplex board (GOH PCB).	Check that the cable between the CU/PU board option connector ⑮ to the Duplex board is normally connected.	Correct the connections.
Square connector connecting the Duplex unit to the printer.	Check if any foreign material exists in the connecting portion of the square connector.	Remove the foreign material.
Square connector connecting the Duplex unit to the printer.	Is the terminals of the square connector damaged?	Replace the connector.
(14-1-3) Check the control signals.		
Check the control signal that is output from the CU/PU board to the Duplex board (GOH PCB).	Check the control signal that is output from the CU/PU board option connector ⑮. Pin-18: TXD (PU → DUP) Pin-20: RXD (DUP → PU)	Pin-18: Replace the CU/PU board. Pin-20: Replace the Duplex board.

(14-2) Option try unit cannot be recognized.

Check item	Check work	Actions to be taken at NG
(14-2-1) Option try board		
Option try unit	Check if the option try unit of C831dn/C841dn specification is being used or not.	Replace the option tray unit.
(14-1-2) Check the system connection		
Check the system connection from the CU/PU board to the option tray board (GOH PCB).	Check that the cable between the CU/PU board option connector ⑮ to the option tray board is normally connected.	Correct the connections.
Square connector connecting the option tray unit to the printer.	Check if any foreign material exists in the connecting portion of the square connector.	Remove the foreign material.
Square connector connecting the option tray unit to the printer.	Is the terminals of the square connector damaged?	Replace the connector.
(14-2-3) Check the control signals.		
Check the control signal that is output from the CU/PU board to the option tray board (GOH-2 PCB).	Check the control signal that is output from the PU board option connector ⑮. Pin-15: OPTCNT2 (PU → 2nd) Pin-17: TXD (PU → 2nd) Pin-19: RXD (2nd → PU)	Pin-17: Replace the CU/PU board. Pin-19: Replace the option tray board.

8.5.2.(15) LED head cannot be recognized. (Errors 131, 132, 133 and 134)

(15-1) Errors 131 to 134 (LED HEAD Missing)

Check item	Check work	Actions to be taken at NG
(15-1-1) Check the system connection		
Connecting condition at the CU/PU board connector and at the head connector.	Check the connecting condition of the FFC by the visual inspection.	Correct the connection to the normal connecting condition.
Head FFC	Remove the head FFC from the printer. Check if any open-circuit or peeling-off of sheath has occurred or not throughout the cable.	Replace the head FFC or the CU/PU board.
Conduction of the fuse on the CU/PU board.	Check that 5V is measured at the ends of the capacitors CP3 and CP4, and also check if the fuse F12, F15 or F16 is open-circuited.	Replace the CU/PU board.

8.5.2.(16) Toner cartridge cannot be recognized. (Errors 540, 541, 542 and 543)

(16-1) Error caused by the consumable items.

Check item	Check work	Actions to be taken at NG
(16-1-1) Consumable items installation condition		
ID unit and toner cartridge	Check that the ID unit is installed in the normal position. Check that the lock lever of the toner cartridge is locked.	Correct the installation to the normal installation condition.

(16-2) Error caused by the toner sensor

Check item	Check work	Actions to be taken at NG
(16-2-1) Toner sensor condition		
Toner sensor	Is the receptor of the toner sensor stained?	Wipe off the stain from the toner sensor.
Toner sensor	Confirm that the toner sensor works normally by using the SWITCH SCAN function of the self-diagnostic mode. Place a white paper in front of the toner sensor, and check if the SCAN state changes or not.	Replace the toner sensor board or the FFC between the toner sensor board and the CU/PU board.

Note! Toner sensor operation check method using the SWITCH SCAN function of the self-diagnostic mode.

(1) How to check operation of the toner sensor at the printer side.

1. Status change of the toner sensor can be checked from the control panel using the self-diagnostic mode. First, switch the display to the control panel display. For the method of switching the display to the control panel display, refer to section 6.3.2.3 Switch Scan Test
2. Remove the ID unit and the toner cartridge (TC) from a printer. There is a window inside a printer opposing the ID side when viewed from the front of a printer. The toner sensor is located inside the window.
3. Place a white paper 3 mm away from the sensor window. The white paper should be placed in the manner of opposing the toner sensor.
4. When light is reflected by a white paper so that incident light falls on the toner sensor, the control panel display shows "L". When the paper is moved so that any light is not reflected by the paper so that the incident light does not reach the toner sensor, "H" is displayed on the control panel.
5. If the control panel display toggles between "H" <-> "L" as a paper is flipped in front of the toner sensor, it indicates that the toner sensor and the related system of the printer are working normally.

Action to be taken at NG

- Clean surface of the toner sensor to remove the stains due to residual toner and paper dust.
- Check the connection condition of the FFC cable between the CU/PU board and the toner sensor board (TSA).
- Perform the operation check again. If the situation has not bee improved and remains unchanged, replace the CU/PU board or the toner sensor board (TSA).

(2) How to check operation of the toner sensor at the toner cartridge (TC) side

1. To the position where the toner sensor is confirmed to be operating normally in the printer itself by the above paragraph (1), install the TC and the ID unit to check operations by observing display on the control panel.
2. If the ID unit works normally, the display on the control panel will toggle between "H" <-> "L" in synchronism with movement of the silver reflector plate that is located on the side of the ID.

Action to be taken at NG

- Check operation condition of the respective ID motors by using the Motor & Clutch Test of the self-diagnostic mode.
- Clean surface of the silver reflector plate on the side of ID to remove stains. (Stain due to toner or paper dust)
- Replace the TC of different color and the ID unit as a pair.

  If a satisfactory operation is attained by using the a pair of TC of different color and the ID unit, replace the TC or replace the ID unit.

(16-3) Error caused by the defective mechanism

Check item	Check work	Actions to be taken at NG
(16-3-1) Mechanical load applied to the ID unit		
ID unit	Check if a heavy mechanical load is being applied to the ID unit due to breakage of the waster toner belt, or not.	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(16-3-2) Motor operating condition		
ID motor	Confirm that the respective ID motors work normally or not by using the Motor & Clutch Test of the self-diagnostic mode. Check if any extra load exists or not.	Replace the CU/PU board or the ID motor.

8.5.2.(17) Fuse cut error (Errors 154 and 155)

(17-1) Fuse cut error

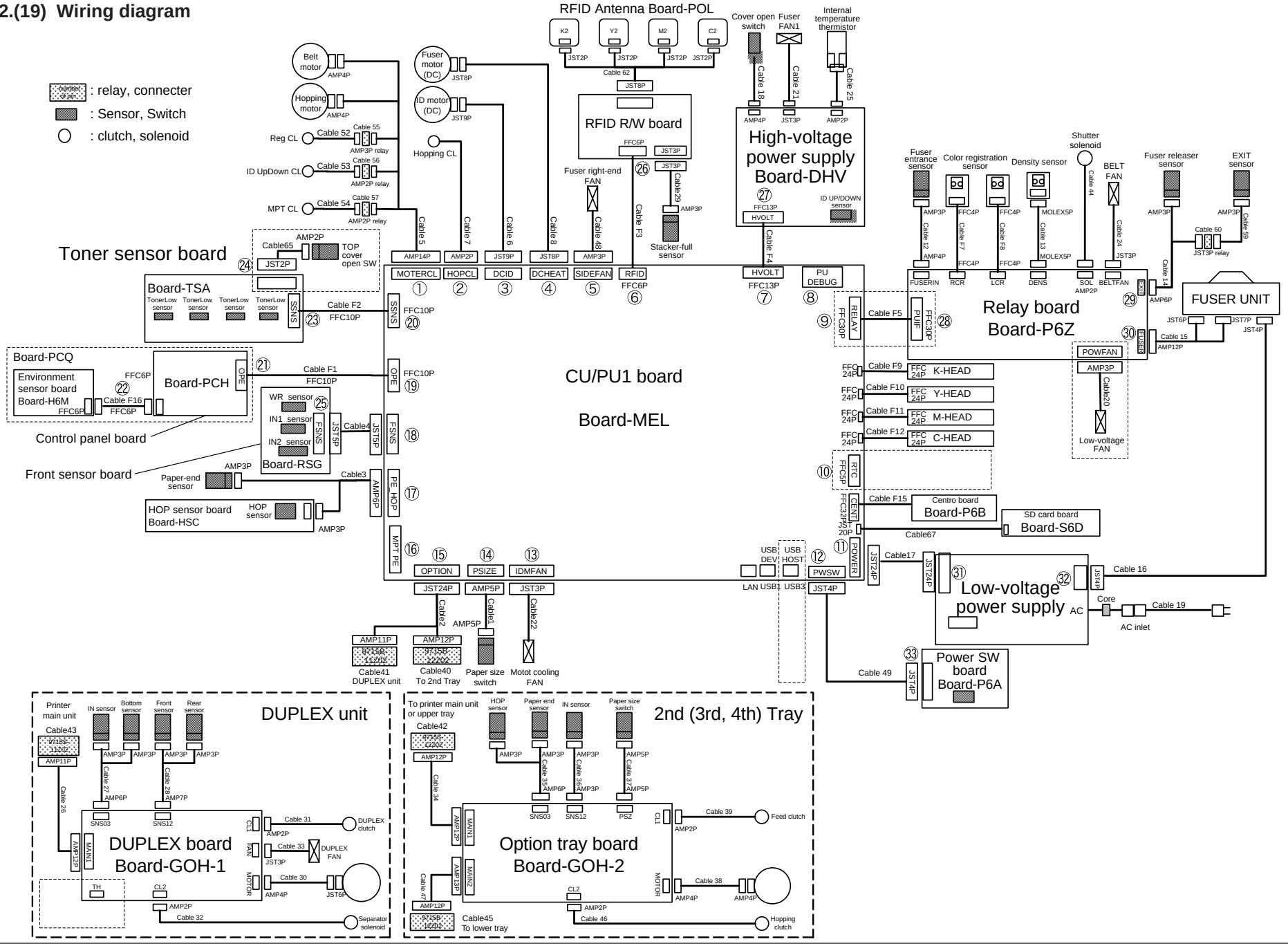
Check item	Check work	Actions to be taken at NG
(17-1-1) Check the system connection		
FFC connecting the CU/PU board and the P6Z board (P6Z PCB)	Check if the RELAY connector ⑨ of the CU/PU board or PUIF connector ㉘ of P6Z board (P6Z PCB) is connected halfway, or inserted at an angle. Check if FFC has open-circuit or its sheath is peeled off.	Connect the FFC normally. Alternately, replace the FFC.
(17-1-2) Fuse cut circuit		
CU/PU board	Upon completion of the system connection check, turn off the power once and back on. The check if the error occurs or not.	Replace the CU/PU board.

8.5.2.(18) Humidity sensor error (Error 123)

(18-1) Humidity sensor error

Check item	Check work	Actions to be taken at NG
(18-1-1) Check the system connection		
Connection between the CU/PU board and the control panel board	Check if the 10-conductor FFC is connected to the OPE connector ⑲ of the CU/PU board properly. Check if the 10-conductor FFC is connected to the CN501 connector ㉒ of the control panel board properly. Check the connectors for half-way connection or angled connection.	Re-connect the cable normally.
FFC connecting the CU/PU board and the control panel board	Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace the FFC with a normal FFC.
FFC connecting the CU/PU board and the environment sensor board	Check for open-circuit with VOM. Visually check that the sheath for peeling.	Replace the FFC with a normal FFC.
(18-1-2) Environment condition		
Sharp change of environment condition	Is the environment condition changed sharply from a low temperature environment to a high environment condition within a short time? (Example is such a case that a printer is moved from storage condition of a cold area in winter to an office environment.)	Leave a printer for around one hour in the new environment to get used to the new environment. After that, turn on the power again. Before turn on the power, touch the metal panel of the controller panel and the metal plate inside a printer to feel temperature increase inside a printer with human hands. After confirmation that the printer temperature has increased close to the room temperature, turn on the power again.

8.5.2.(19) Wiring diagram



8.5.3 Troubleshooting the abnormal images

(1) Color has faded-out and blurred entirely. (Refer to Figure 8-2 A.) 8-60
(1-1) Color are faded-out and blurred. 8-60
(2) Stain on white print. (Refer to Figure 8-2 B.)....8-61
(2-1) Stain on white print (Partial stain)....8-61
(2-2) Stain on white print (overall stain) 8-61
(3) White print (Refer to Figure 8-2 C.)....8-62
(3-1) White print over entire page 8-62
(4) Black banding/black streaking in vertical direction....8-63
(4-1) Thin vertical line (with color) (Refer to Figure 8-2 D.)....8-63
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(5) Periodic abnormalities (Refer to Figure 8-2 E.)....8-63
(5-1) Periodic abnormality occurs in vertical direction 8-63
(6) Significant color misregistration 8-64
(6-1) Color misregistration occurs. 8-64
(6-2) Thought REG ADJUST TEST of engine maintenance function results ok, color misregistration occurs. 8-64
(7) Solid black printing.....8-64
(7-1) Solid black printing over the whole page....8-64
(8) Getting only monochrome printing or no printing....8-65
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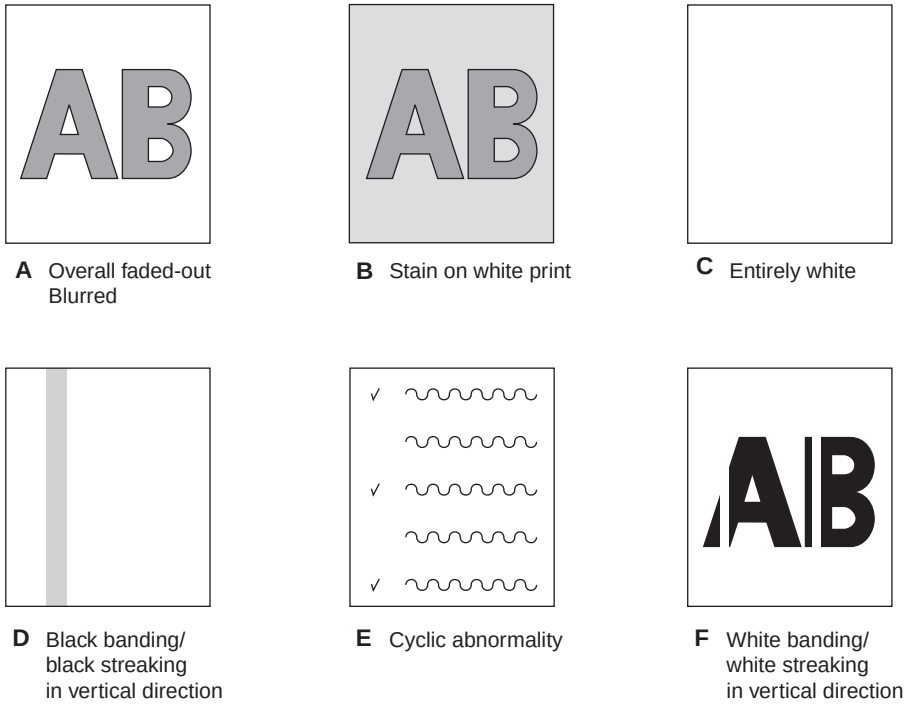
Note! To replace a CU/PU board, data of the EEPROM chip on the old CU/PU board must be read beforehand copied to the new board after replacement.



A Overall faded-out Blurred

B Stain on white print

C Entirely white

D Black banding/ black streaking in vertical direction

E Cyclic abnormality

F White banding/ white streaking in vertical direction

Figure 8-2

8.5.3.(1) Color has faded-out and blurred entirely. (Refer to Figure 8-2 A.)

(1-1) Color are faded-out and blurred.

Check item	Check work	Actions to be taken at NG
(1-1-1) Toner		
Remaining amount of toner	Check if the message "Prepare toner replacement." or "Replace the toner." appears or not.	Replace toner cartridge with new one.
Tape attached to the toner cartridge opening slot	Check to see that the tape attached to the toner cartridge opening slot has been peeled off.	Move the toner cartridge lever to CLOSE position and remove tape from opening slot.
(1-1-2) LED head		
Lens of the LED head	Check if surface of the lens of the LED head is stained or not by toner and paper dust.	Clean the lens with soft tissue paper.
Mounting condition of LED head	Check that the LED head is mounted on the LED head holder correctly. Check that the right and left tension springs are normally installed.	Correct for normal condition.
(1-1-3) Print media		
Media type	Check to see that the print media which is used for printing is not a specially thick media	Use the normal paper.
(1-1-4) High voltage terminal		
ID unit terminal	ICheck that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 8-3.)	IReplace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(1-1-5) ID unit installation condition		
ID unit DOWN position (Defective transfer)	Move the ID unit in and out with hand to confirm that any abnormal mechanical load does not exist, and the ID unit can be moved down to the DOWN position normally. If a piece of paper is inserted in between drum and belt, if top end of the paper can enter easily, it is NG (No Good).	Check the U-shaped groove of the side plate for any abnormality. If repair is found impossible, replace the equipment.

8.5.3.(2) Stain on white print. (Refer to Figure 8-2 B.)

(2-1) Stain on white print (Partial stain)

Check item	Check work	Actions to be taken at NG
(2-1-1) ID unit		
Exposure of drum to light	Is the drum left in a circumstance in which drum surface is exposed to direct light for a long time?	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
Leakage of toner	Does toner leak out from either ID unit or from toner cartridge?	Replace the ID unit or toner cartridge. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(2-1-2) Fuser unit		
Offset toner of the fuser unit	Check if the offset toner of the previous printing is left adhered on the fuser unit or not, by visual inspection.	Repeat blind printing using unwanted media until offset toner is created on print media. Alternately replace the fuser unit. If any attempt of using new fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

(2-2) Stain on white print (overall stain)

Check item	Check work	Actions to be taken at NG
(2-2-1) Print media		
Type of print media	Check to see that the print media which is used for printing is not a specially thin media.	Use the normal paper.
(2-2-2) High voltage terminal		
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 8-3.)	Replace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

8.5.3.(3) White print (Refer to Figure 8-2 C.)

(3-1) White print over entire page

Check item	Check work	Actions to be taken at NG
(3-1-1) Toner condition		
Remaining amount of toner	Confirm that sufficient amount of toner remains inside the ID unit.	Replace the toner cartridge.
(3-1-2) Exposure condition to light		
LED head	Confirm that the LED head is positioned in the normal position where the LED head opposes again the drum when the cover is closed. Check that no obstacle exists in front of the LED head, that hampers light emission from the illuminating surface of the LED head.	Correct the installation condition of the LED head.
Connecting condition of the LED head	Check that the LED head is normally connected.	Replace the LED head.
Drum shaft	Check that the drum shaft keeps contacting with the right and left side plates normally.	Replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
F15, F16, fuse on the CU/PU board	Measure resistance of F15, F16. 1Ω or less: Normal Higher than 1Ω: NG	Replace the CU/PU board

Check item	Check work	Actions to be taken at NG
(3-1-3) High voltage terminal		
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 8-3.)	Replace the ID unit or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

8.5.3.(4) Black banding/black streaking in vertical direction

(4-1) Thin vertical line (with color) (Refer to Figure 8-2 D.)

Check item	Check work	Actions to be taken at NG
(4-1-1) ID unit condition		
Filming of the ID unit	Is print attempted without toner?	Replace toner cartridge with new one. If replacement does not solve the problem, replace the ID unit. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

(4-2) Thin vertical line (without color) (Refer to Figure 8-2 F.)

Check item	Check work	Actions to be taken at NG
(4-2-1) LED head condition		
LED head	Is any foreign material attached on the light emitting surface of the cell fox lens of the LED head?	Remove the foreign material.
(4-2-2) Condition of paper running path		
Paper running path	Check that any burr that may scatter the un-fused toner on the paper running path does not exist.	Remove the burr.

8.5.3.(5) Periodic abnormalities (Refer to Figure 8-2 E.)

(5-1) Periodic abnormality occurs in vertical direction

Check item	Check work	Actions to be taken at NG
(5-1-1) Cycle		
Image drum	Check that the cycle is 94.3 mm.	Replace the ID unit
Developing roller	Check that the cycle is 37.2 mm.	Replace the ID unit
Toner feed roller	Check that the cycle is 54.6 mm.	Replace the ID unit
Charge roller	Check that the cycle is 37.7 mm.	Replace the ID unit
Fuser belt	Check that the cycle is 142.6 mm.	Replace the fuser unit.
BU Roller of fuser	Check that the cycle is 113.1 mm.	Replace the fuser unit.
Transfer roller	Check that the cycle is 50.3 mm.	Replace the belt unit.
		If any attempt of using new consumable item as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

8.5.3.(6) Significant color misregistration

(6-1) Color misregistration occurs.

Check item	Check work	Actions to be taken at NG
(6-1-1) Result of color registration error correction		
Color registration error correction time (If a printer is normal, it is approx. 40 seconds.)	Use the self-diagnostic mode and execute the REG ADJUST TEST. Check the result. Error is issued but is not displayed on the ON LINE display.	Replace the sensor that causes the error. Clean the sensor to remove stain. Replace the shutter. Replace the CU/PU board.
(6-1-2) Toner		
Remaining amount of toner	Check if the message “Prepare toner replacement.” or “Replace the toner.” appears or not	Replace toner cartridge with new one.
(6-1-3) Color registration error detection sensor		
Sensor is dirty	Is toner or paper dust attached to the sensor?	Clean the sensor to remove stain
(6-1-4) Color registration error detection sensor shutter		
Shutter operation is faulty	Check the shutter operation by the self-diagnostic mode	Replace the shutter or tune the mechanism

(6-2) Thought REG ADJUST TEST of engine maintenance function results ok, color misregistration occurs.

Check item	Check work	Actions to be taken at NG
(6-2-1) Paper feed system		
Paper feed system of the paper running path	Check if any obstacle exists in the paper feeding path, that hampers smooth paper run.	Remove the obstacle

8.5.3.(7) Solid black printing.

(7-1) Solid black printing over the whole page

Check item	Check work	Actions to be taken at NG
(7-1-1) High voltage contacting condition		
CH terminal	Check that the terminal coming from the printer body contacts with the high voltage terminal that is located on the left side of the ID unit when viewed from the top by visual inspection.	Replace the terminal of printer side.
CH terminal	Check that the high voltage terminal keeps the normal contacting condition on the high voltage board. Open the left cover and remove the high voltage board. Then, check that the terminal is not installed in the abnormal installation condition.	Correct the installation condition of the terminal to the normal condition.
ID unit terminal	Check that the high voltage terminal of the ID unit is contacting with the Contact Assembly normally by visual inspection. (Refer to Figure 8-3.)	Replace the ID unit or replace the high voltage board or correct the high voltage terminal. If any attempt of using new ID unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.
(7-1-2) High voltage output condition		
CH output	If high voltage probe is available as a maintenance tool, open the left cover, and check the CH output with the high voltage probe from the soldering side of the high voltage board. (The high voltage probe is not an ordinary maintenance tool.)	Replace the high voltage board.

8.5.3.(8) Getting only monochrome printing or no printing

(8-1) Erroneous setting of the specific color print menu

Check item	Check work	Actions to be taken at NG
(8-1-1) Status of specific color print menu		
Boot Menu item	Check if the set value item of “Process Setup” of Boot Menu is the setting of “Full Color”. (About Boot Menu, refer to Section 5.6)	Setting alteration for “Full Color”

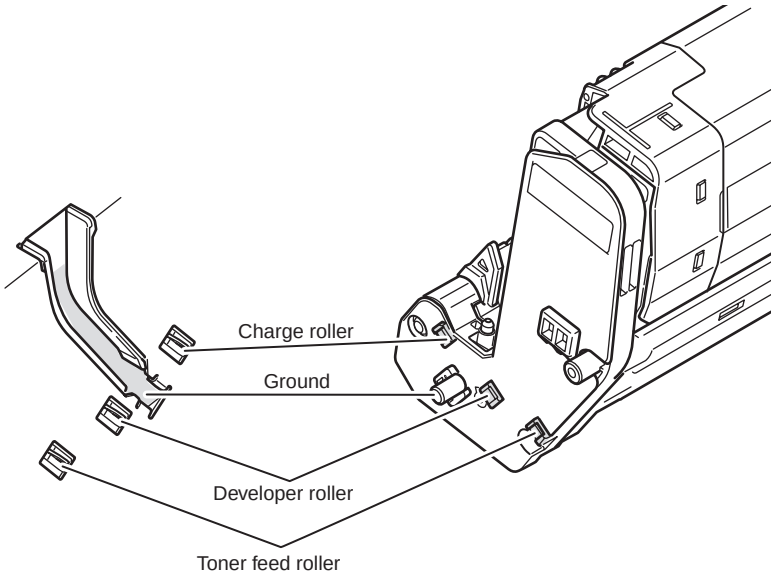


Figure 8-3

8.5.4 Network troubleshooting

(1) Print cannot be activated from Utilities

Check item	Check work	Actions to be taken at NG
(1) Check the LINK lamp		
Check if the LINK lamp (green) is illuminating or not.	Check if the HUB and a printer are connected normally. (Check that the network cable is connected normally.)	Re-connect the network cable normally.
	Confirm that the straight network cable is being used.	Replace the cable with the straight cable.
	Make an attempt to change connection of the network cable to other port of a HUB.	Try to change the HUB.
(2) Check the network information		
Check if the network information can be printed normally or not.	Operate the panel (Print Printer Information → Network → Print) and print out the network information.	Re-write the NIC-F/W by using Utilities.
(3) Check contents of the network information.		
Confirm the IP address, SUB net mask and gateway address.	Confirm the IP address, SUB net mask and gateway address that are printed on the network information.	Set the IP address, SUB net mask and gateway address normally.
(4) Check if communication is possible or not through network		
Confirm if the Ping command can be sent or not from a PC to a printer.	Confirm if correct reply is returned from a printer to a PC when the PC sends the Ping to a printer.	Set the IP address, SUB net mask and gateway address normally.
(5) Check the Utilities.		
Check setting of the OKI LPR Utilities.	Check the setting items of the OKI LPR Utilities.	Set the OKI LPR Utilities setting items correctly.
(6) Check the following from an OS standard port		
Confirm the standard LPR port of the WINDOWS standard (NT, 2000, XP).	Set the standard LPR port of the WINDOWS standard (NT, 2000, XP), and confirm if printing can be performed or not.	Set the standard LPR port of the WINDOWS standard (NT, 2000, XP) correctly.

8.5.4.1 Connection error occurs with the Web browser

If the printer setting page cannot be displayed by the web browser "https://<printer IP address>", check the followings.

Establish connection by "https://<printer IP address>.

1) If the printer setting page is displayed, the followings are probable.
   Take an appropriate measure by referring to the following items.
   * Certificate is not created yet. (Or failed to create certificate.)
     → Refer to section "8.5.4.1.1 Is the certificate created?".
   * Certificate has been created but the SSL/TLS setting is turned off.
     → Refer to section "8.5.4.1.2 Is the SSL/TLS setting set to [ON]?".

2) If the printer setting page is not displayed, the followings are probable.
   * Version number of the browser is old.
     → Refer to section "8.5.4.1.3 Check version number of the Web browser".
   * Encryption strength has been set to Strong.
     → Refer to section "8.5.4.1.4 Check encryption strength of a printer".
   * The key exchange system of a printer is not supported by the browser. (Compatibility problem)
     → Refer to section "8.5.4.1.5 Check the key exchange type of the certificate".

8.5.4.1.1 Is the certificate created?

Log-on in as the administrator, and select "Security" → "Encryption (SSL/TLS)".

If the following screen is displayed, certificate of the printer is not created yet. (The same screen is displayed when failed to create certificate.)

Solution: Create certificate by referring to the User's Manual (Advanced edition).

Before creating certificate (default state)

8.5.4.1.2 Is the SSL/TLS setting set to [ON]?

Log-on in as the administrator, and select "Security" → "Encryption (SSL/TLS)".

If the following screen is displayed, certificate has already been created, but the SSL/TLS setting is turned [OFF].

Solution : Set the SSL/TLS setting to [ON].

8.5.4.1.3 Check version number of the Web browser

Check version number of the Web browser in use.

How to check version number.

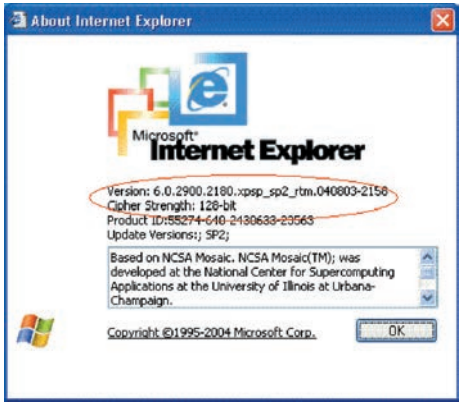
For Internet Explorer

Launch the browser and select "HELP" → "Version information".

Recommended version is Internet Explorer 5.5 and higher.

Solution : Install the newest web browser. Alternately, install the high encryption pack.

If any version that is older than the recommended version is used, communication can become possible sometimes when the encryption strength is set to "Weak". If the encryption strength is set to "Weak", security level lowers. To change the encryption strength, refer to section "8.5.4.1.4 Confirm encryption strength of a printer".



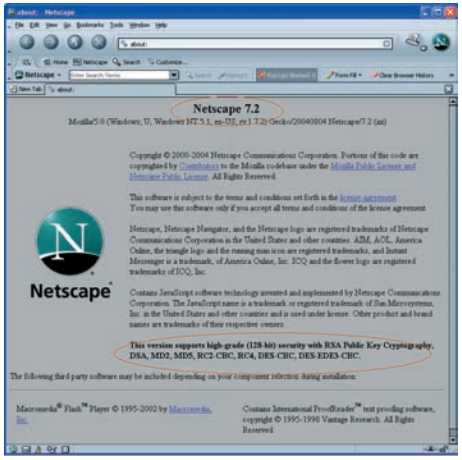
For Netscape

Launch the web browser and select "HELP" → "Netscape".

Recommended version is Netscape 6 and higher.

Solution : Install the newest web browser.

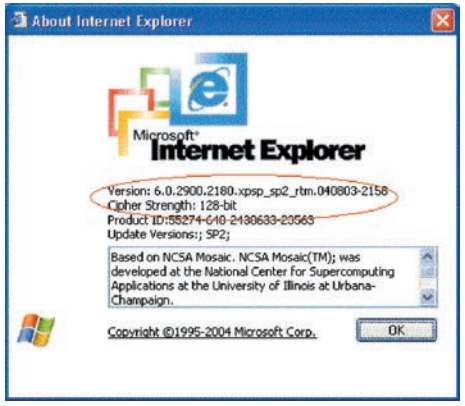
If any version that is older than the recommended version is used, communication can become possible sometimes when the encryption strength is set to "Weak". If the encryption strength is set to "Weak", security level lowers. To change the encryption strength, refer to section "8.5.4.1.4 Confirm encryption strength of a printer".

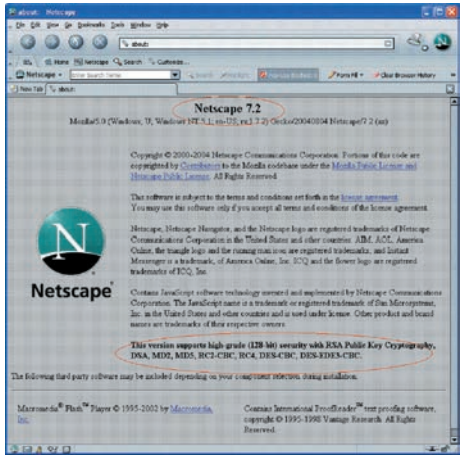


8.5.4.1.4 Confirm encryption strength of a printer

Version display of the browser that is confirmed by section "8.5.4.1.3 Check version number of the Web browser" has description on encryption strength of the browser. The browser in which the encryption strength is not set to 128 bits, the browser cannot establish communication with the printer in which the encryption strength is not set to "Standard".

Either, upgrade the browser until it supports 128 bits (high encryption) or set the printer encryption strength to "Weak".





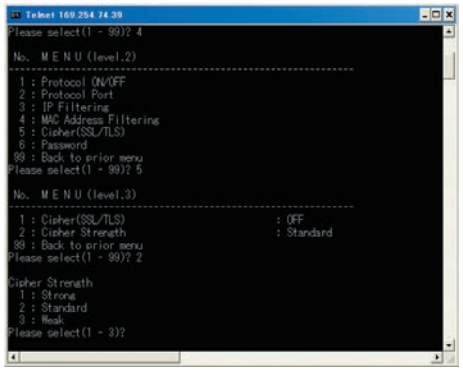
Solution: Set the encryption strength to "Weak".

How to change encryption strength with Telnet

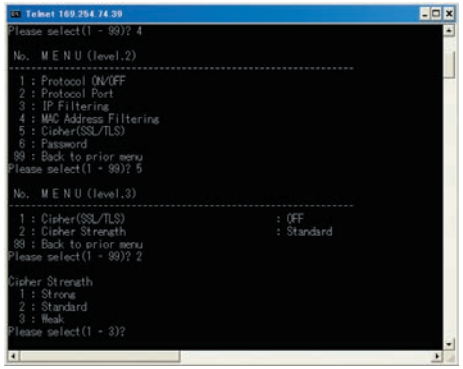
Note! Telnet cannot be used if it remains in the default setting. To change the encryption strength, Telnet must be set to Enable.

Select the command prompt (DOS prompt) and enter "Telnet <printer IP address>", and press Return.

Establish connected using administrator user name and password



Select the menus in this order: [4: Security Config] → [5: Cipher (SSL/TLS)] → [2: Cipher Strength]. Then, change the cipher strength as desired (1: Strong, 2: Standard, 3: Weak).



8.5.4.2 Print operation is not possible

If print operation is not possible by using the encrypted IPP printer, check the followings.

Establish connection by "https://<printer IP address>.

1) If the printer setting page is displayed, the followings are probable.
   Take an appropriate measure by referring to the following items.
   * Certificate is not created yet. (Or failed to create certificate.)
     → Refer to section "8.5.4.1.1 Is the certificate created?".
   * Certificate has been created but the SSL/TLS setting is turned off.
     → Refer to section "8.5.4.1.2 Is the SSL/TLS setting set to [ON]?".

2) If the printer setting page is not displayed, the followings are probable.
   Take an appropriate measure by referring to the following items.
   * Version number of the browser is old.
     → Refer to section "8.5.4.1.3 Check version number of the Web browser".
   * Encryption strength has been set to Strong.
     → Refer to section "8.5.4.1.4 Check encryption strength of a printer".
   * The key exchange system of a printer is not supported by the browser. (Compatibility problem)
   * The OS does not support the IPP (encrypted) printing.
     → Refer to section "8.5.4.2.1 Check OS (Operating System)".
   * IPP (encrypted) printer is not created yet.
     → Refer to section "8.5.4.2.2 Is the Printer created?".
   * IPP setup of the Printer is not Enabled.
     → Refer to section "8.5.4.2.3 Is the IPP setting set to Enabled?".

8.5.4.2.1 Check OS (Operating System)

The IPP print (encryption) function is supported by Windows 2000, Windows XP, Windows 2003 Server and Windows Vista only.

It is not supported by other operating systems.

8.5.4.2.2 Is the Printer created?

Printer may not be created normally.

To use the IPP print (encryption) function, the Printer must have been created by setting port to URL" HYPERLINK "https://<" https://< printer IP address>/ipp" when creating the Printer.

For more details of Printer creation method, refer to the User's Manual (Advanced edition).

8.5.4.2.3 Is the IPP setup Enabled?

The IPP setup may not be set to Enable.

As the default setting of printer, IPP has been set to Disable.

To use the IPP print (encryption) function, the IPP setup must have been set to Enable.

For the method of changing the IPP setup, refer to the User's Manual (Advanced edition).

8.5.4.3 Cannot create Certificate

When Certificate cannot be created, the following causes are probable. Take an appropriate measure by referring to the following items.

* Required input items are not fully entered
  → Refer to section "8.5.4.3.1 Required input items are not fully entered".
* The printer is printing.
  → Refer to section "8.5.4.3.2 The printer is printing".

8.5.4.3.1 Required input items are not fully entered

Unless all of the required input items are fully entered, Certificate cannot be created.

When creating Certificate, entry into the items of Common Name, Organization, Locality, State/Province, Country/Region is the must item. (Entry into Organizational Unit can be omitted.)

Solution : Enter the appropriate value into all of the required input items, and execute creation of Certificate.

For more details of the input items, refer to the User's Manual (Advanced edition).

8.5.4.3.2 The printer is printing.

Certificate cannot be created while printing is in progress. (Print operation has priority.)

Solution : Create Certificate when all other operations are complete.

During creation of self-sign certification, during creation of CSR for Certificate of certifying authority, and during installation of Certificate, the printer must not perform any other operations (such as printing) until the operation is complete (creation of self-sign certification is complete, creation of CSR is complete, and installation of Certificate is complete).

8.5.4.4 Installation of Certificate is not possible

When installation of Certificate fails, the following causes are probable.

Take an appropriate measure by referring to the following items.

* User has changed the IP address of a printer to other IP address than the "IP address during creation of CSR".
  → Refer to section "8.5.4.4.1 IP address of the printer has been changed".
* "Network card is initialized" while user is applying issuance of certification to certifying authority (i.e., in the state of Waiting for Installation of Certificate).
  → Refer to section "8.5.4.4.2 "Network card is initialized".
* "Deletion of CSR" was executed while user is applying issuance of certification to certifying authority (i.e., in the state of Waiting for Installation of Certificate).
  → Refer to section "8.5.4.4.3 "Deletion of CSR" is executed.
* Intermediate Certificate is installed.
  → Refer to section "8.5.4.4.4 "Installation of intermediate Certificate" is desired.

8.5.4.4.1 User has changed the IP address of a printer

If IP address of a printer is changed to other IP address than the "IP address during creation of CSR", error is issued and installation of Certificate become impossible.

If the changed setup is only the "IP address of printer", error will not be issued if the IP address is returned to the original address.

Solution : Return the IP address of printer back to the "IP address during creation of CSR", and then install Certificate.

Note! Do not change any setup of printer while creation of Certificate of certifying authority is in progress (during the period starting from creation of CSR up until installation of Certificate). If changed, the already issued Certificates become invalid necessitating re-setup starting from the very beginning. If printer setup is changed after Certificate is obtained, the "Security warning" is displayed on the web browser.
If IP address of printer is changed, the Certificate becomes invalid. In the case of Certificate of certifying authority requiring some charge for issuance, another charge may be required for creating Certificate once again. For details, contact certifying authority.)

8.5.4.4.2 "Network card is initialized"

If network card is initialized (to default setup) while creation of Certificate of certifying authority is in progress (during the period starting from creation of CSR up until installation of Certificate), the setup information of the Certificate is deleted. If information is deleted once, the information cannot be recovered by any means. (Even when the same information as before is entered, the same Certificate cannot be created.)

Solution : Repeat all the steps from the very beginning. (Certificate under application is already invalid.)

8.5.4.4.3 "CSR is deleted"

If CSR is deleted (if Certificate is deleted) while creation of Certificate of certifying authority is in progress (during the period starting from creation of CSR up until installation of Certificate), the setup information of the Certificate is deleted. If information is deleted once, the information cannot be recovered by any means. (Even when the same information as before is entered, the same Certificate cannot be created.)

Solution : Repeat all the steps from the very beginning. (Certificate under application is already invalid.)

8.5.4.4.4 Installation of intermediate Certificate is desired

Some certification authorities use the procedure of installing the SSL server Certificate (printer Certificate) and the intermediate Certificate into printer as the same time.

However, printer of this model supports installation of only a single Certificate, intermediate Certificate cannot be installed in printer. Be sure to install the SSL server Certificate in printer.

When installation of intermediate Certificate is required, install the intermediate Certificate not in printer, but in client PC (browser).

For the method of installing the intermediate Certificate in client PC (browser), refer to the following.

Installing the intermediate Certificate (or CA certificate) in client PC (browser).

[Procedure]

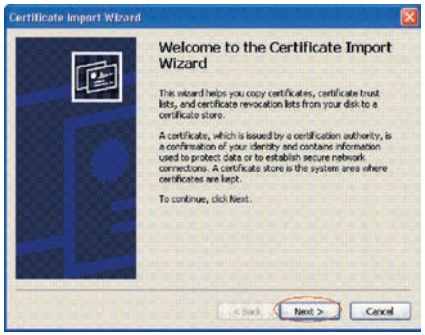
1. Double-click the intermediate Certificate (or CA certificate) that is issued by certifying authority, on a client PC to display the intermediate Certificate (or CA certificate).

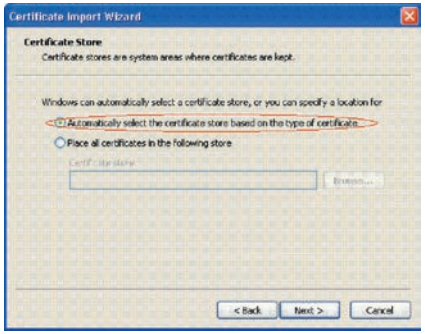
   ex.) For an example, the intermediate Certificate of Comodo has the text (PEM) format: ComodoJapanCA.Crt, and the binary format: ComodoJapanCA.cer. Either one of these formats can be opened. (Same result can be obtained.)

   Open either ComodoJapanCA.crt or ComodoJapanCA.cer.

2. Press the "General" tab of the displayed Certificate information, and press "Install Certificate" button.

3. The "Certificate Import Wizard" is displayed. Install Certificate in accordance with the displayed procedure. Select "Automatically select the certificate store based on the types of certificate". Then, the Certificate will be installed automatically.





8.5.4.5 Other questions

Other probable questionnaires are described below.

8.5.4.5.1 Time required for creation of Certificate

It takes several ten seconds for creation of Certificate.

8.5.4.5.2 Communication time when the encryption function is enabled

A time longer than the ordinary communication time is required for communication when the encryption function is used.

8.5.4.5.3 Can encrypted printing be performed by any printer other than IPP?

Answer : Any printer other than IPP cannot encrypt printing.
Only the IPP printing can encrypt printing.

8.5.4.5.4 What will happen if SSL/TLS is turned OFF after Certificate has been created (or installed)?

Answer : Certificate will be kept saved as it is.
If SSL/TLS is turned ON again, the Certificate becomes usable.

8.5.4.5.5 Want to change the port number

Answer : The port number during the SSL/TLS communication is fixed to 443.
It cannot be changed.

8.5.4.5.6 The error message "The security certificate was issued by a company you have not chosen to trust. View the certificate to determine whether you want to trust the certifying authority" is displayed.

If this error is indicated, it means that the certificate which is installed in a printer is self-sign certificate.

In the case of self-sign certificate, error (security warning) will not be displayed if the self-sign certificate of printer is installed in the client PC.

In the case of certificate of certifying authority, error (security warning) will not be displayed if the CA certificate of certifying authority is installed in the client PC.

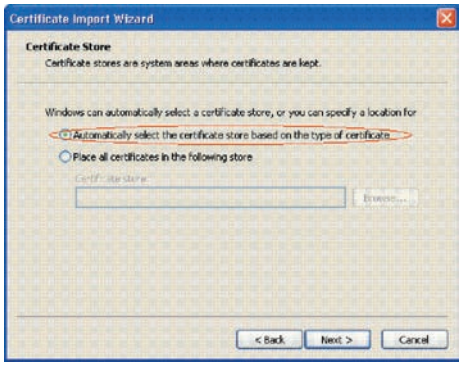
Solution : Install certificate in the client PC (browser).

[Procedure]

1. Click the "View Certificate" button on the error (security warning) screen.

2. Press the "General" tab of the displayed Certificate information, and press "Install Certificate" button.

3. The "Certificate Import Wizard" is displayed. Install Certificate in accordance with the displayed procedure. Select "Automatically select the certificate store based on the types of certificate". Then, the Certificate will be installed automatically.



8.5.4.5.7 The error message "Name of security certificate is invalid or does not match the site name" is displayed.

It means that the IP address of printer is different from the IP address that is described on certificate, or from the IP address when the certificate is created.

Solution : Return the IP address of printer back to the address when self-sign certificate is created, or to the address when CSR is created.

8.5.4.6 Restrictions when using Internet Explore 7

Several restrictions are imposed when using Internet Explore 7. This is because security restriction became more severe in IE7.

8.5.4.6.1 Warning indication when SSL is made valid by self-sign certificate

When SSL is made valid by self-sign certificate, the following picture is obtained when web page is accessed, and page will not be displayed.

Web display when SSL is made valid by self-sign certificate

Solution : When "Continue browsing this site (not recommended)" is clicked on the warning screen, the web page will be displayed.

However, it has no effect on the web page function. It can be used for browsing or to change setting of printer setup.

Web page display when "Continue browsing this site (not recommended)" is clicked.

8.6 Fuse check

If any of the following errors occurs, check the corresponding fuse on the CU/PU control board or high voltage power supply board.

(Refer to Table 8-6.)

Table 8-6 Fuse error

Fuse Name		Error Description	Insert Point	Resistance
CU/PU board	F1	Service call 128	Belt motor, ID motor FAN, fuser side FAN: 24V	1Ω or less
	F3	Not displayed on the operator panel.	CU part: 3.3V	
	F4	Paper jam in Tray 1 during printing. Service call 141 to 142	Hopping clutch, registration clutch, MPT clutch, ID UP clutch, hopping motor: 24V	
	F5	Power SW LED blinks at a high speed	PU/CU part: 5V	
	F11	HOSTUSB error	HOSTUSB: 5V	
	F12	Service call 131 to 134	KYMC heads: 3.3V	
	F15	CM color missing	CM heads: 5V	
	F16	KY color missing	KY heads: 5V	
	F501	Cover open	High-voltage power supply unit, low-voltage FAN, belt FAN, shutter solenoid, belt fuse, ID fuse, discharging light, fuser FAN: 24V	
	F502	Paper jam in an option tray during printing	Option trays (2nd to 4th trays): 24V	
	F503	Service call 918	Duplex unit: 24V	
	F504	Centronics interface error	Centronics interface: 3.3V	
	F505	Centronics interface error	Centronics interface: 5V	
Low-voltage power supply	F1	Shut off	Main power source	1Ω or less
	F2	Shut off	Main power source	
	F651	Shut off	Power source: 3.3V	
High-voltage power supply	F501	Cover open	High-voltage power supply: 24V	
DUPLEX control board	F501	Service call 918	Duplex unit: 24V	
Option tray control board	F501	Paper jam during printing in the tray concerned	Option tray: 24V	

8.7 Paper cassette switches and paper size correlation table

(1) Source tray

Switch Part No. 2052000P4000

Model No: HS12-001

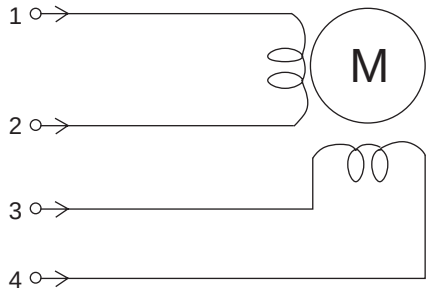
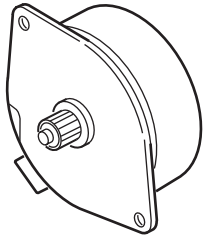
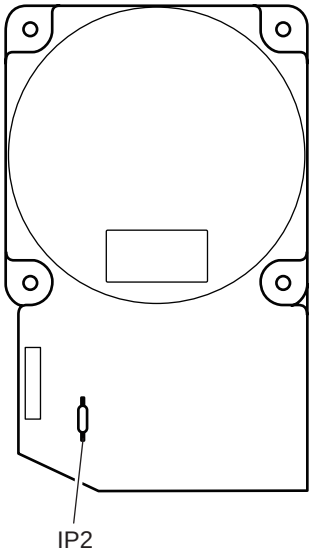
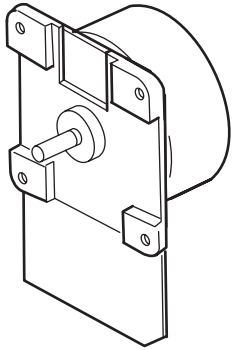
Bit Number				Dial Indication Size	
1	2	3	4	TRAY1	TRAY2/TRAY3/TRAY4
H	H	H	H	No cassette	No cassette
H	L	H	L	A6	A4 LEF
L	H	L	L	Other	Other
H	L	L	H	Tabloid	Tabloid
L	L	H	H	Legal	Legal
L	H	H	L	Letter	Letter
H	H	L	H	Letter LEF	Letter LEF
H	L	H	H	Executive	Executive
L	H	H	H	B4	B4
H	H	H	L	B5	B5
H	H	L	L	B5 LEF	B5 LEF
H	L	L	L	A3	A3
L	L	L	L	A4	A4
L	L	L	H	A4 LEF	A4 LEF
L	L	H	L	A5	A5
L	H	L	H	A5 LEF	A3
Press of SW: L					

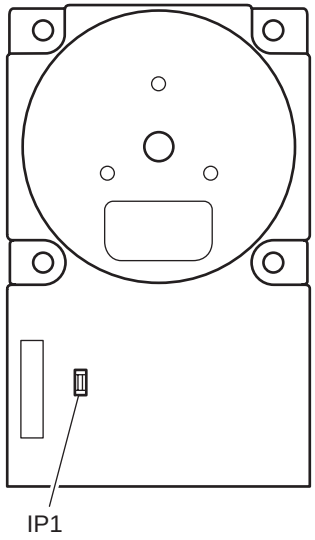
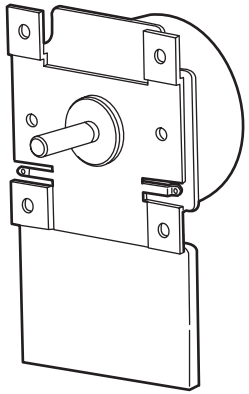
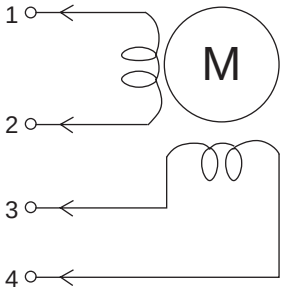
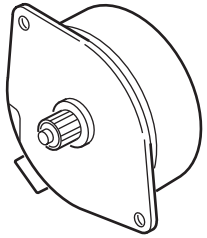
- When “Legal” is selected, three options, “Legal 13”, “Legal 13.5” and “Legal 14” are selectable.

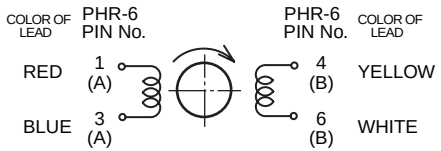
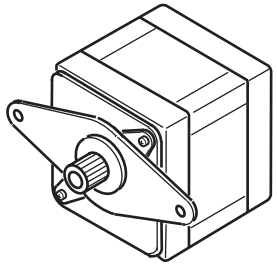
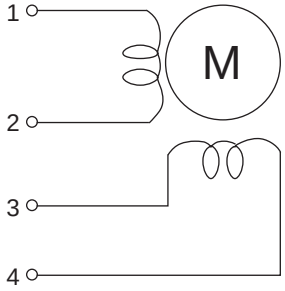
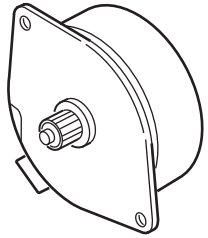
9. CONNECTION DIAGRAMS

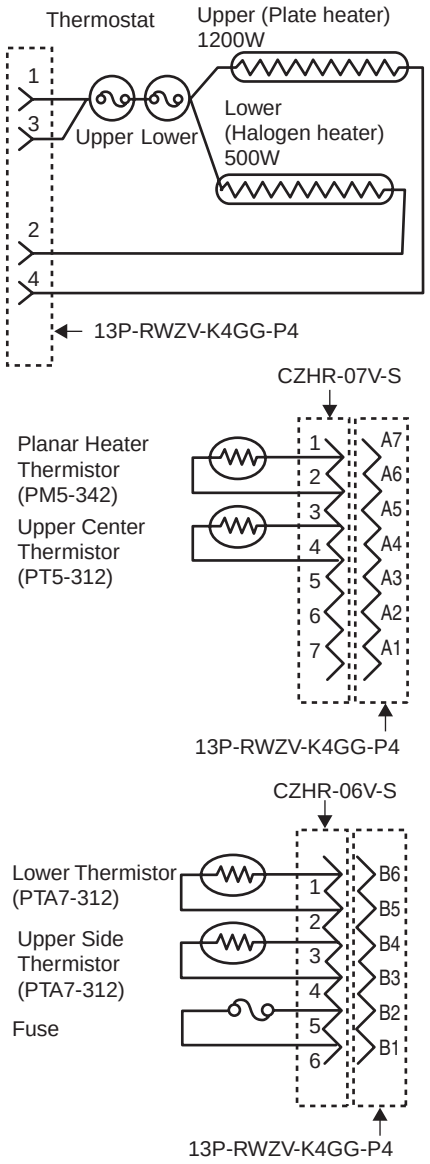
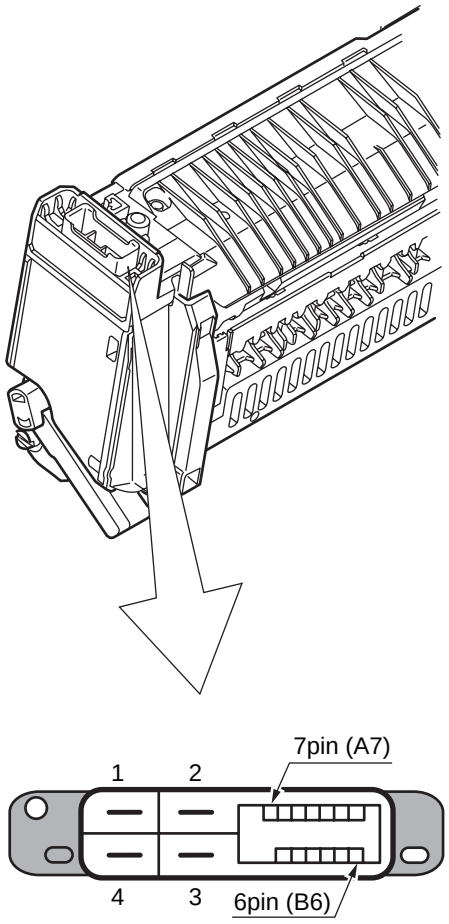
9.1 Resistance value check.....9-2
9.2 Parts location.....9-6
9.3 F/W Version number.....9-16

9.1 Resistance value check

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Transport belt motor			Between pin-1 and pin-2 : 3.4 Ω Between pin-3 and pin-4 : 3.4 Ω
ID motor			Across both ends of IP2 :1 Ω or less

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser unit motor			Across both ends of IP1 : 1 Ω or less
Paper feed motor			Between pin-1 and pin-2 : 3.4 Ω Between pin-3 and pin-4 : 3.4 Ω

Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Duplex print motor			PHR-6 connector Between pin-1 and pin-3 : 3.2 Ω Between pin-4 and pin-6 : 3.2 Ω
2nd, 3rd and 4th tray paper feed motor			Between pin-1 and pin-2 : 3.4 Ω Between pin-3 and pin-4 : 3.4 Ω

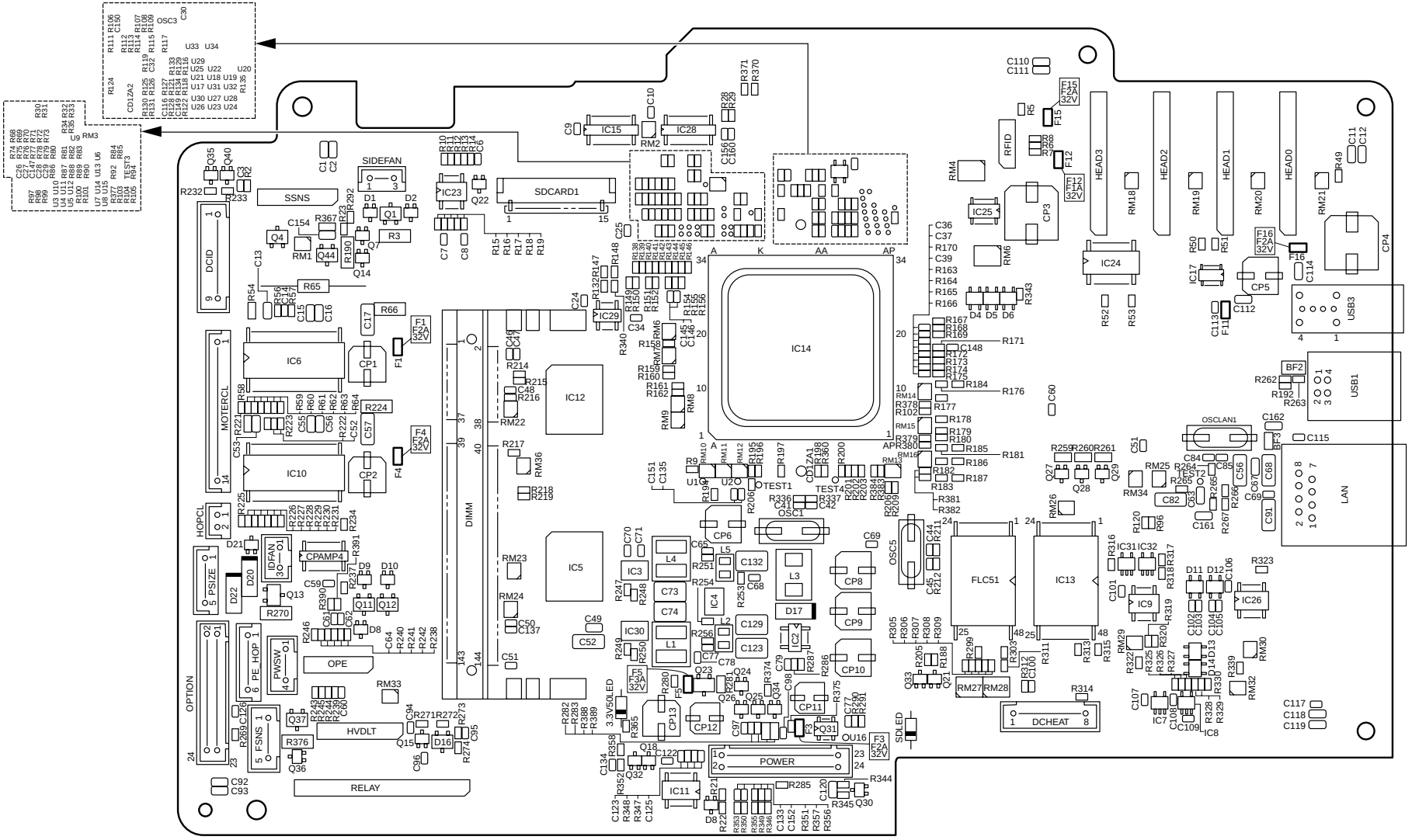
Unit	Electrical circuit diagram, connection	Part outside view	Resistance value
Fuser unit			Between pins A-6 and A-7 : Approx. 80.58 kΩ to 53.38 kΩ 0 to 93°C) Between pins A-4 and A-5 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C) Between pins B-5 and B-6 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C) Between pins B-3 and B-4 : Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C)

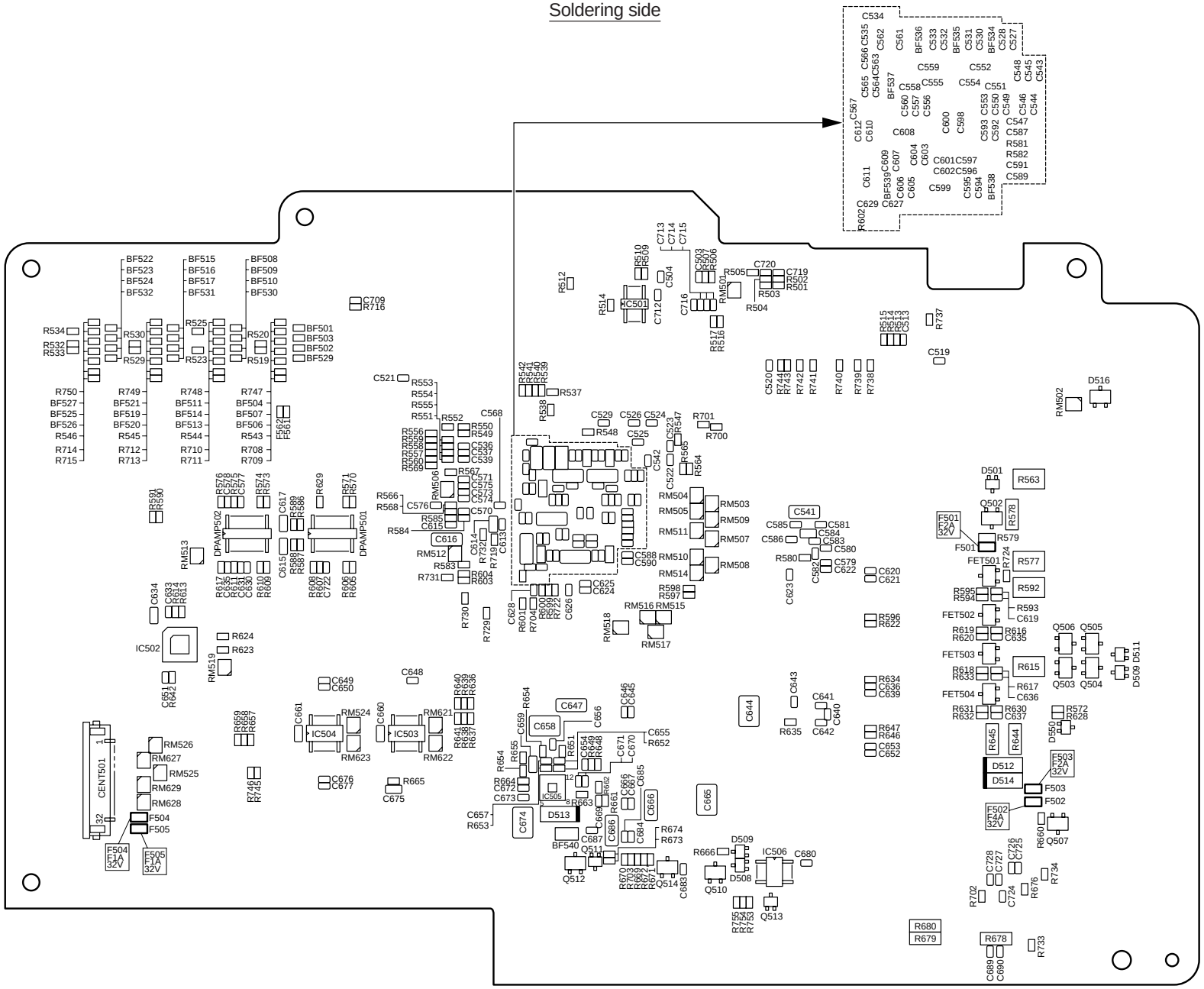
9.2 Parts location

(1) Print Controll PCB (PU/CU PCB)

Component side

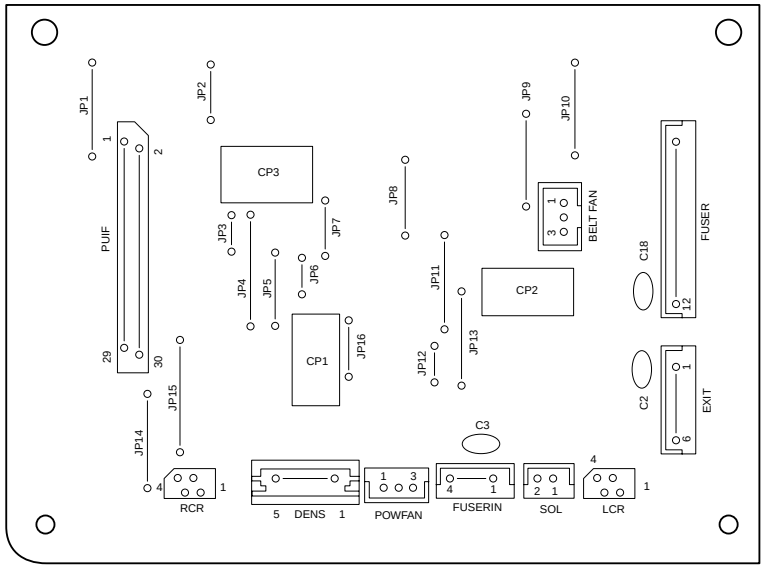
※ A specified product number is shown in RSPL.



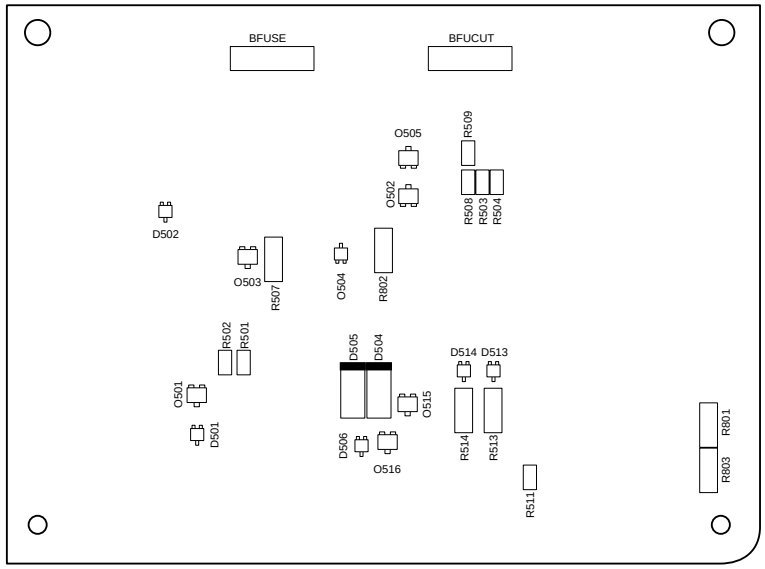

Soldering side
CEN T501
IC502
IC503
IC504
IC505
IC506
D501
D502
D503
D504
D505
D506
D507
D508
D509
D510
D511
D512
D513
D514
D516
Q501
Q502
Q503
Q504
Q505
Q506
Q507
Q508
Q509
Q510
Q511
Q512
Q513
Q514
F501
F502
F503
F504
F505
FET501
FET502
FET503
FET504
DPAMP501
DPAMP502

(2) Relay PCB (P6Z PCB)

Component side

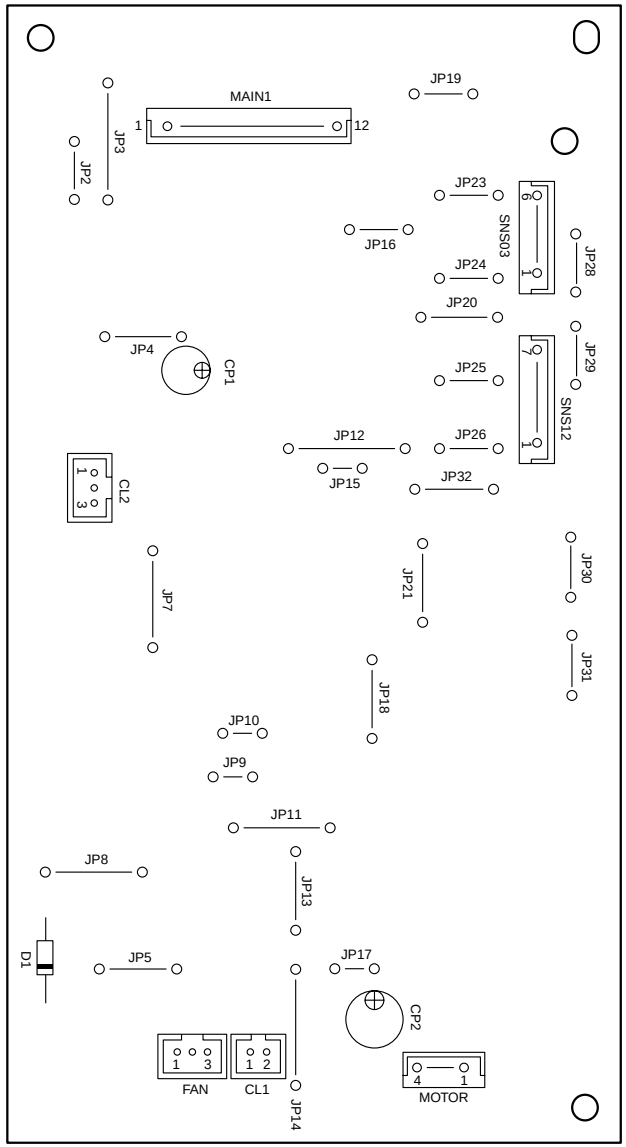


Soldering side

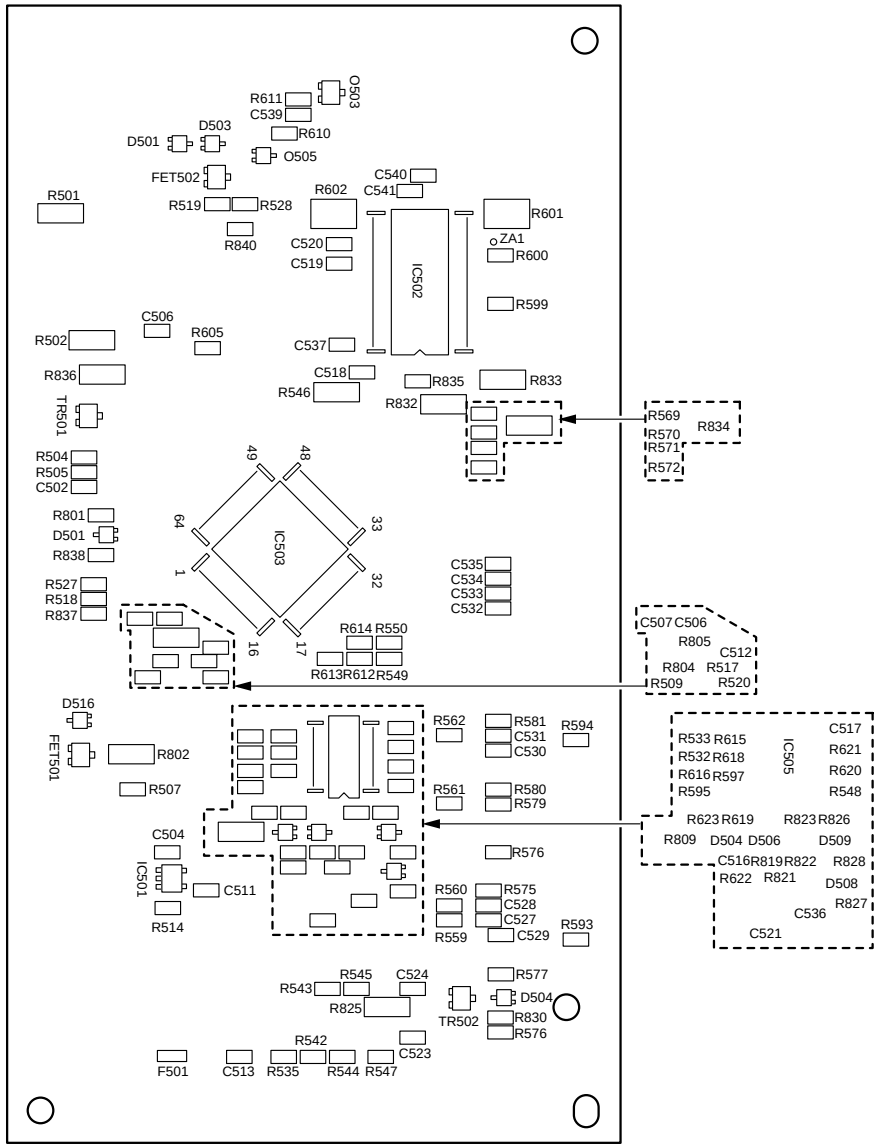


(3) Duplex print control PCB (GOH-1 PCB)

Component side

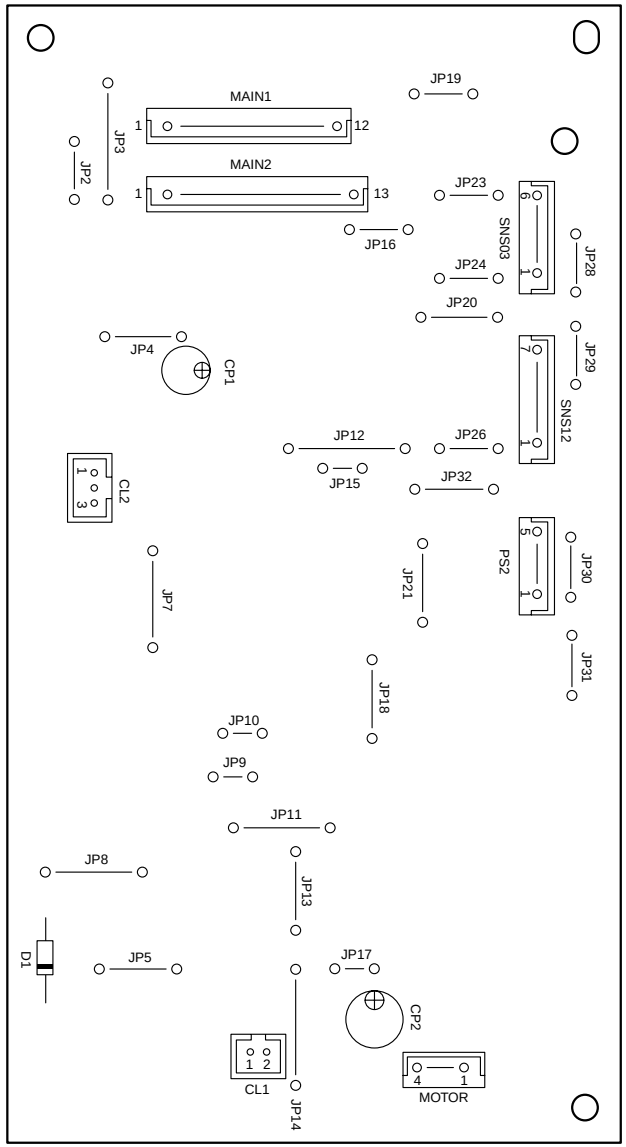


Soldering side

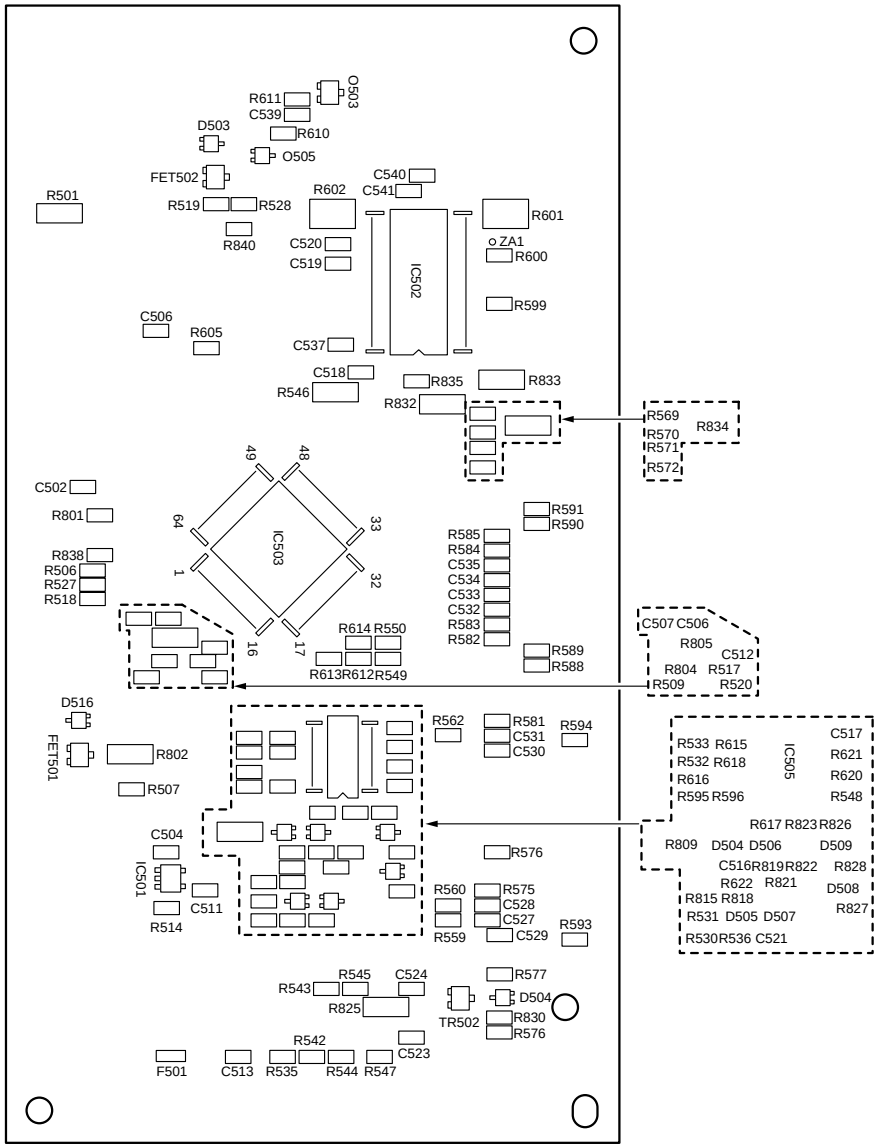


(4) Second tray control PCB (GOH-2PCB)

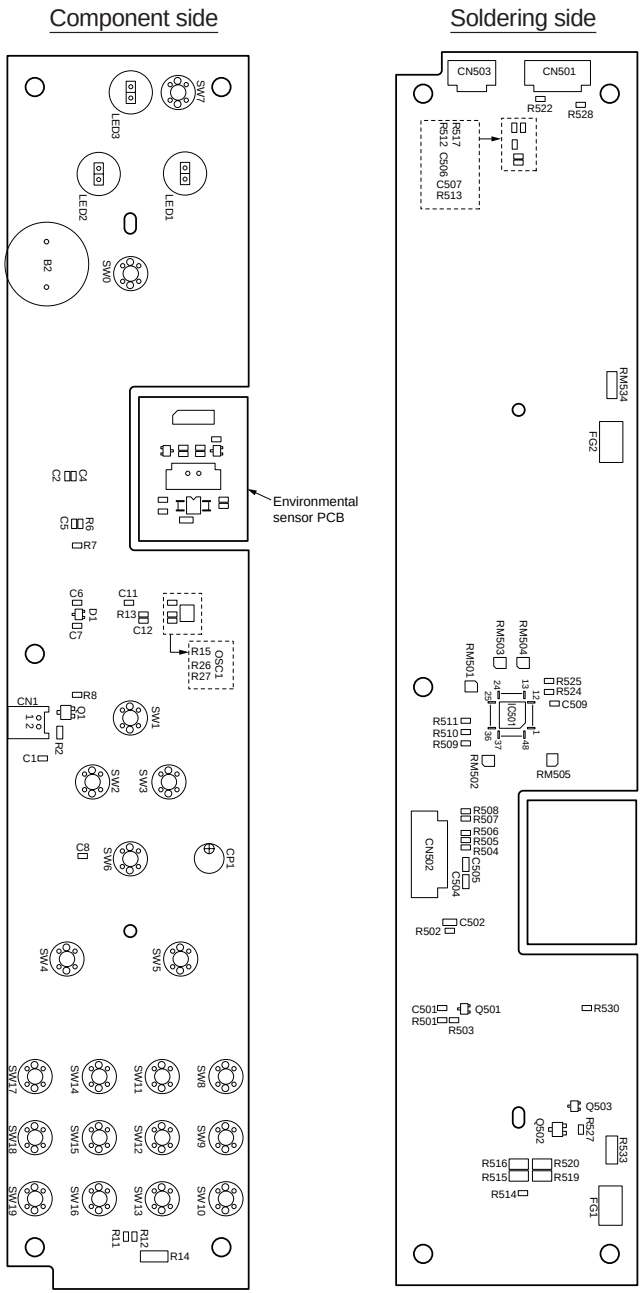
Component side



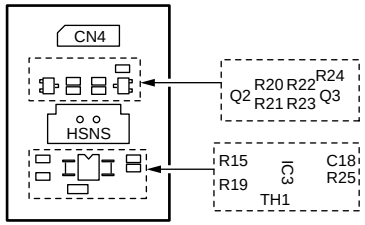
Soldering side



(5) Control panel PCB (PCQ PCB)

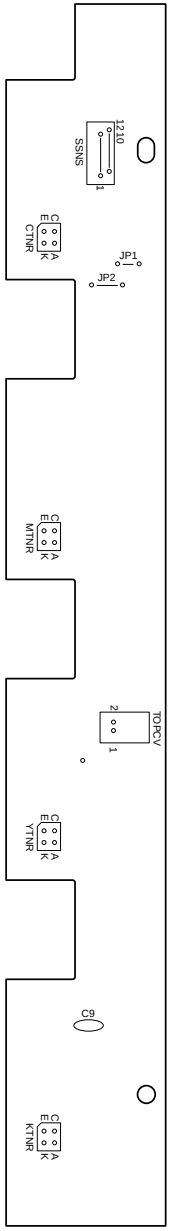


(6) Environmental sensor PCB (enlargement)

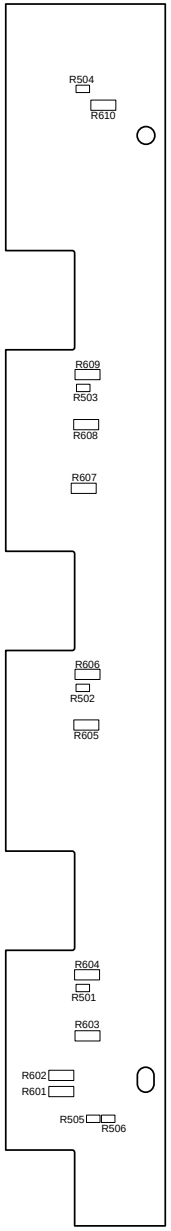


(7) Toner low sensor PCB (TSA PCB)

Component side

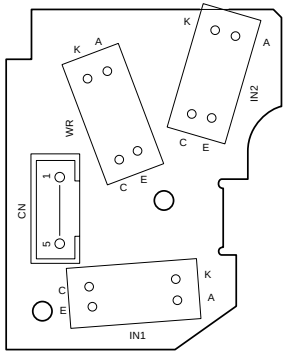


Soldering side

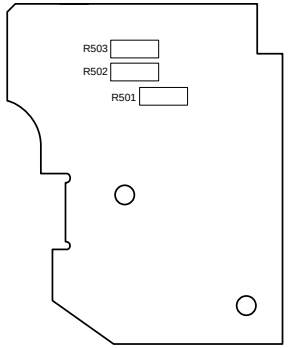


(8) Entrance sensor PCB (RSG PCB)

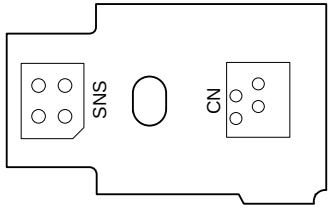
Component side



Soldering side

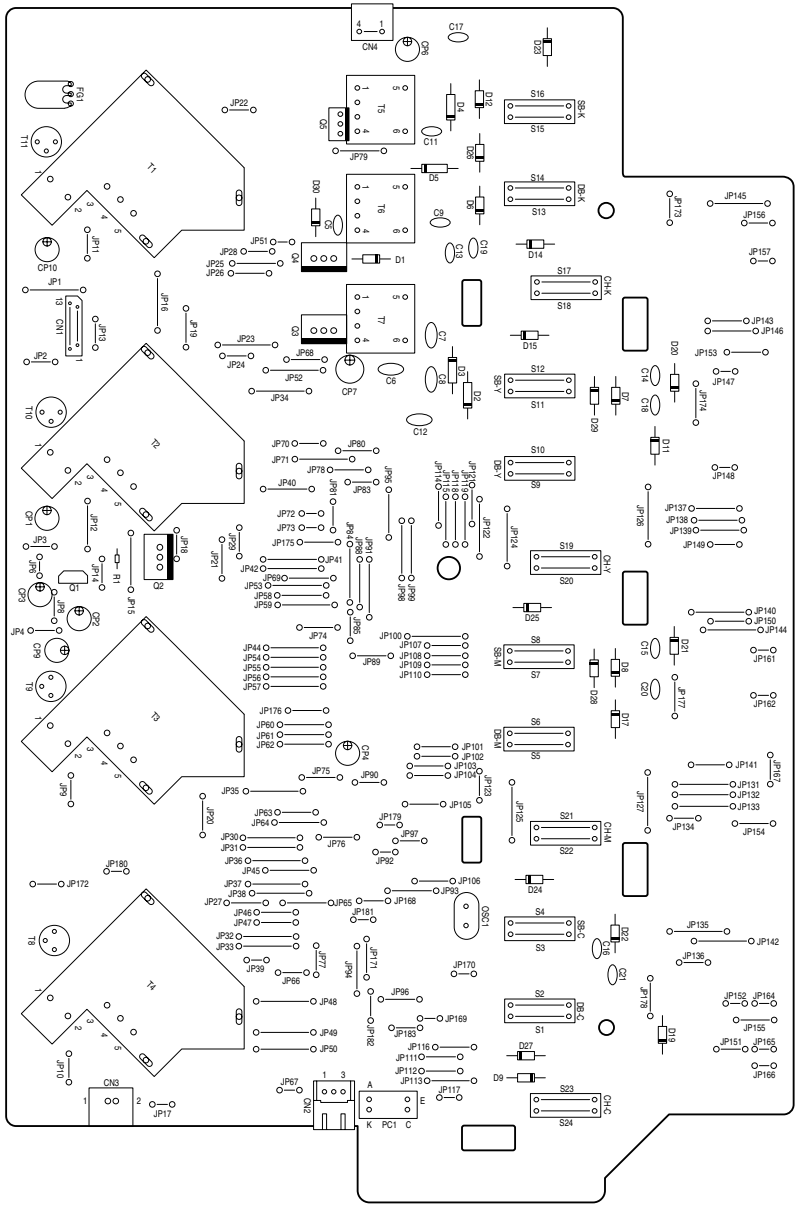


(9) Color adjustment sensor PCB (PRC PCB)

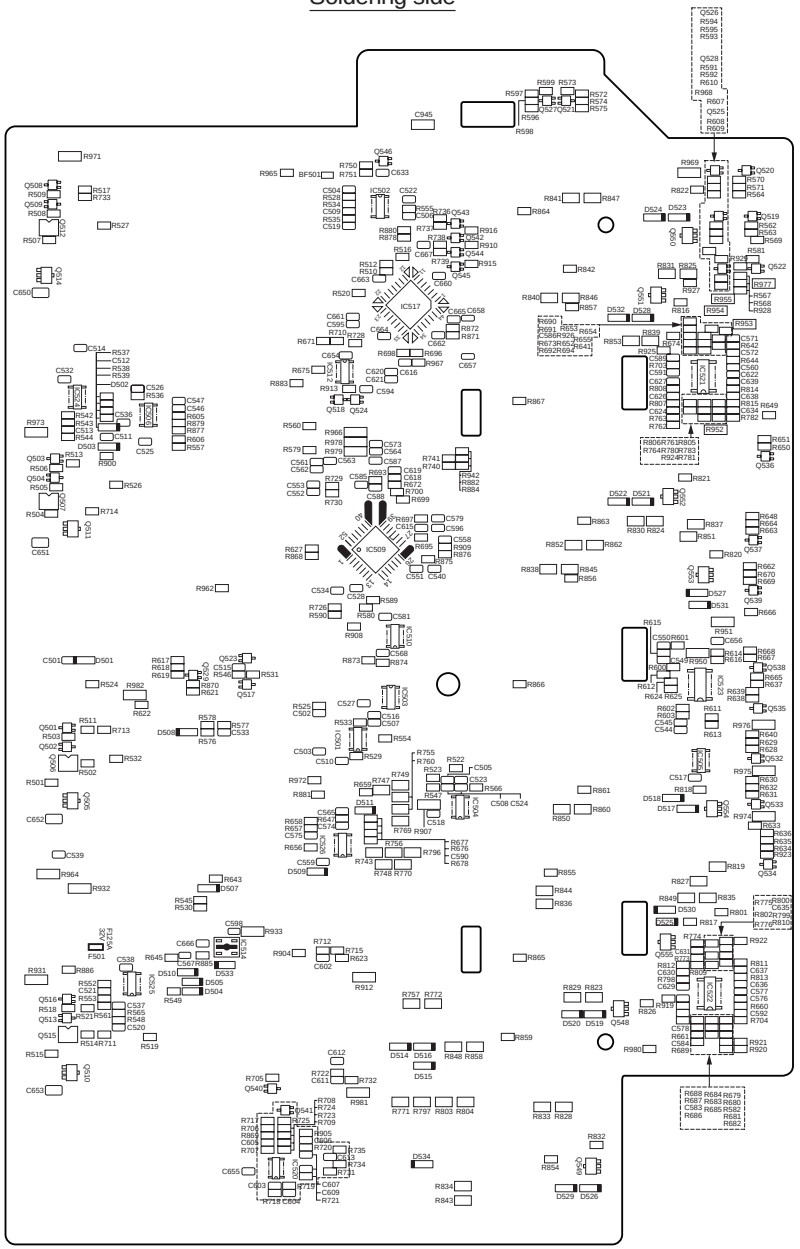


(10) High-Voltage Power Supply PCB

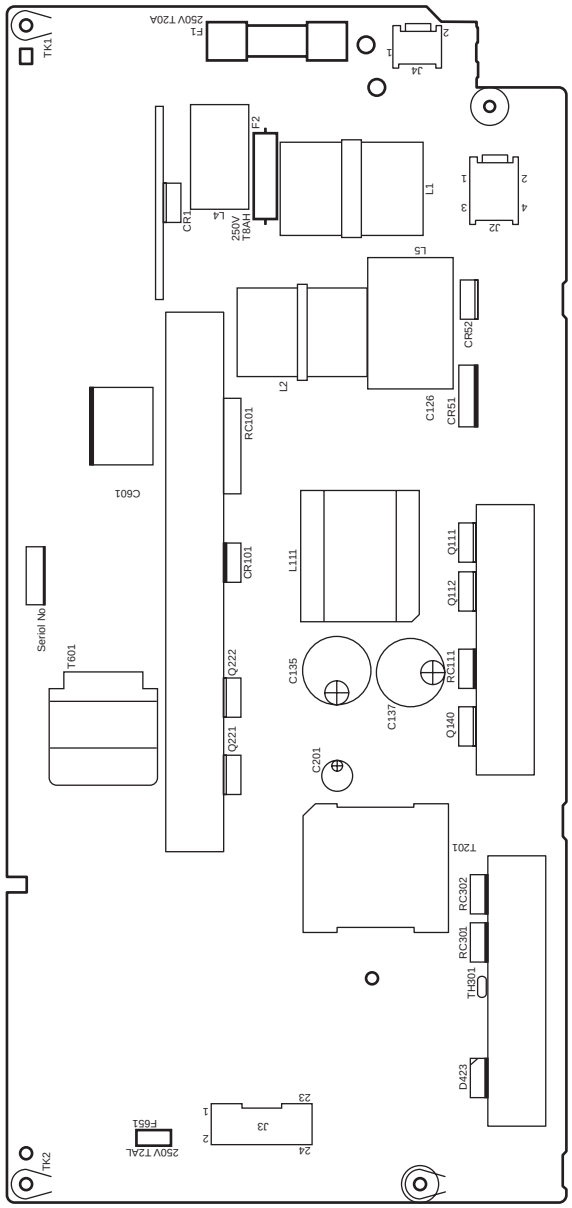
Component side



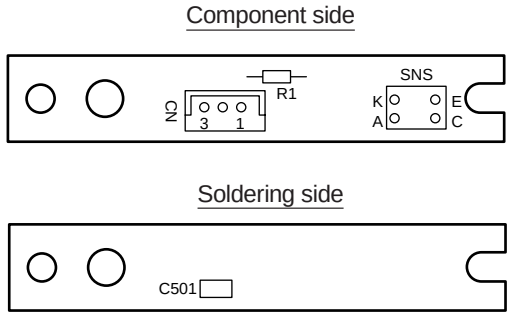
Soldering side



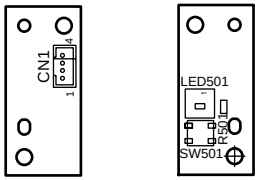
(11) Low-Voltage Power Supply PCB



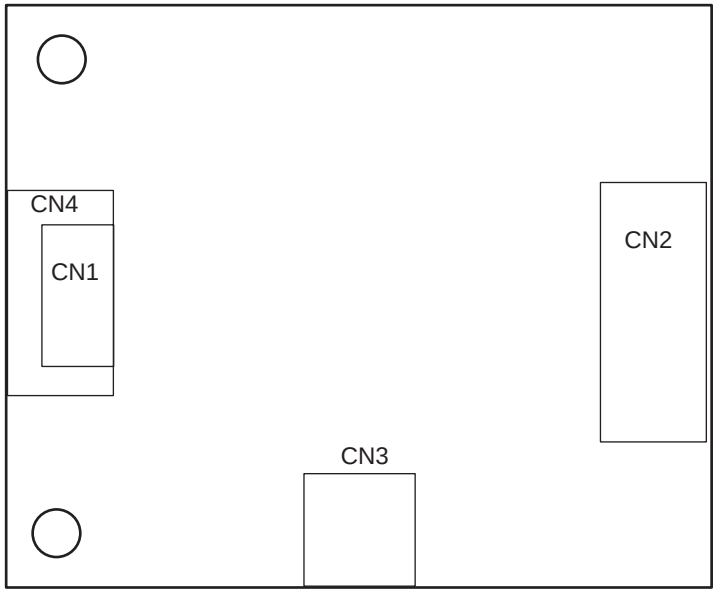
(12) Hopping sensor PCB (HSC PCB)



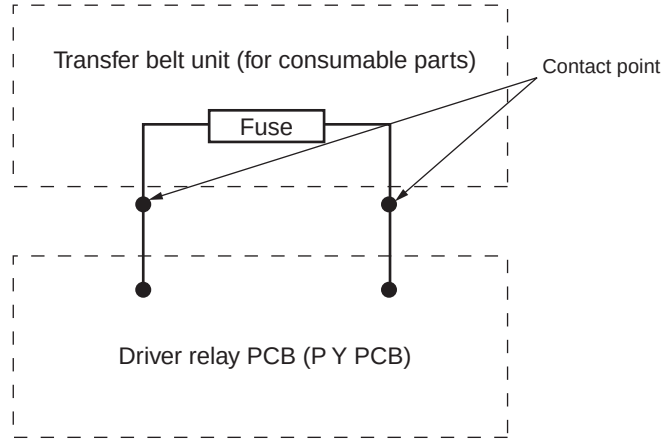
(13) Switch PCB (P6A PCB)

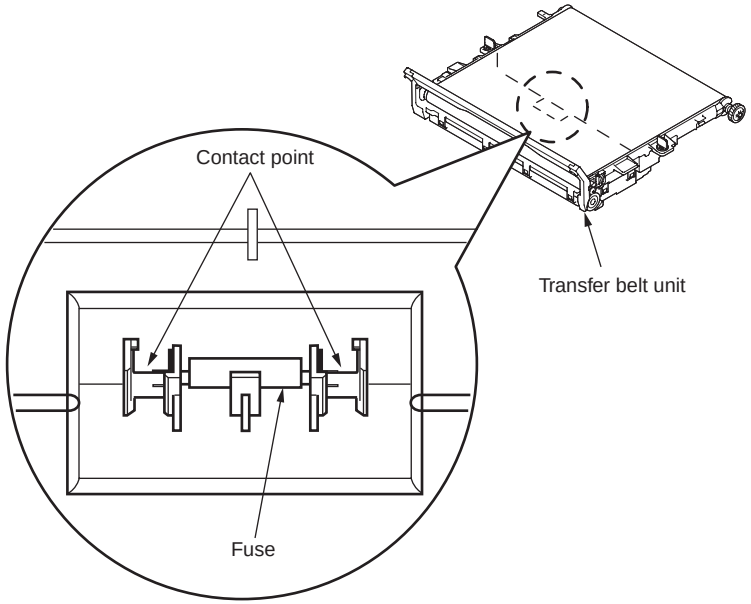


(14) RFID R/W PCB(RFID Read Write System)



(15) Transfer belt unit

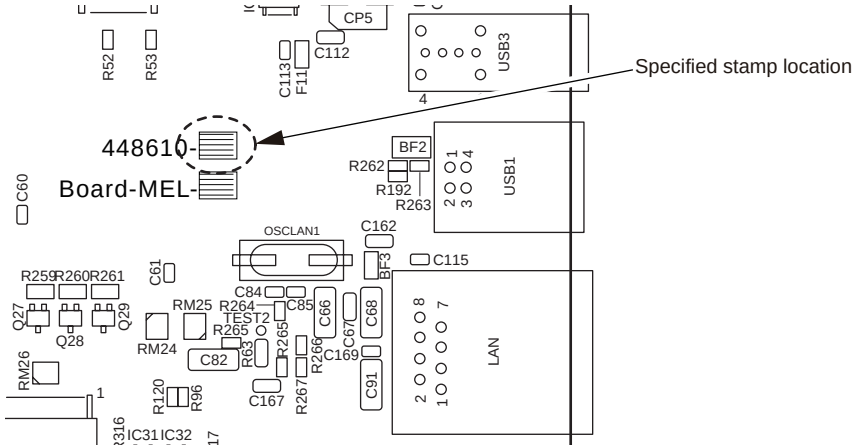




9.3 F/W version number

9.3.1 Maintenance board indication stamp

In accordance with the following list, a specified part number is stamped on the maintenance board indication field on CU/PU board.



Series No.	Stamp No. (Maintenance Board Series No.)	Board MEL (YU) Series No.	Use for
02	448610 [02]	MEL-1 (44779701)	ODB_PX756PDL (C831n)
04	448610 [04]	MEL-1 (44779701)	OEL_PX756PDL (C831/C841)
05	448610 [05]	MEL-1 (44779701)	OAU_PX756PDL (C831n)
06	448610 [06]	MEL-1 (44779701)	OAU_PX756PDL (ES8431)
07	448610 [07]	MEL-1 (44779701)	ODSP_PX756PDL (C831n)
08	448610 [08]	MEL-1 (44779701)	ODSP_PX756PDL (ES8431)
09	448610 [09]	MEL-1 (44779701)	OEL_PX756PDL (ES8431)
12	448610 [12]	MEL-1 (44779701)	OEL_PX756PDL (C841n)
13	448610 [13]	MEL-1 (44779701)	OEL_PX756PDL (ES8431)