OKI
PRINTING SOLUTIONS

C330/C530

Maintenance Manual

021712B

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Document Revision History

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PREFACE

This manual explains the maintenance methods for the C330dn and C530dn printers.

The manual has been prepared for use by the maintenance personnel. For how to operate the C330dn and C530dn printers, refer to the corresponding user's manual.

These printer names may be given as follows in this manual.

C330dn → C330

C530dn → C530

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 repairs, adjustment, or modifications of the printers conducted by the users using this manual.
- The parts employed in the C330dn and C530dn printers are so delicate that they may be damaged if not treated properly. Oki Data Corporation highly recommends that the maintenance of the printers is undertaken by ODC's registered maintenance personnel.
- Work after eliminating static electricity.

CONTENTS

1. CONFIGURATION

1.1 System configuration

Figure 1-1-1 and Figure 1-1-2 show the system configurations of the C330dn and C530dn printers.

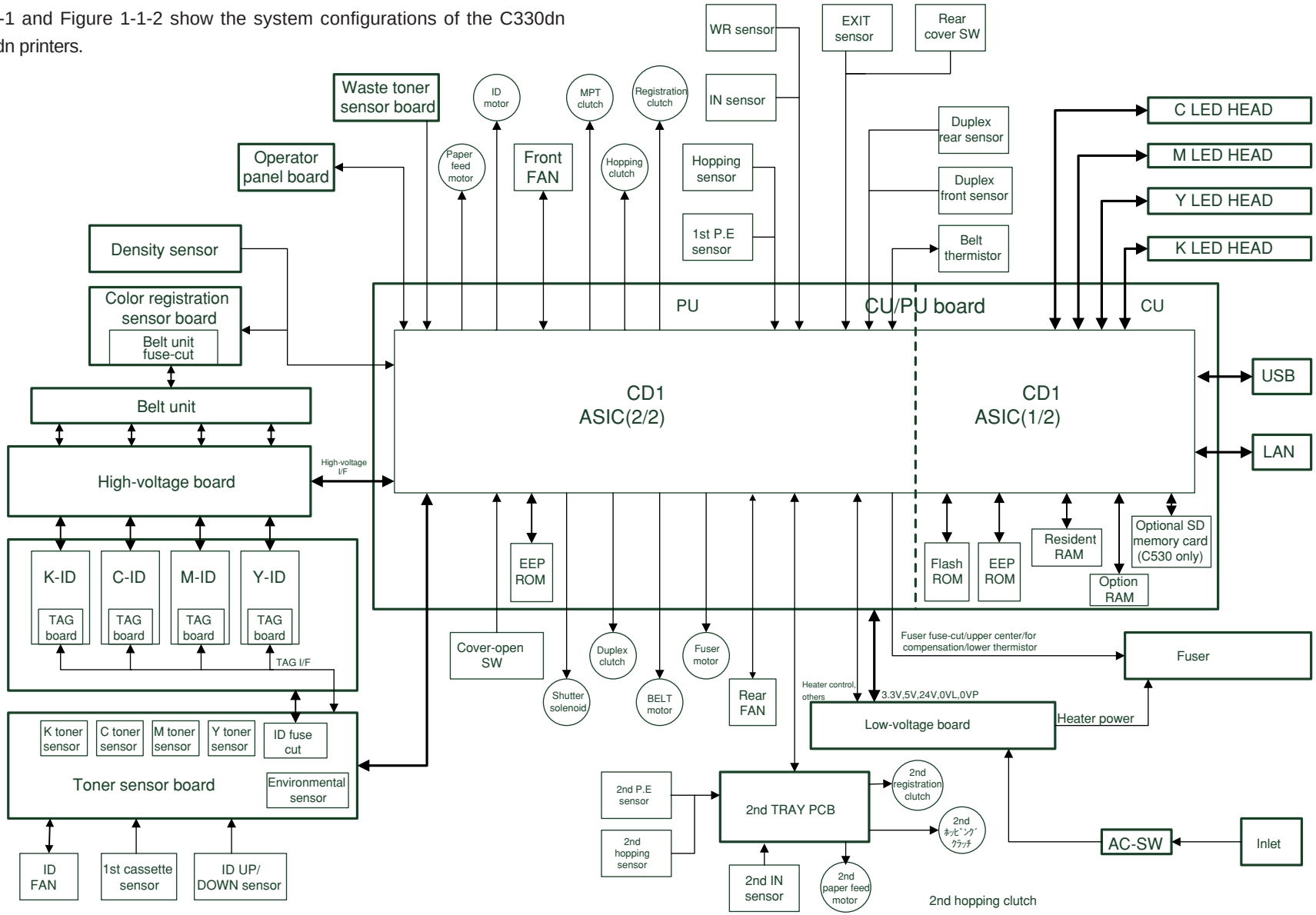


Figure 1-1-1 System Configuration Diagram (C530/C330)

1.2 Printer configuration

The internal part of the 330dn and C530dn printers consists of the following sections:

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

Figure 1-2 shows the configuration of the printers.

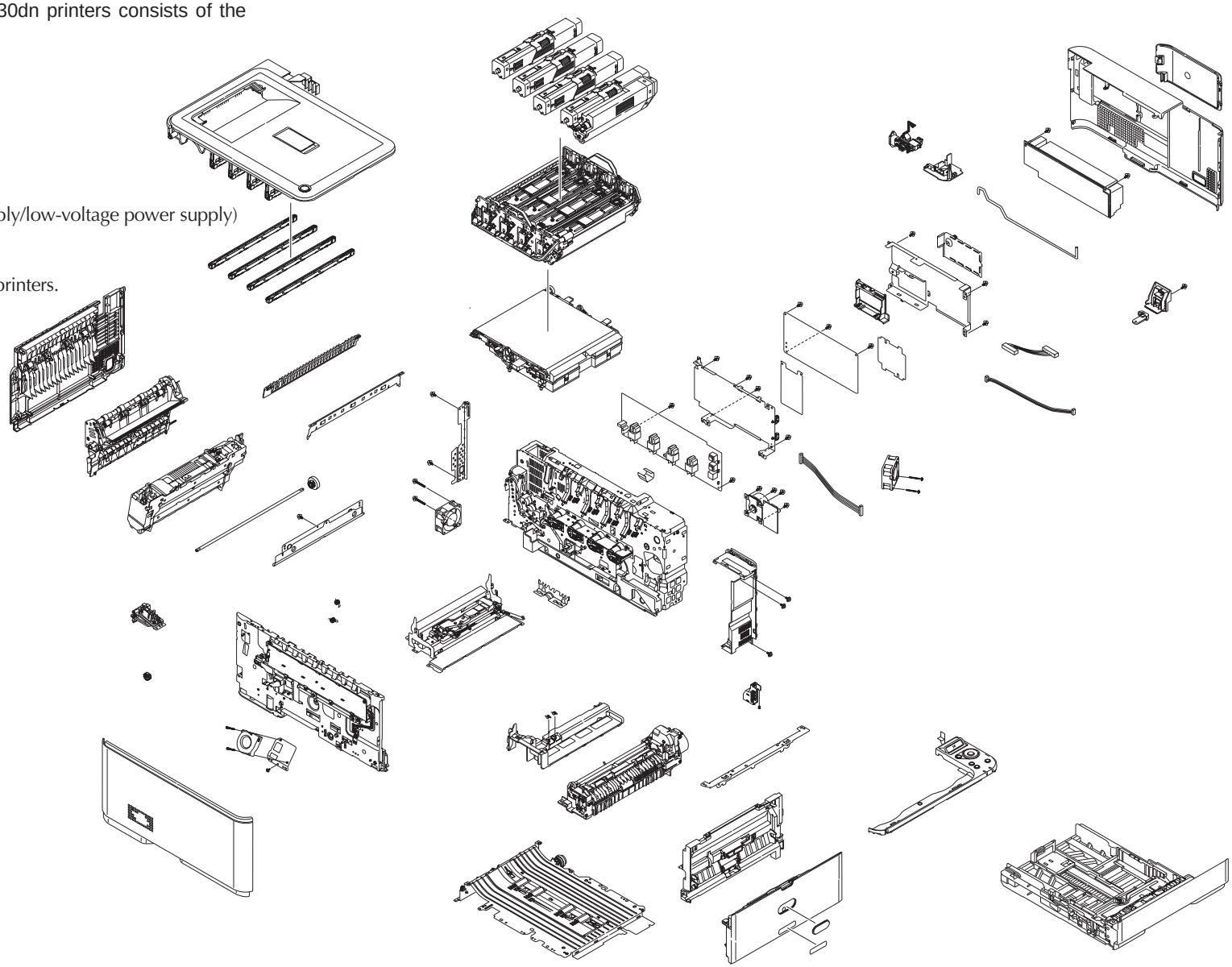
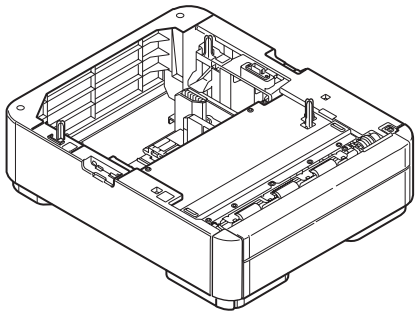


Figure 1-2

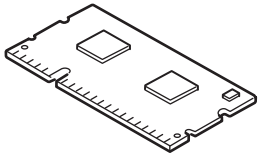
1.3 Optional items

The following optional items are available

(1) Optional tray (2nd Tray)

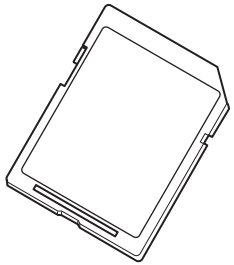


(2) Additional memory



(3) SD memory card (C530 only)

(authentication printing, encrypted secure printing)



1.4 Specifications

	C530dn	C330dn
Printing system	Xerographic method using LEDs (light emitting diodes) as light sources	
Resolution	600 dots/inch (LED head) 600 × 600 dpi/600 × 1200 dpi/600 × 600 dpi × 2 bits (print resolution)	
Print color	Four colors of yellow, magenta, cyan, and black	
CPU	Power PC	
RAM capacity	256 MB (Max. 756 MB)	128 MB (Max. 640 MB)
Supported OSes	Windows Vista/ Windows Server 2008/Windows XP/Windows Server 2003/ Windows 2000 Japanese Version Mac OS 9.0 to 9.2.2, Mac OS X 10.3.9 to 10.5 Japanese Version See the system requirements for further information.	Windows Vista/Windows Server 2008/Windows XP/ Windows Server 2003/Windows 2000 Japanese Version Mac OS X 10.3.9 to 10.5 Japanese Version See the system requirements for further information.
Print languages	PostScript3 emulation PCL5c/PCL XL emulation	
Internal fonts	-	
Interface	USB (supporting Hi-Speed USB), 100BASE-TX/10BASE-T	

	C530dn	C330dn
Print speed *1 (at 600 × 600 dpi or 600 × 1200 dpi)	Color: 26 pages/minute (A4-size plain paper in copy mode), 10 pages/minute (postcards and label stocks), 12 pages/minute (177g/m2 [152kg] or more thick paper), 14 pages/minute (duplex printing on A4 plain paper) Monochrome: 30 pages/minute (A4 plain paper in copy mode), 10 pages/minute (postcards and label stocks), 16 pages/minute (duplex printing on A4 plain paper)	Color: 22 pages/minute (A4-size plain paper in copy mode), 10 pages/minute (postcards and label stocks), 12 pages/minute (189g/m2 [163kg] or more thick paper), 12 pages/minute (duplex printing on A4 plain paper) Monochrome: 24 pages/minute (A4 plain paper in copy mode), 10 pages/minute (postcards and label stocks), 13 pages/minute (duplex printing on A4 plain paper) Color: 22 pages/minute (A4-size plain paper in copy mode), 10 pages/minute (postcards and label stocks), 12 pages/minute (189g/m2 [163kg] or more thick paper), 12 pages/minute (duplex printing on A4 plain paper) Monochrome: 24 pages/minute (A4 plain paper in copy mode), 10 pages/minute (postcards and label stocks), 13 pages/minute (duplex printing on A4 plain paper)

	C530dn	C330dn
Paper size *2	A4, A5, A6, B5, Letter, Legal 13 inch, Legal 13.5 inch, Legal 14 inch, Executive, 16K (184 × 260 mm), 16K (195 × 270 mm), 16K (197 × 273 mm), Custom, Postcard, Double-postcard, Envelope, Index Card	
Paper type *2	Plain paper (64g/m2 [55kg] to 220g/m2 [151kg]), Postcard, Envelope, Labels	
Feed type *2	Automatic feeding by Tray 1 Automatic feeding by or manual feeding from the multi-purpose tray Automatic feeding by a second tray unit (option)	
Automatic feeding by a second tray unit (option) Tray capacity	Tray1: 280 sheets of 64g/m2 (55kg) plain paper, 25mm or less in total thickness Multi-purpose tray: 110 sheets of 64g/m2 (55kg) plain paper, 10mm or less in total thickness, 40 postcards, 10 envelopes of 85g/m2 paper Second tray unit (option): 580 sheets of 64g/m2 (55kg) plain paper, 53 mm or less in total thickness	
Paper ejection *2	Face-up (ejecting paper with the front side up)/Face-down (ejecting paper with the back-side up)	
Stacker capacity *3	Face-up: 110 sheets of 64g/m2 (55kg) plain paper Face-down: 150 sheets of 64g/m2 (55kg) plain paper	
Assured print area	Area excluding 6.35mm from paper edges (except special media such as envelopes)	
Print accuracy	Print start position accuracy: ±2mm, Paper skew: ±1mm/100mm Image expansion: ±1mm/100mm (in use of 82g/m2 of 70kg paper)	
Warm-up time	In 60 sec. after power on (25°C) *4 Within 32 sec. from power saving	
Power	AC 100V ± 10%, 50/60Hz ± 2%	

	C530dn		C330dn	
Power consumption *5	Operating: Max. 1170W, Average 540W (25°C) Ready: Average 90W (25°C) Power save mode: Max. 14W Sleep mode: Approx. 0.9W		Operating: Max. 1170W, Average 480W (25°C) Ready: Average 90W (25°C) Power save mode: Max. 14W	
Inrush current	70A or less (25°C)			
Operating environment conditions	Operating: 10 to 32°C, 20 to 80% RH (max. wet-bulb temperature: 25°C, max. wet- and dry-bulb temperature difference: 2°C) Non-operating: 0 to 43°C, 10 to 90% RH (max. wet-bulb temperature: 26.8°C, max. wet -and dry-bulb temperature difference: 2°C)			
Print quality assured conditions	30 to 73% RH at 10°C, 30 to 54% RH at 32°C, 10 to 32°C at 30% RH, 10 to 27°C at 80% RH, 17 to 27°C at 50 to 70% RH in color printing			
Standard operating conditions	Average power–on hours: 600 hours/month Average number of printed pages: 6,000 pages/month			
Consumables, maintenance units	Toner cartridges, image drum units, belt units, fuser units, feed roller sets			
Printer life	5 years or 420,000 pages (A4)		5 years or 300,000 pages (A4)	
Total weight *6	Approx. 22kg			

*1: Print speed varies depending on sizes, types and thickness of paper and paper feed types.

*2: There are limitations on paper feed types and paper ejection types depending on paper sizes, types and thickness.

*3: The stacker capacities may different from the specifications depending on operating

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%)

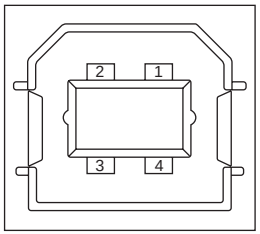
(3) Power control
Self-powered device

1.5.1.2 USB interface connector and cable

(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) Cable

Length: USB 2.0 cable no more than five meters long
(two meters or less recommended)
(A shielded USB 2.0 cable shall be used.)

1.5.1.3 USB interface signals

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

1.5.2 Network interface specifications

1.5.2.1 Network interface overview

Basic specifications

Network protocols (*: C330dn/C530dn only)

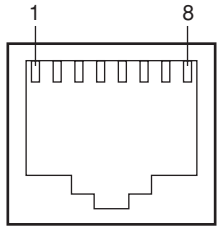
TCP/IP spec.	Network layer ARP, IP, ICMP, IPv6*, IPSec* Transport layer TCP, UDP Application layer LPR, Port9100, FTP, HTTP, HTTPS*, IPP, SNMPv1, SNMPv3*, TELNET, DHCP/BOOTP, DNS, DDNS, WINS, UPnP, Bonjour, SNTP, SMTP, POP*, Windows Rally (WSD Print, LLTD)
NBT/NetBEUI*:	SMB, NetBIOS, NetBIOS over TCP
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 Network interface connector and cable

(1) Connector

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

Connector pin 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

2. DESCRIPTION OF OPERATION

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 surface in accordance with an 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. Fusing

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

6. Drum cleaning

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

7. Static elimination

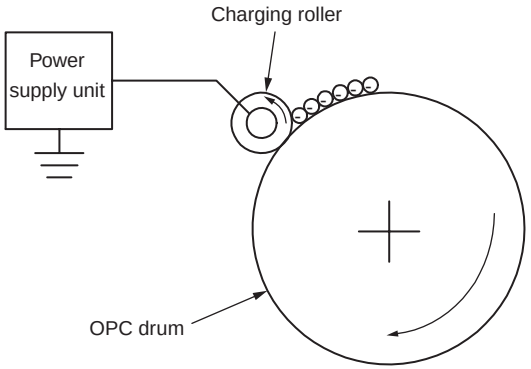
   Residual potential on the image drum is removed.

8. Belt cleaning

   The belt cleaning blade removes toner remaining on the belt.

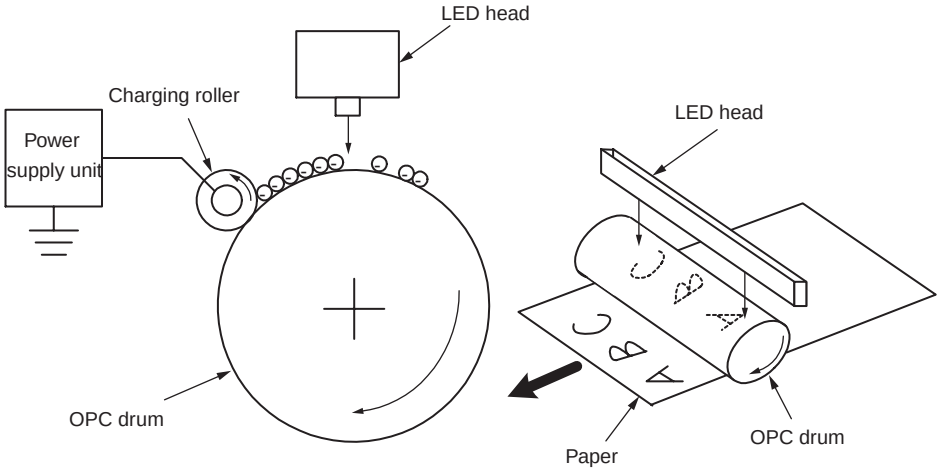
(2) Charging

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

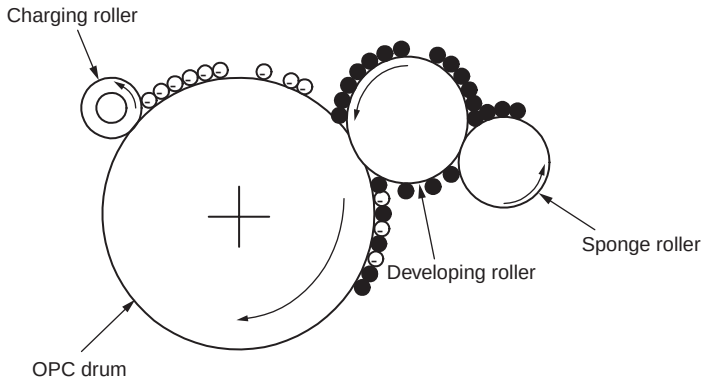
The light emitted from the LED head is radiated onto the charged OPC drum surface. The charge of the radiated part of the OPC drum attenuates according to the intensity of the light, forming an electrostatic latent image on the OPC drum surface.



(4) Development

Toner adheres to an 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 developing roller.

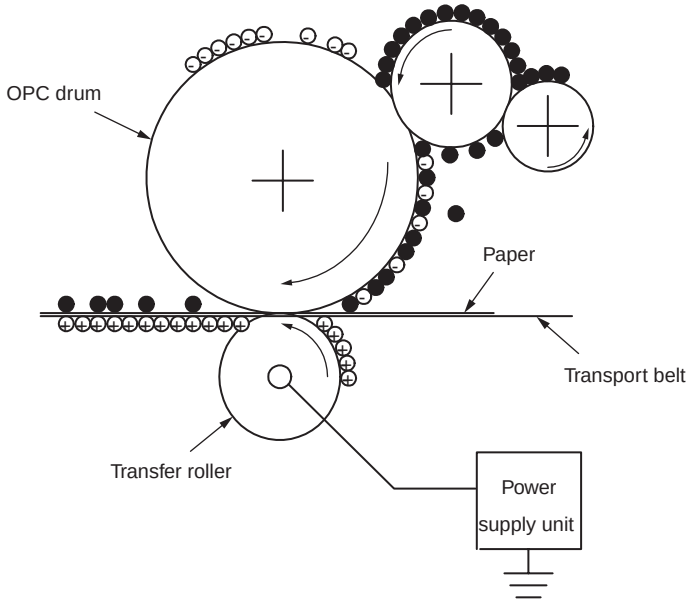


2. The electrostatic latent image on the OPC drum surface is turned into a visible image by the toner.

(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.

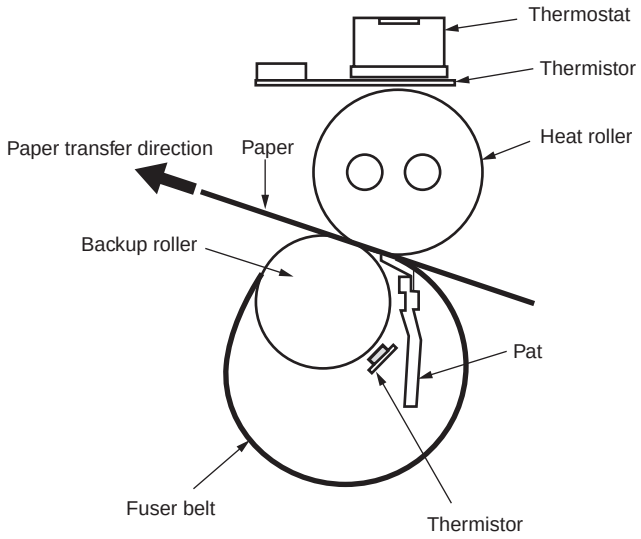
When a high voltage is applied to the transfer roller from the power supply unit, the charge induced on the transfer roller moves on to the surface of the paper through the contact part between the transfer roller and the paper, and the toner is attracted to the paper surface from the OPC drum surface.



(6) Fusing

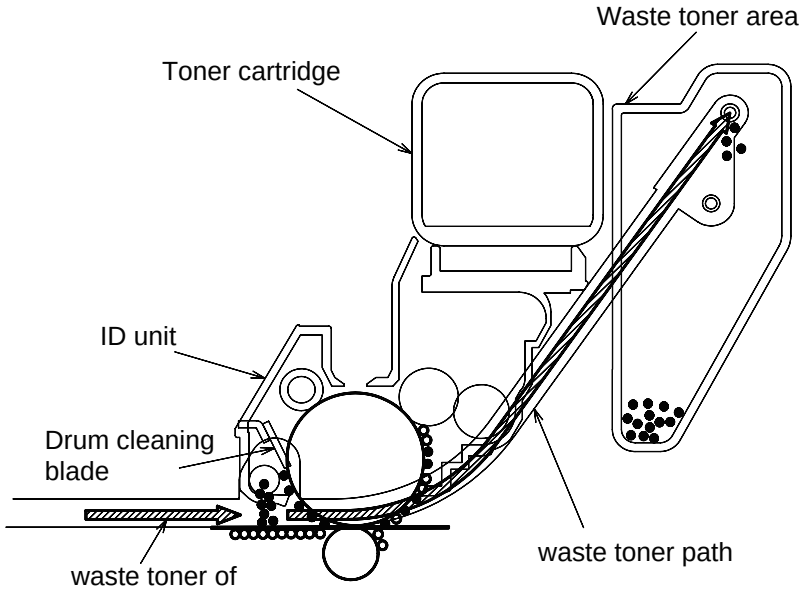
The toner image transferred on the paper is fused on the paper by heat and pressure when the paper passes through the heat roller and the backup roller unit (consists of a backup roller, a pat, and a fuse belt).

The heat roller is heated by 800W and 300W internal halogen lamps, and the backup roller has no internal halogen lamps and is heated by heat transferred from the heat roller. The fuser temperature is controlled according to the temperature that is detected with the thermistor not contacting to the heat roller surface. The temperature detected with the other thermistor that is frictionally sliding against the backup roller surface is used to control the fuser temperature under designated conditions. There is also a thermostat for safety purposes. When the heat roller temperature rises above a certain temperature, the thermostat is open and voltage supply to the heater is cut off. The backup roller unit is pressed against the heater by the press spring on both sides.



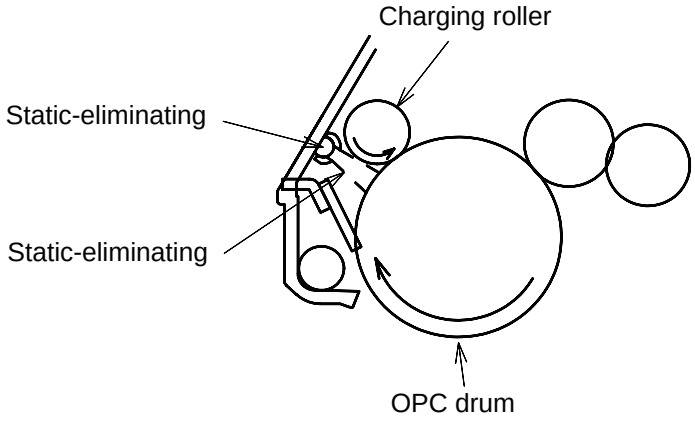
(7) Drum cleaning

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



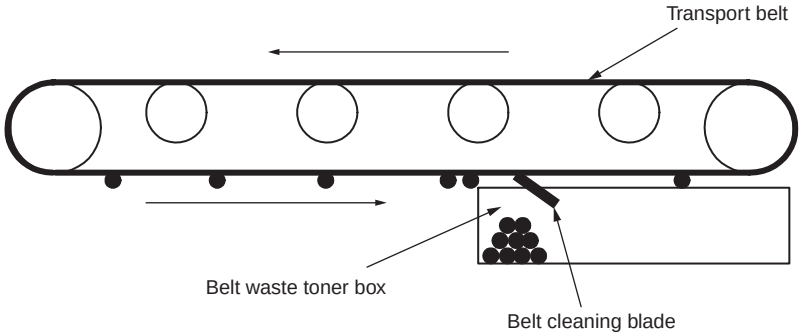
(8) Static elimination

After completing transfer, the OPC drum is illuminated with its surface to reduce static charge of its surface.



(9) 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.



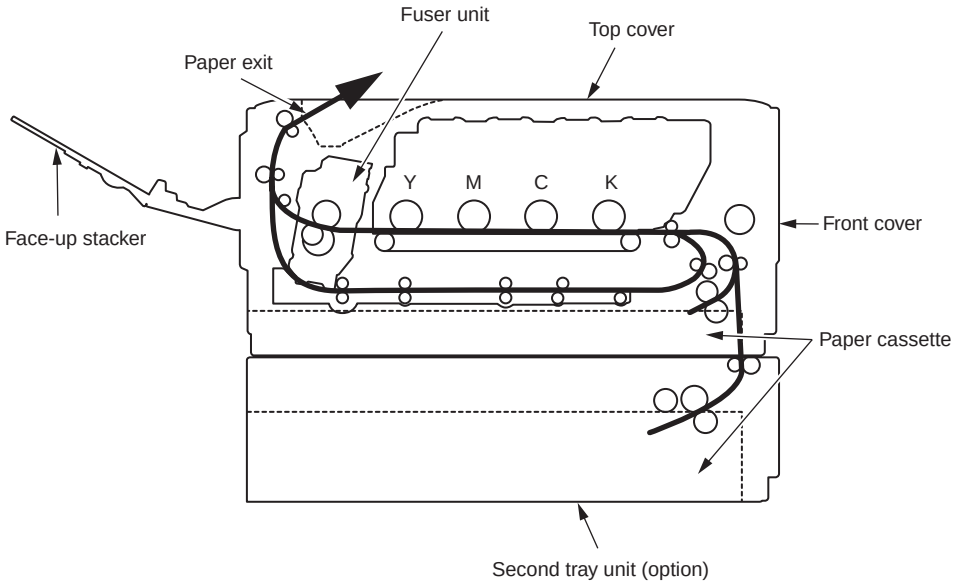
2.2 Printing process

Paper fed from Tray 1, Tray 2 or Tray 3 is carried by the paper feed roller, the registration roller L, and the transport roller. When 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.

The above refers to the simplex printing operation of the printers, and the following explains the duplex printing operation.

During duplex printing, paper, which firstly passes the fuser unit after its backside is printed, is sucked into the duplex unit by the separator DUP. 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. 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, and then arrives the route for paper feeding from a tray. From here on, the same operation as that of simplex printing of paper fed from the tray takes place.



(1) Paper fed from 1st Tray

1. As illustrated in Figure 2-1, after the paper feed motor starts running (clockwise) and the 1st clutch comes ON, the paper is fed from the 1st Tray.
2. After causing the IN sensor to come ON, the paper is further carried over a certain distance to finally hit the registration roller. (This corrects skew of the paper.)
3. It causes the registration clutch to come ON and has the registration roller carry the paper.

(2) Paper fed from MPT

1. As illustrated in Figure 2-1, after the paper feed motor starts running (clockwise) and the MPT clutch comes ON, the paper is fed from the MP Tray.
2. After causing the IN sensor to come ON, the paper is further carried over a certain distance to finally hit the registration roller. (This corrects skew of the paper.)
3. It causes the registration clutch to come ON and has the registration roller carry the paper.

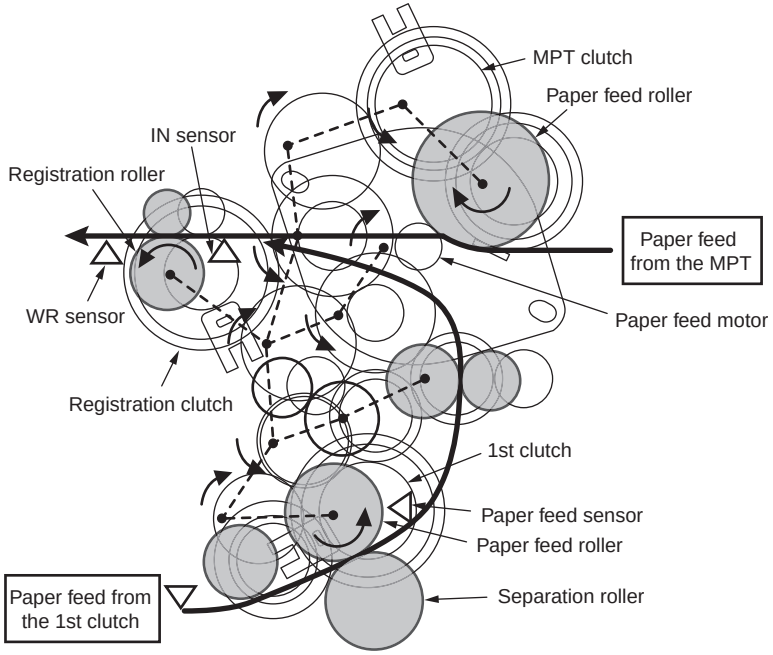


Figure 2-1

(3) Transport belt

1. As the transport belt motor runs 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.

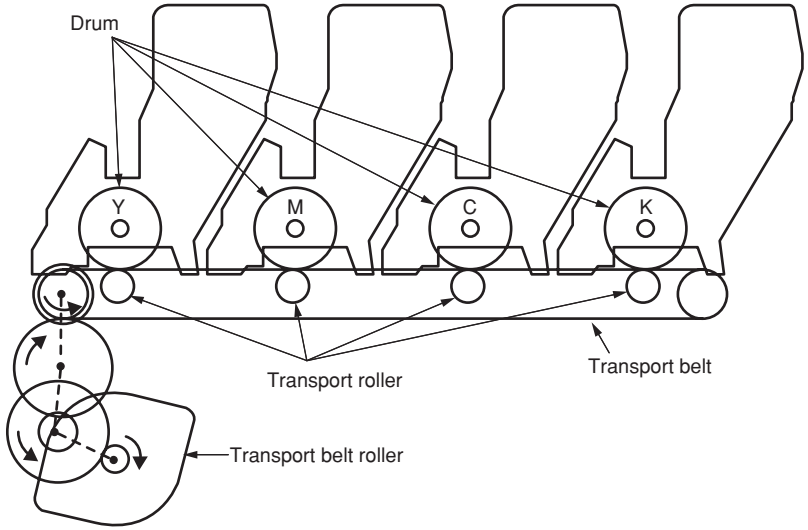


Figure 2-2

(4) Up/down-motions of ID units

1. The up/down motions of the ID units take place driven by the fuser motor and the up/down clutch.
2. Figure 2-3 shows the motions of each of the ID units when the printer is operated for color printing. As the lift-up motor runs (counterclockwise) with the up/down clutch ON, the lift-up link slides to the left causing the ID units to come down as shown in Figure 2-3. In that state, color printing is available.
3. Figure 2-4 shows the motions of each of the ID units when the printer is operated for monochrome printing. As the lift-up motor runs (clockwise) with the up/down clutch ON, the lift-up link slides to the right causing the ID units, except the K-ID unit, to go up as shown in Figure 2-4. In that state, monochrome printing is available.

ID unit motions during color printing

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

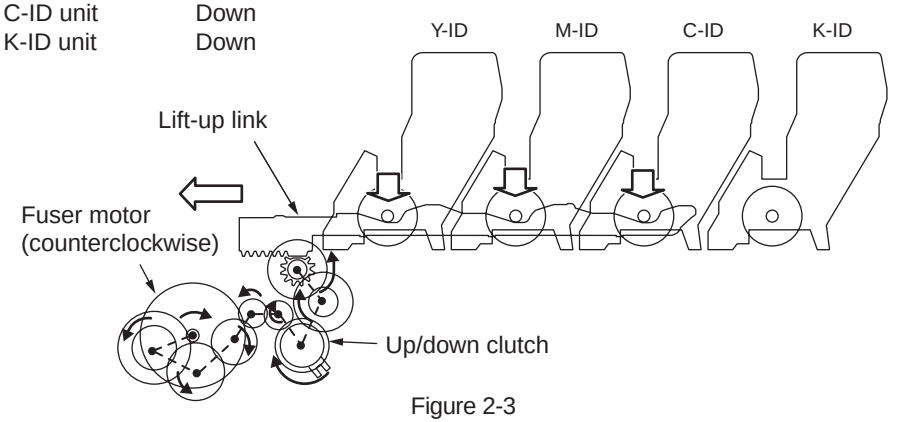


Figure 2-3

ID unit motions during monochrome printing

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

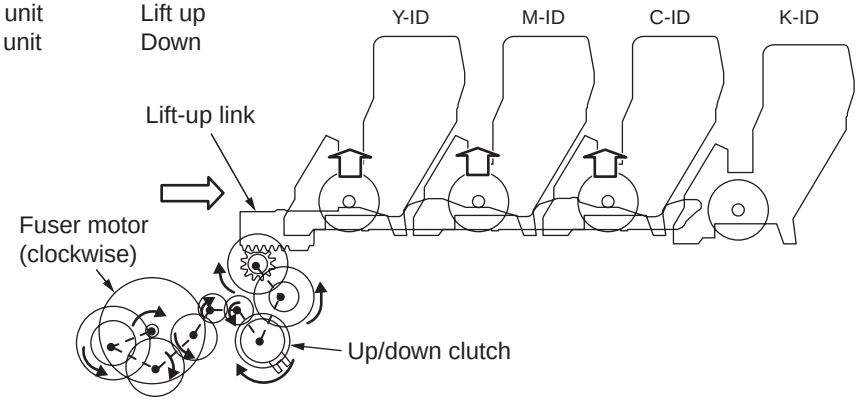


Figure 2-4

(5) Ejection unit and paper ejection

(a) Face-down ejection

Face-down ejection is available when the face-up tray is closed.

In that state, the separator FU is fixed in the direction illustrated in Figure 2-5, and the face-up tray detection sensor is enabled.

As the fuser motor runs (counterclockwise), the eject rollers and the heat roller start rotating, and printed paper is ejected with its face down.

(b) Face-up ejection

Face-up ejection is available when the face-up tray is open.

In that state, the separator FU is fixed in the direction illustrated in Figure 2-6, and the face-up tray detection sensor is disabled.

As the fuser motor runs (clockwise), the eject rollers and the heat roller start rotating, and printed paper is ejected with its face up. (When face-up ejection is enabled, duplex printing is not available.)

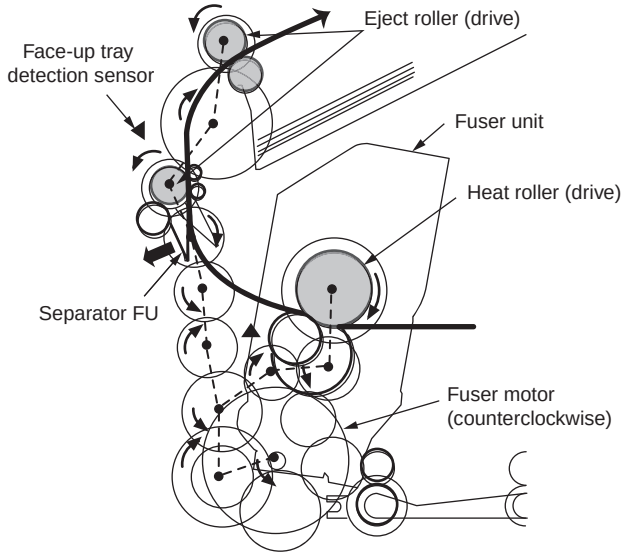


Figure 2-5

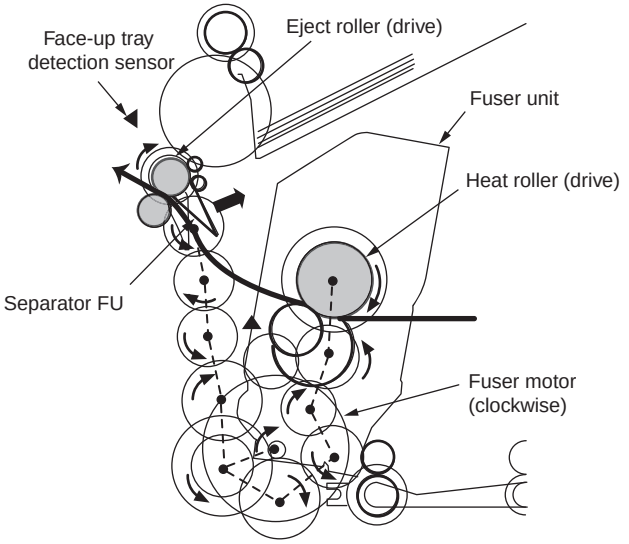


Figure 2-6

(6) Duplex printing system (paper flipping and returning to the paper feed route)

1. In a certain period of time after the fuser motor starts running counterclockwise and the rear end of paper being fed passes the eject sensor, the fuser motor starts running clockwise. (It changes from the state shown in Figure 2-7 to the state shown in Figure 2-8.)
2. As a result of that, the eject rollers start rotating in the reverse direction, and the paper is flipped and carried to the duplex unit.
3. When the duplex unit clutch becomes on, the paper is transferred by the duplex unit transport rollers.
4. In a certain period of time after the rear end of the paper passes the eject rollers, the fuser motor starts running counterclockwise, and as a result of this, the eject rollers can carry the next paper to the exit. (It changes from the state shown in Figure 2-8 to the state shown in Figure 2-7.) (The duplex unit transport rollers rotate in the same direction regardless of the running direction of the motor.)
5. The paper that is carried by the duplex unit transport rollers comes back to the route for paper feeding from a tray. After that, the paper is handled in the same way as paper fed from a tray for simplex printing.

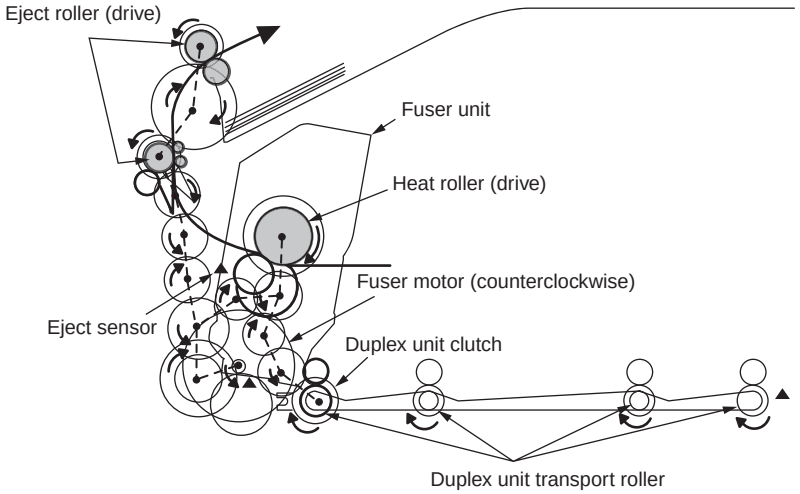


Figure 2-7

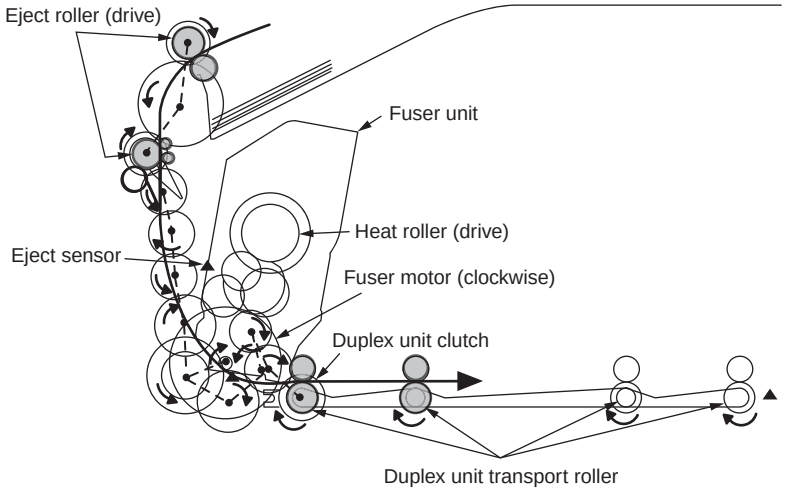


Figure 2-8

(7) Cover-opening motions 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.

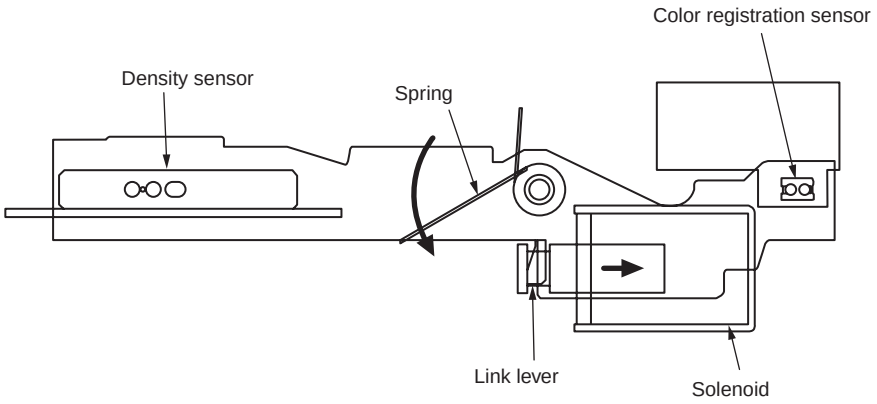


Figure 2-9

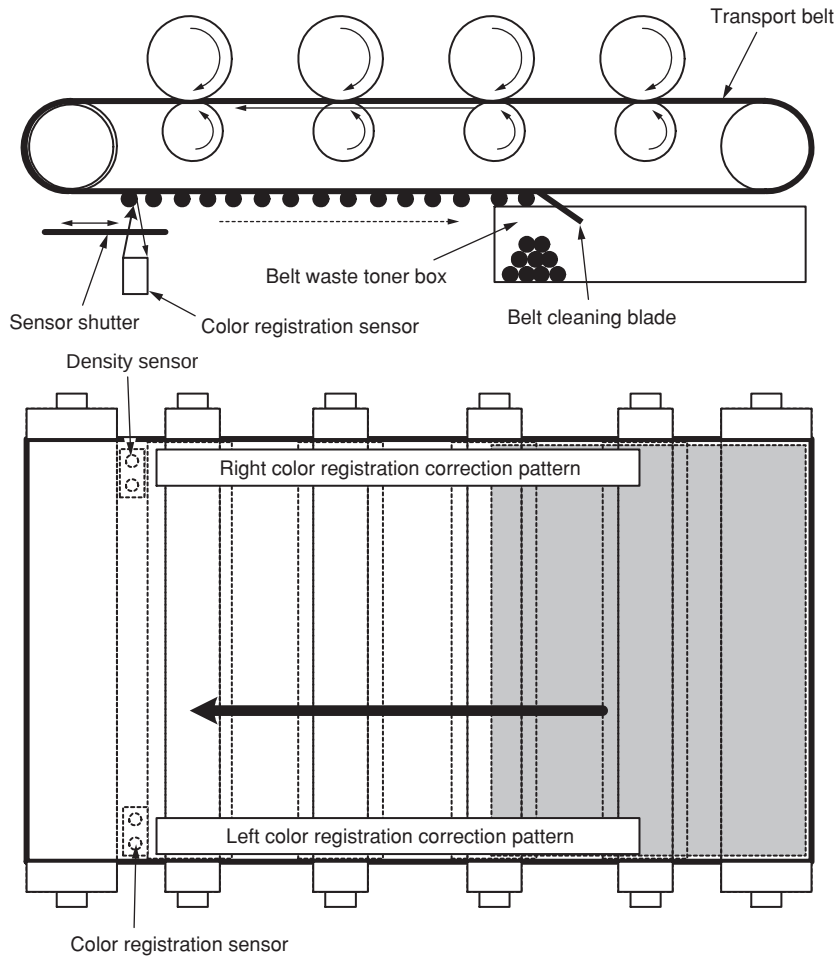
Outline of color registration correction

Color registration is corrected by reading correction patterns, which are printed on the belt, by use of the color registration sensor located inside the sensor shutter under the belt unit. The sensor is used to detect patterns and correct color registration.

Automatic start timing of color registration correction

- At power-on
- When an opened cover is closed
- When 400 or more pages have been printed or at least six hours has passed after the previous correction

A correction error may be issued due to an inadequate toner amount of a pattern generated, a sensor stained with toner, deficient opening/closing of the shutter, or for other reasons. However, even if such a registration correction error is issued, it is not indicated on the operator panel. Therefore, it is necessary to perform forcible color registration correction in the self-diagnostic mode (Section 5.3.2.6) to check the error indication.



Error checking methods and remedies

The color registration correction test function among the other self-diagnostic functions is employed to check errors. (Section 5.3.2.6)

Remedies for 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.

  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 board, the CU/PU board and the connector cable one by one and check that no error will occur again.

- BELT REFLX ERR

  Check 4: If this indication appears, check the cleaned state for the toner remaining on the belt surface, in addition to making the above checks 1, 2 and 3. Take out the belt unit, turn the drive gear located on the left rear side, and ensure that the belt surface has been cleaned thoroughly.

  If cleaning is not achieved perfectly and there still remains toner on the belt surface after the drive gear has been turned, replace the belt unit.

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

  Check 5: If the above indication appears, check to see whether toner of NG-issuing color is running short.

  Replace a toner cartridge, as needed.

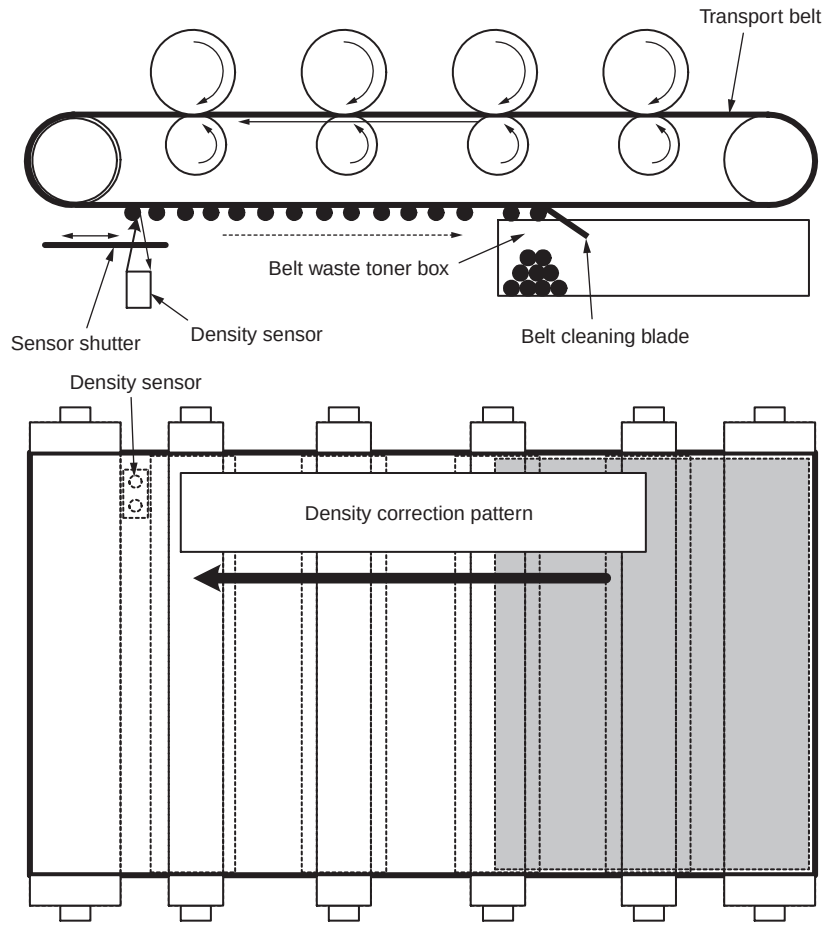
Outline of density correction

Density is corrected by reading correction patterns, which are printed on the belt, by use of the density sensor located inside the sensor shutter under the belt unit.

Automatic start timing of density correction:

- When the environment at power-on is drastically different from the environment of the previous correction
- When one or more of four ID count values at power-on indicates that the corresponding IDs are almost new
- When an ID count after the previous correction exceeds 500
- When one or more ID is replaced with a new one
- When the belt is replaced with a new one
- When a toner low or toner empty error is cleared by a replacement of a toner cartridge in a toner low or toner empty state

A correction error may be issued due to an inadequate toner amount of a pattern generated, a sensor stained with toner, deficient opening/closing of the shutter, or for other reasons. However, even if such a density correction error is issued, it is not indicated on the operator panel. Therefore, it is necessary to perform forcible color registration correction 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)

Remedies for 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 density sensor, the CU/PU board and the connector 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.

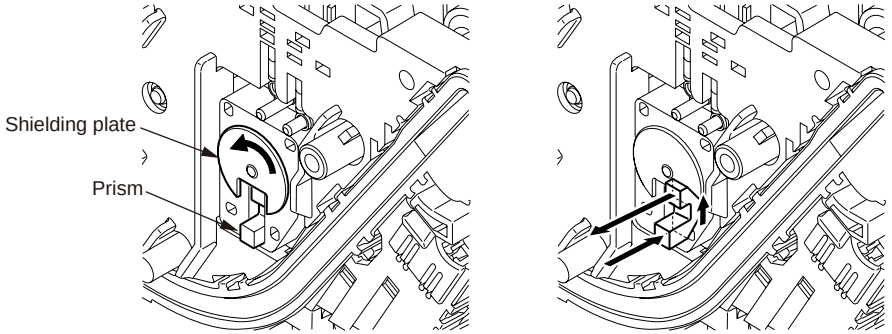
- DENS ID ERR

  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 a toner sensor (Reflection sensor) installed inside each of the printers. A shielding plate is mounted inside each ID and rotates in synchronization with toner agitation.

Moreover, each ID has a shutter fitted. Each shutter is synchronized with the operation lever of the relevant 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 a shielding plate or toner sensor is stained with toner, or if an ID unit and the relevant 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 printers can print, the LSI counts the data as the 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, toner LOW detection by a toner sensor is implemented when the amount of toner remaining inside an 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 a 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, a count to add is determined by the number of times that 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	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	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	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).
peration 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 page count is incremented when the front end of print media passes the writing sensor, a feed jam (380) is also included into the limits on counts according to its jam type.				If paper jams before passing the fuser, its pages are not counted. If paper jams after passing the fuser, its pages are counted.	
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 a pair of two pages is in color, the color page count increases by two. If a pair of two pages is in monochrome, the monochrome page count increases by two.	
Reset condition	None	None			(1) Replacement of ROM with another one of a different version (2) Change of the shipping destination (3) Execution of MENU RESET of the system maintenance menu (4) Replacement of a CU board	
Value storage destination	PU	PU	PU	PU	CU	CU
Menu/MenuMap output	○(*2)	○	○	○	○	○
EngineMenuMap output	○	○(*3)	○(*3)	○(*3)	–	–

*1. Each of the count is updated at the end of each job or each of four pages; however, the count is not updated if the power is turned off when any page from page one through page three of a job of four or more pages is being printed.

*2. It is shown in the header of MenuMap.

*3. 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 shall 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
A4	1	2
A5	1	2
A6	1	-
B5	1	2
COM-9	1	-
COM-10	1	-
MONARCH	1	-
DL	1	-
C5	1	-
Postcard	1	-
Double-postcard	1	-
Custom	1	2
Custom, Length > 210 mm	2	4
Custom, Length ≥ 900 mm	4	-
Envelope (Choukei 3)	1	-
Envelope (Choukei 4)	1	-
Envelope (Youkei 4)	1	-
Envelope (Envelope A4)		
INDEXCARD	1	-

3. INSTALLATION

3.1 Cautions, and do's and don'ts

⚠ Warning

- Do not install the printer in any potentially 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 center.
  Such mishap could lead to an electric shock, fire or injury.
- Do not connect any power cord, printer cable or ground 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 case 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 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 the 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

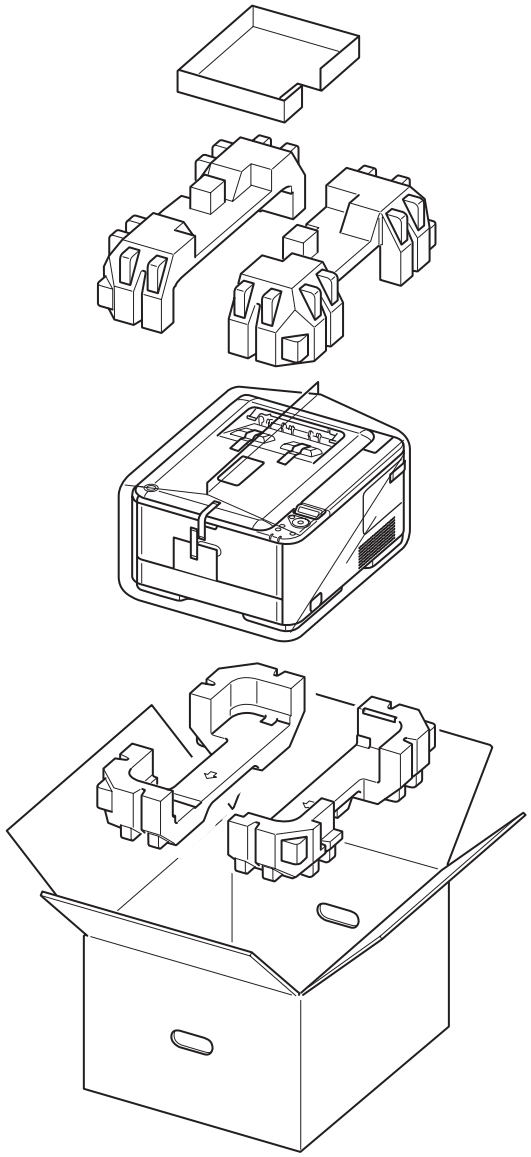
- Do not install the printer in a location where its vent hole is blocked.
- Do not install the printer directly on a shag carpet or rug.
- Do not install the printer in a sealed room or other location with poor ventilation or permeability.
- Make sure to ventilate sufficiently when continuously using 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 them.
- The printer, which weighs approximately 25 kg (packed), 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 ground wire.

3.2 Unpacking procedure

⚠ Warning	Personal injury may occur.	⚠

Since the printer weights approximately 25 kg (packed), it should be lifted by two or more people.



3.3. Printer installation instructions

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

  Ambient temperature : 10 to 32°C

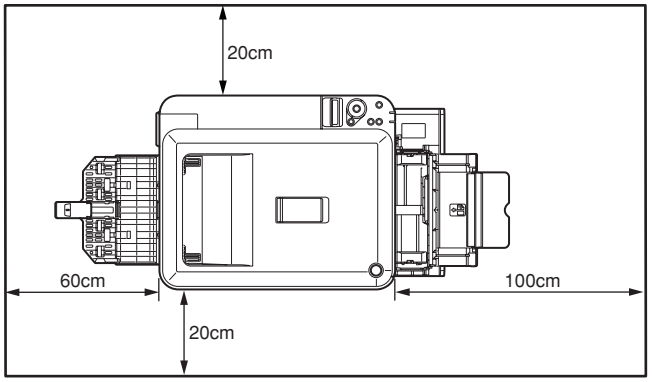
  Ambient humidity : 20 to 80 % RH (relative humidity)

  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.

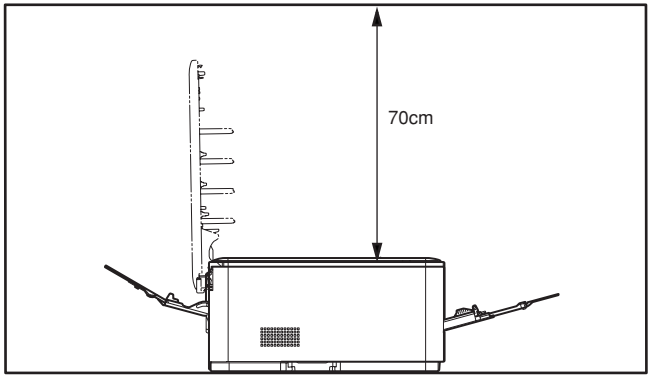
Installation space

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

Plan view



Side view



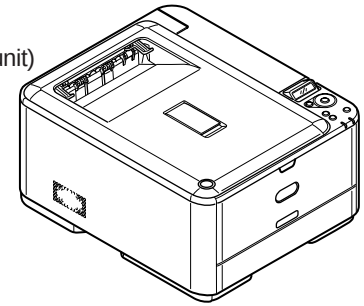
3.4 List of components and accessories

- 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.

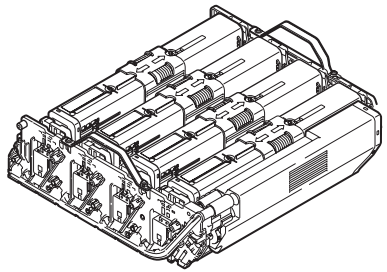
⚠ **Warning**	Personal injury may occur.	⚠

The printer weights approximately 31 kg (or 36 kg when packed), so it should be lifted by two or more people.

☐ Printer (main unit)



☐ Image drum cartridges (one each of cyan, magenta, yellow, and black installed in the printer)



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

☐ Software CD-ROM

☐ Power cord

☐ Warranty card and user registration card

☐ User's manual (Setup and usage)

☐ User's manual (CD-ROM)

☐ Quick Guide

☐ Bag for Quick Guide

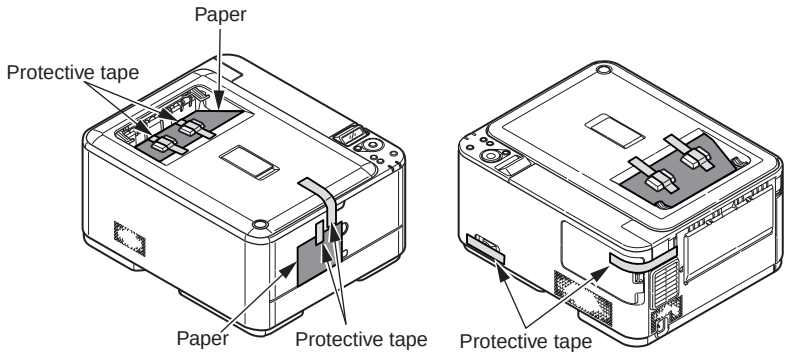
Note! No printer cable is supplied with the printer.

3.5 Assembly procedure

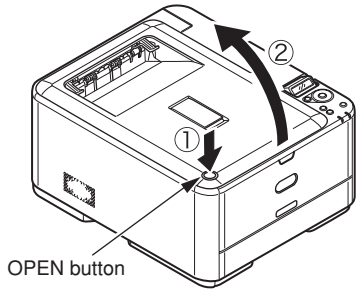
3.5.1 Assembly of the printer main unit

Setup of the printer

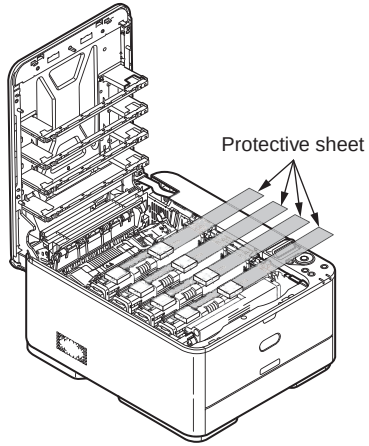
(1) Remove the protective tapes (six places) from the surface of the printer.



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

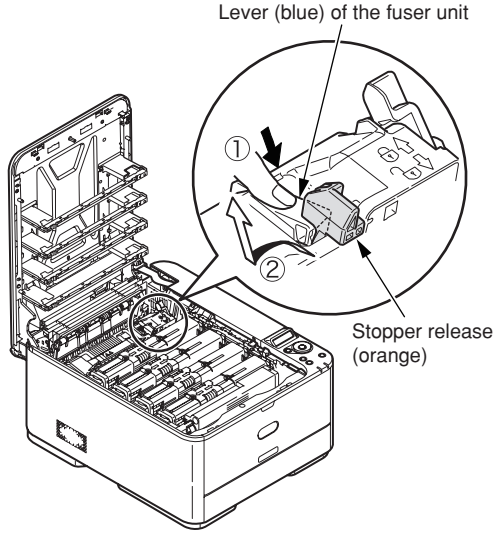


(3) Remove the four protective sheets.

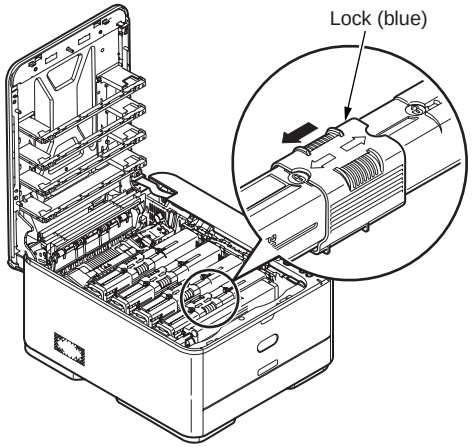


(4) Remove the stopper release (orange) while pushing down the lever (blue) of the fuser unit in the direction of the arrow ① .

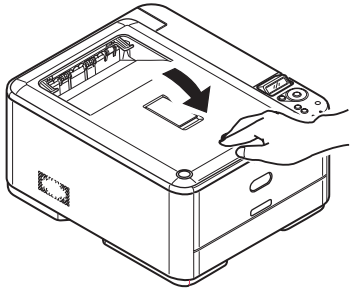
Note! The stopper release is used when the printer is not used for a long time or being transported. Be sure to keep it.



(5) Slide the locks of the (four) toner cartridges to the left to lock the toner cartridges.



(6) Close the top cover.

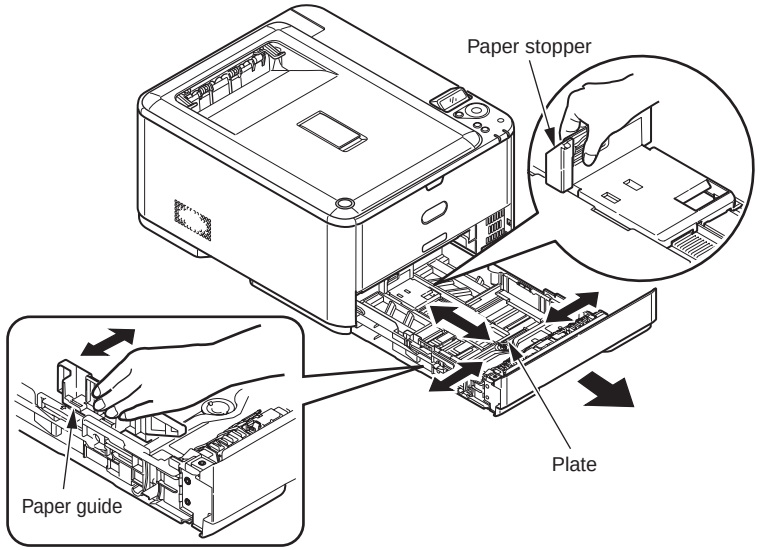


Loading paper in the paper cassette

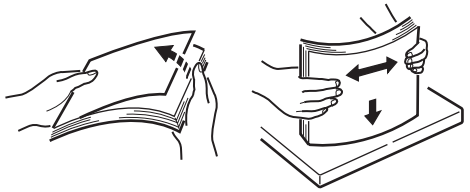
(1) Pull out the paper cassette.

Note! Do not remove the rubber from the plate.

(2) Adjust the paper stopper and the paper guide to the size of the paper to be loaded and fix them firmly.



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



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

Note! • Place the paper against the front side of the paper cassette.

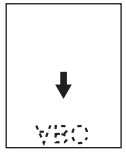
• Do not allow the level of paper to pass the "▽" mark of the paper guide (530 sheets of 70 kg paper).

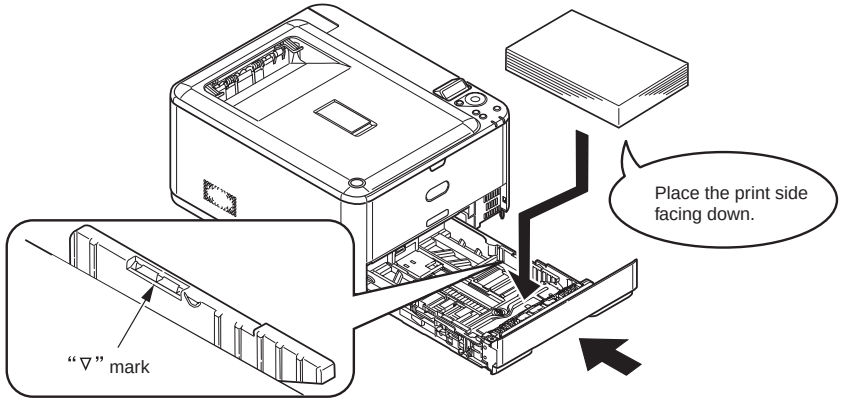
(5) Hold the paper with the paper guide.

(6) Turn the paper size dial to the size of the paper loaded.

(7) Insert the paper cassette back into the printer.

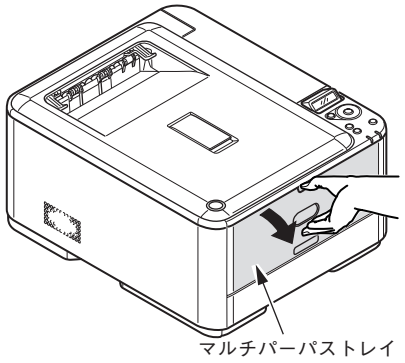
Paper loading orientation



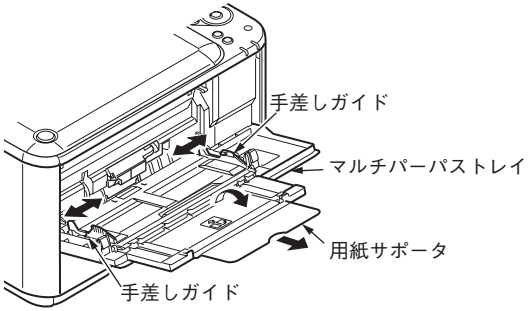


Loading paper in the multi-purpose tray

(1) Open the multi-purpose tray and also the paper supporter.

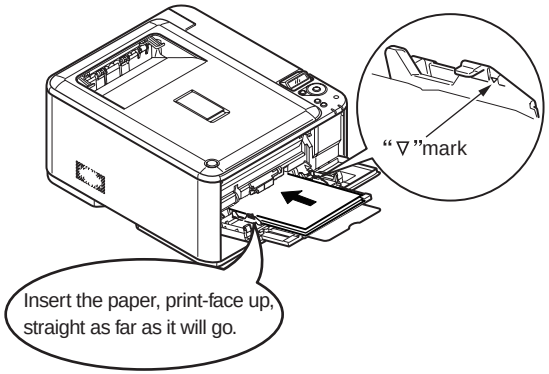


(2) Move the manual feed guide to the paper size.



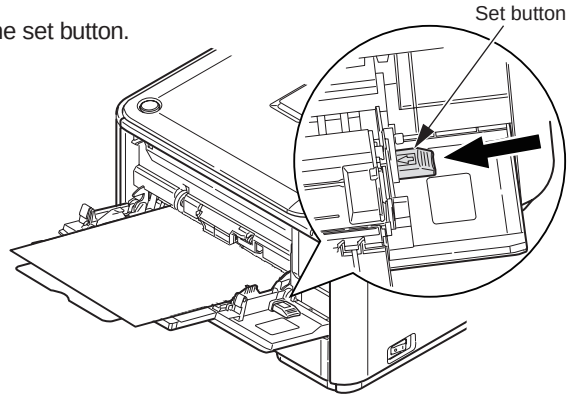
(3) Align the edges of the paper stack.

(4) Insert the paper, print-face up, along the manual feed guide straight as far as it will go.



Note! Do not allow the level of paper to pass the ""▽"" mark of the paper guide (100 sheets of 70 kg paper, or 10 envelopes).

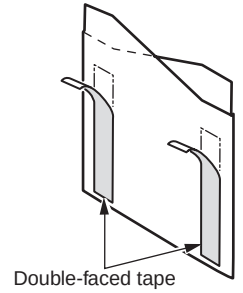
(5) Press the set button.



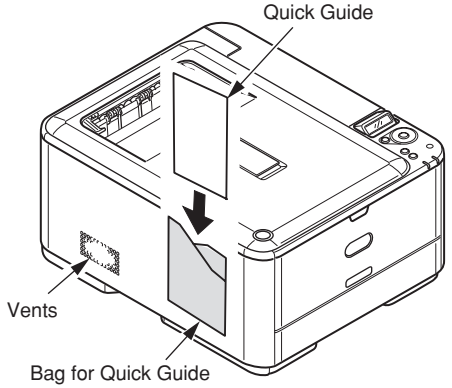
Storing Quick Guide

Stick a bag for Quick Guide on the printer to store Quick Guide.

(1) Remove double-faced tapes (two places) from the back of the bag.



(2) Stick the bag for Quick Guide on the printer.



Note! Stick the bag to a place not to block the vents on the printer.

3.5.2 Connection of the power cable

Power supply conditions

- Observe the following conditions:
  AC : 100V ± 10%
  Power frequency : 50 Hz or 60 Hz ± 2 Hz
- If the available power is unstable, use a voltage regulator or the like.
- The maximum power consumption of this printer is 1,170W. Ensure that the power source offers an ample margin in the power capacity.
- Proper operation with a UPS (uninterruptible power supply) is not guaranteed. A warning to not use a UPS should be given to the user.

⚠ Warning	It may cause an electric shock or fire.	

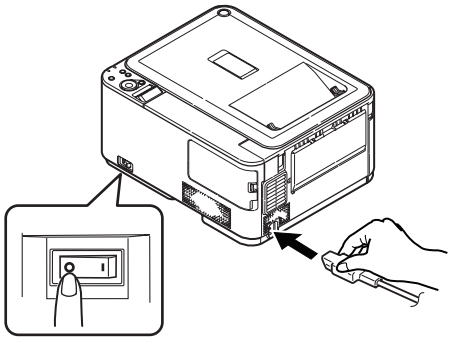
- Installation and removal of the power cord and the ground wire must be performed after turning the switch to OFF.
- The ground wire should be connected to a dedicated ground terminal. If it is not possible to establish a ground, consult the dealer where the user bought this printer.
- Never connect the ground wire to a water pipe, gas pipe, or a telephone line ground, or to a lightning rod or the like.
- Be sure to complete connection to the ground terminal before inserting the power plug into the power outlet. Also be sure to remove the power plug from the power outlet before disconnection from the ground terminal.
- Hold the power plug of the power cord to plug in or unplug the cord.
- Insert the power plug securely into a receptacle as far as it will go.
- Do not insert or remove the power plug with wet hands.
- Lay the power cord in a location where it is not likely stepped on, and avoid placing anything on the power cord.
- Do not bundle or tie the power cord.
- Do not use a damaged power cord.
- Avoid many loads on one electrical outlet.
- Do not connect the printer to the same power outlet shared by other electric appliances. Especially, if the printer is connected to the same power outlet in conjunction with an air-conditioner, copy machine or shredder, electric noise may cause false operation of the printer. If it is inevitable to connect them to the same power outlet, use a commercial noise filter or noise-cut transformer.
- Use the power cord that is supplied with this printer and insert it directly into an outlet. For this printer, do not use a power cord provided for any other product.
- Do not use an extension cord. If it is inevitable to use an extension cord, use one with rating of 15A or more.
- Use of an extension cord may hinder the printer from operating normally because of an AC voltage drop.
- Do not turn off the power or disconnect the power plug while the printer is printing.
- If the printer is going to be placed out of use for an extended period of time due to a long spell of holidays or travel, unplug the power cord.
- Do not use the supplied power cord for other products.

About the connections of the power cord and the ground wire, the user should be given thorough explanation by referred to the user's manual.

Connecting the power cord

Note! Ensure that the power switch is OFF (O).

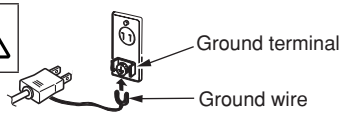
(1) Insert the power cord into the printer.



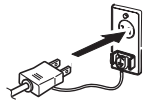
(2) Connect the ground wire to a ground terminal of a power outlet.

⚠ Warning	It may cause an electric shock.	

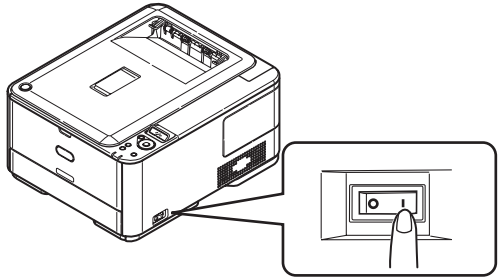
Be sure to use the ground wire.



(3) Inset the power plug into the power outlet.



Pressing on (I) of the power switch



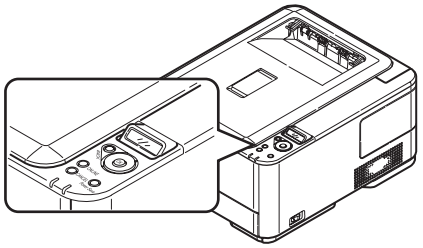
[Ready to Print] will appear when the printer has started up completely.

Note! An error (of code 126, 171, 175, 177, or 320) may occur if the printer is turned on when it is cold. In such a case, turn off the printer, wait for a while and turn it on again.

Turning off the power

Note! Turning off the power without taking proper shutdown steps may damage and disable the printer. Be sure to follow the steps below.

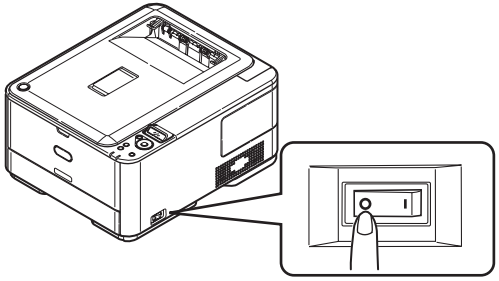
(1) Check that [CMYK] or [ONLINE] is displayed on the operator panel. If the printer is in sleep mode, press the [POWER SAVE/RESTORE] button to make [CMYK] or [ONLINE] displayed.



(2) Press the OK button repeatedly until [Shutdown menu] appears.

Press the OK button. By pressing the OK button after [Shutdown Start Execute] appears, the shutdown process will start.

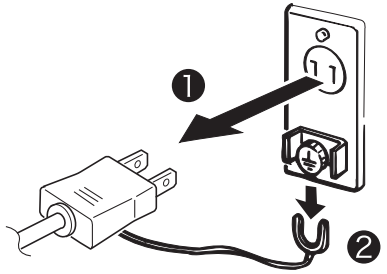
(3) After [PLEASE POW OFF SHUTDOWN COMP] appears, press the power switch OFF (○).



No use for a long time

Advise the user to unplug the power cord if the printer will not be used for a long time, such as during long vacations or travel. In addition, instruct the user to attach the stopper release to the fuser unit.

Note! Before disconnecting the ground terminal, disconnect the power plug from the power outlet.



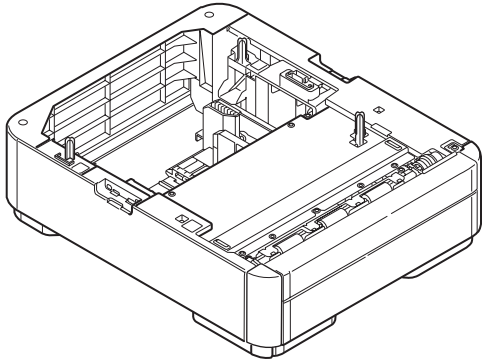
Note! This printer does not cause any malfunction even if the power plug is disconnected for a long time (four weeks or longer). Unwarranted deterioration of consumables of the printer, including toner and image drums, should be informed to the user.

3.5.3 Installation and recognition confirmation of an option

(1) Installation of an optional tray (second tray) unit

An optional tray unit is intended for increasing the amount of paper that can be loaded in the printer. An optional tray holds 580 sheets of 55 kg paper, allowing the printer to print up to 970 sheets continuously when used with a standard paper cassette and a multi-purpose tray together.

Type: TRY-C4E1



1. Turn off the printer and disconnect the power cord and the printer cable.

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

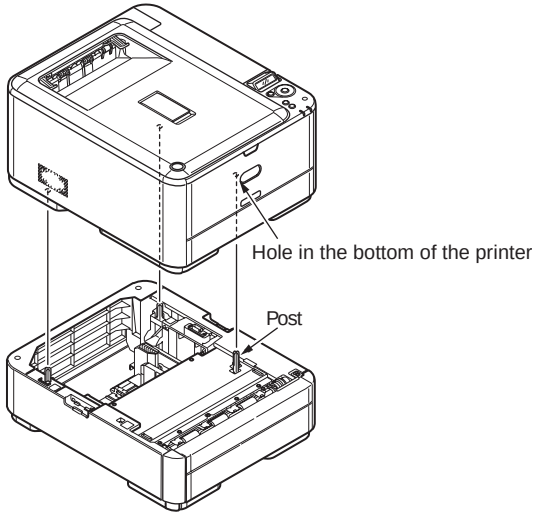
   Note! • Turning off the power without taking proper shutdown steps may cause a failure of the printer, so be sure to execute the shutdown menu.
   • Installation of an optional tray unit with the power on may cause a failure of the printer.

2. Place the printer on an optional tray unit.

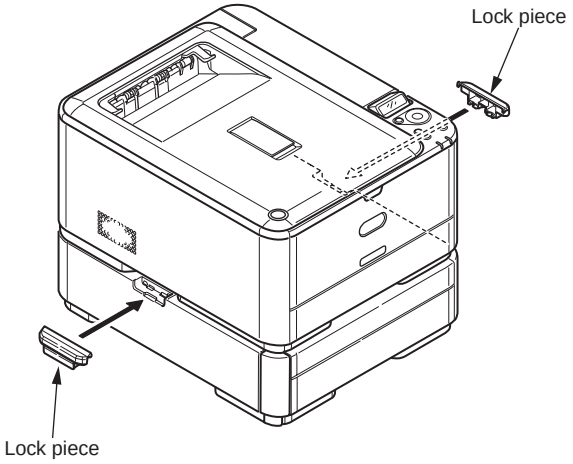
   Note! The printer weights approximately 22 kg. It should be lifted by two or more people.

   ❶ Align the holes in the bottom of the printer to the pins of the optional tray unit.

   ❷ Place the printer gently on the optional tray unit.



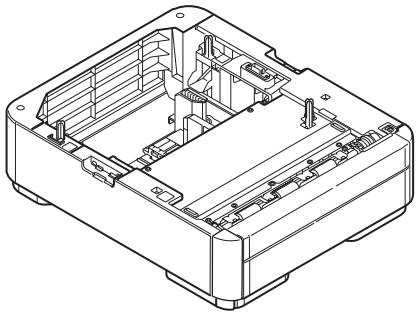
3. Attach lock pieces to the printer.



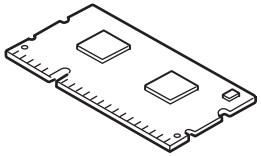
1.3 Optional items

The following optional items are available:

(1) Optional tray (2nd Tray)

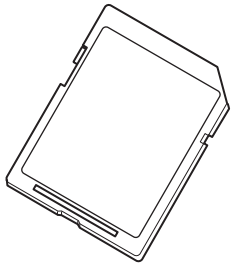


(2) Additional memory (C530 only)



(3) SD memory card (C530 only)

(authentication printing, encrypted secure printing)



1.2 Printer configuration

The internal part of the 330dnn, and C530dn printers consists of the following sections:

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

Figure 1-2 shows the configuration of the printers.

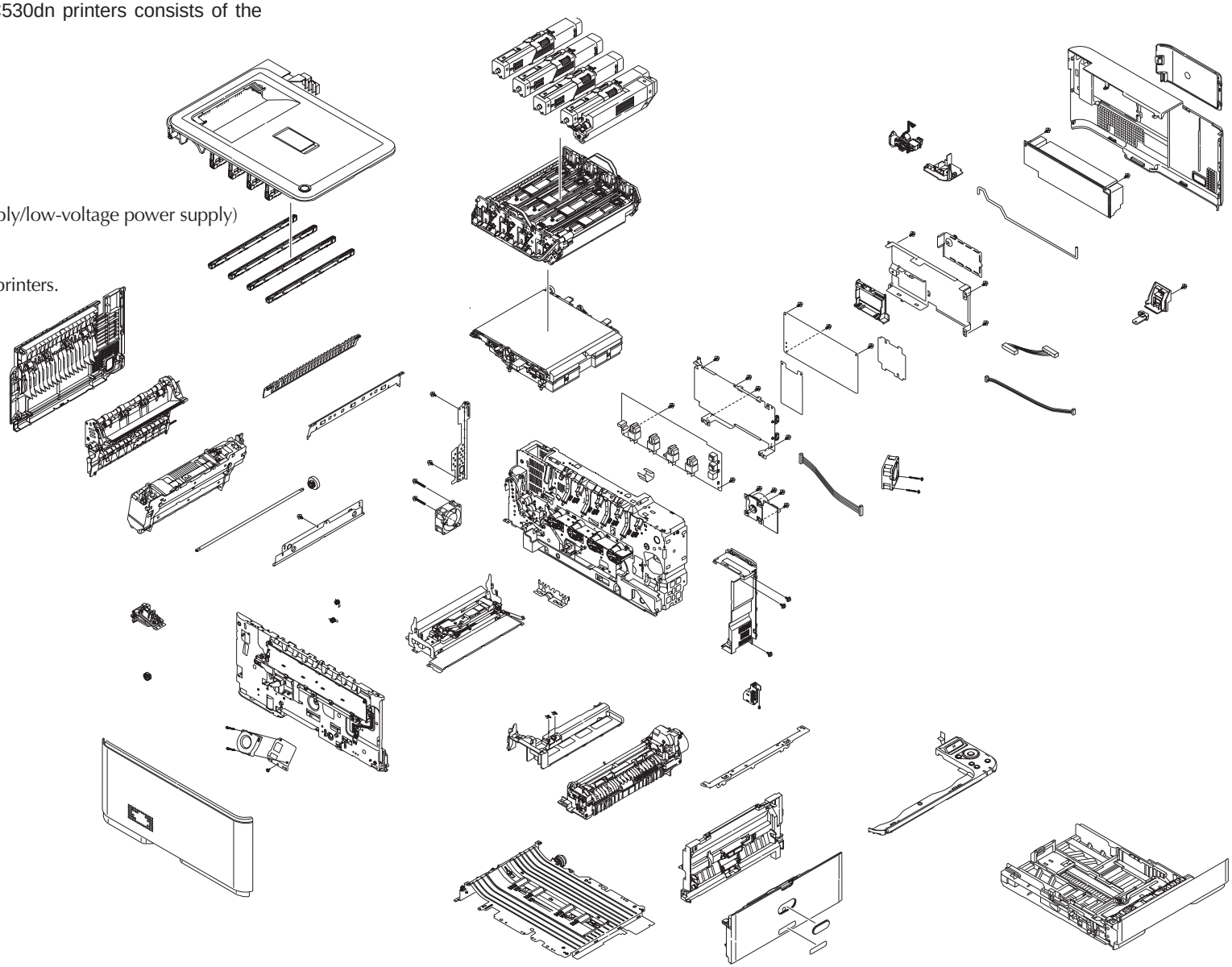
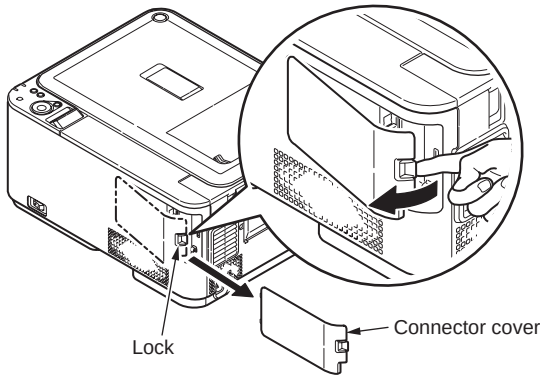
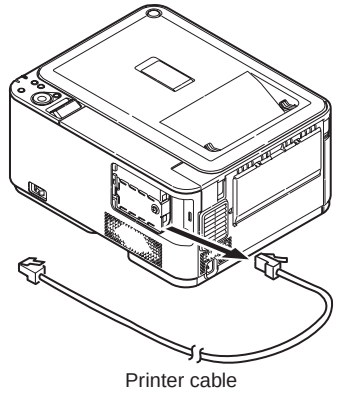


Figure 1-2

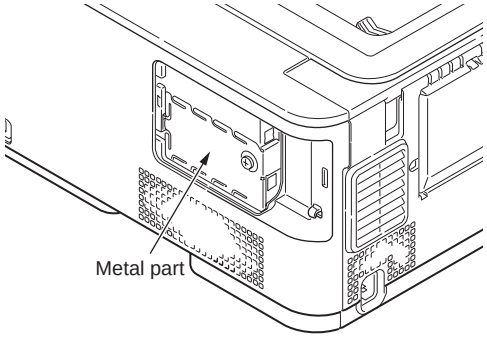
2. Remove the connector cover.



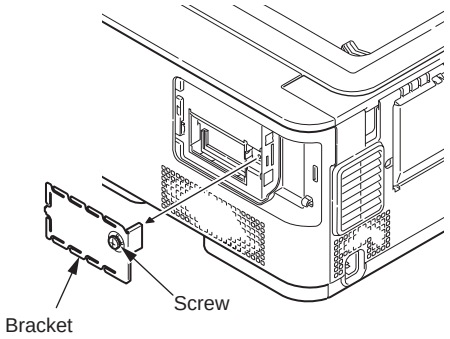
3. Remove the printer cable.



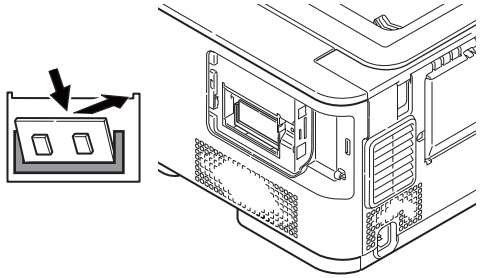
4. Touch the metal part of the printer to discharge static.



5. Loosen the screw and remove the bracket.

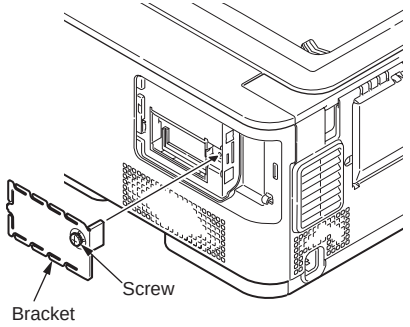


6. Insert an additional memory into the slot and push it against the main unit.

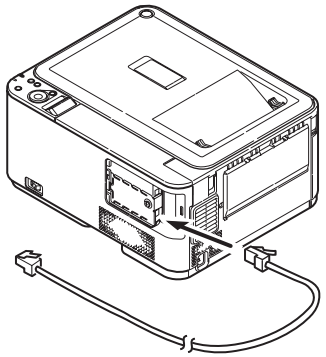


Note! • Do not touch electronic parts or connector terminals.
• Install the memory by observing the correct orientation of it. The memory has a notch in its edge so as to fit with the memory slot connector.

7. Attach the bracket and tighten the screw.

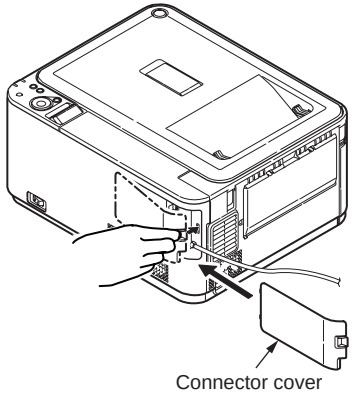


8. Connect the printer cable to the printer.



Printer cable

9. Attach the connector cover to the printer.

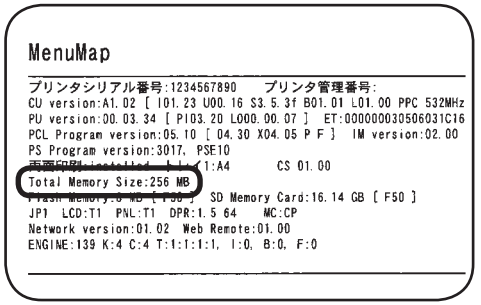


Connector cover

10. Connect the power cord to the printer and turn the power ON.

Note! If the operator panel displays [SERVICE CALL 031: ERROR], remove the memory and reinstall it.

11. Print the configuration report and check the printout for successful installation of the additional memory.


MenuMap

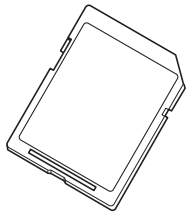
プリンタシリアル番号:1234567890　　プリンタ管理番号:
CU version:A1.02 [I01.23 U00.16 S3.5.3f B01.01 L01.00 PPC 532MHz
PU version:00.03.34 [PI03.20 L000.00.07] ET:000000030506031C16
PCL Program version:05.10 [04.30 X04.05 P F] IM version:02.00
PS Program version:3017, PSE10
1:A4　　CS 01.00
Total Memory Size:256 MB
SD Memory Card:16.14 GB [F50]
JP1 LCD:T1 PNL:T1 DPR:1.5 64　　MC:CP
Network version:01.02 Web Remote:01.00
ENGINE:139 K:4 C:4 T:1:1:1:1, I:0, B:0, F:0

❶ Print the configuration report by following the steps instructed in section 3.6.

❷ Check the total memory size shown at “Total Memory Size” in the header.

Note! Reinstall the additional memory if the size at “Total Memory Size” is not correct.

(3) Installation of an SD card (C530dn only)



Note! Fonts cannot be downloaded to any SD cards for C530dn.

SD cards are provided as an option for C530dn.

- SD memory card (model name: SDC-A1)

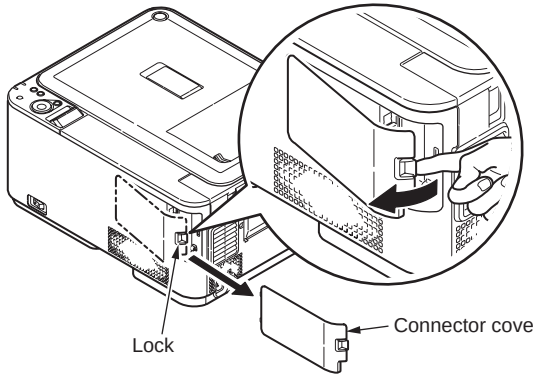
  It is a storage added to C530dn printers. It is used for authenticated printing, print job saving and buffer printing, or used when [Collating Error] appears in making collated sets of copies.

1. Turn off the printer and disconnect the power cord.

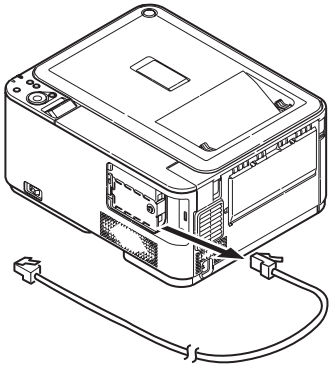
Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.

Note!
- Turning off the power without taking proper shutdown steps may cause a failure of the printer, so be sure to execute the shutdown menu.
- Installation of an SD card with the power on may cause a failure of the printer.

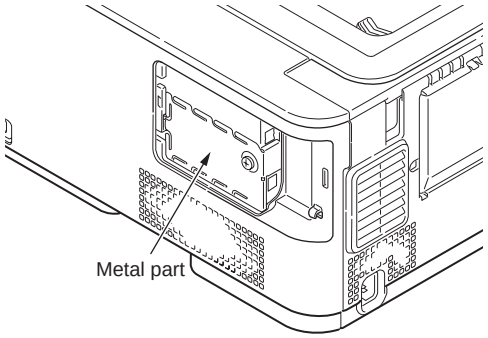
2. Remove the connector cover.



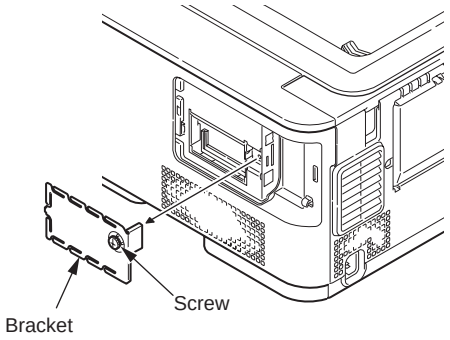
3. Remove the printer cable.



4. Touch the metal part of the printer to discharge static.

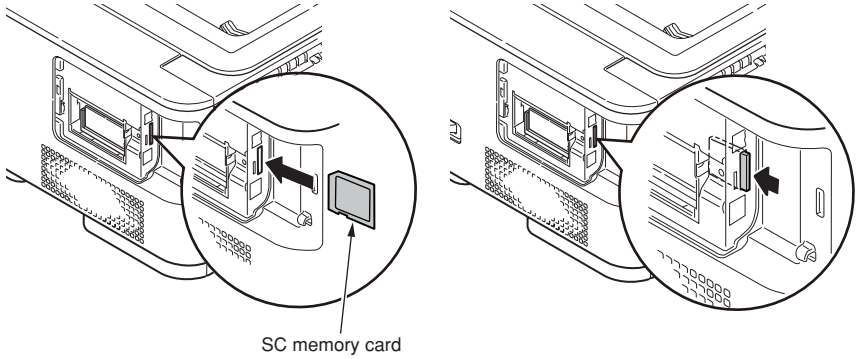


5. Loosen the screw and remove the bracket.

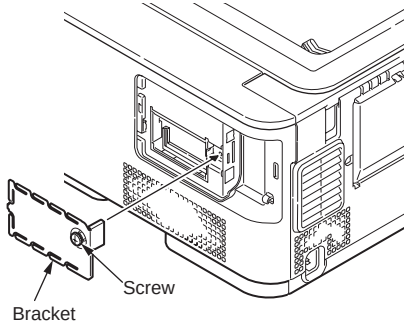


6. Insert an SD memory card into the slot.

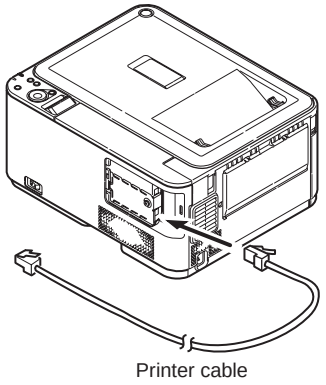
Note! • SD memory cards are not usable when the safety switch against possible erasure is in the active position, so be sure to move it to the inactive position.



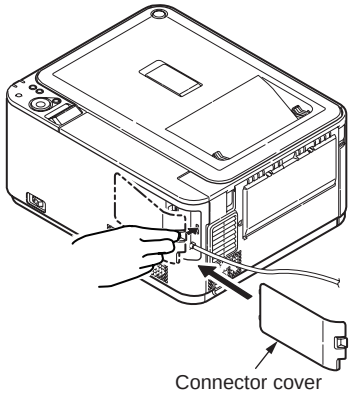
7. Attach the bracket and tighten the screw.



8. Connect the printer cable to the printer.

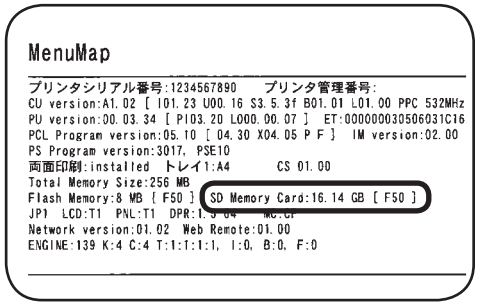


9. Attach the connector cover to the printer.



10. Connect the power cord to the printer and turn the power ON.

11. Print the configuration report and check the printout for successful installation of the SD memory card.



❶ Print the configuration report by following the steps instructed in section 3.6.

❷ Check that the memory size is shown at “SD Memory Card.”

Memo The size of SD memory cards may be different from the above example.

Note! Reinstall the SD memory card if its size is not shown there.

Subsequently, it is required to make settings in the printer driver to have the SD memory card recognized by the printer driver.

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 by taking steps described on the following pages.

12. Set up SD Memory Card in the printer driver.

Note! Administrator privileges on the computer are required.

For Windows PS printer driver

❶ For Windows Vista, select [Start] - [Control Panel] and click [Printers].

For Windows XP, select [Start] - [Control Panel] - [Printers and Other Hardware] - [Printers and Faxes].

For Windows Server 2003, select [Start] - [Printers and Faxes].

For Windows 2000, select [Start] - [Settings] - [Printers].

❷ Right-click the [C530 (PS)] icon and select [Properties].

❸ Click [Get printer information] in [Installable Options] on the [Device Settings] tab, and click [Setup] or [Obtain printer information]. For USB connection, manually specify [Installed] for [SD Memory Card].

❹ Click [OK].

For Windows PCL / PCL XPS Printer Driver

❶ For Windows Vista, select [Start] - [Control Panel] and click [Printers].

For Windows XP, select [Start] - [Control Panel] - [Printers and Other Hardware] - [Printers and Faxes].

For Windows Server 2003, select [Start] - [Printers and Faxes].

For Windows 2000, select [Start] - [Settings] - [Printers].

❷ Right-click the [C530 (**)] (** is PCL or PCL XPS, which is a type of the printer driver) icon and select [Properties].

❸ Select [Obtain printer information] on the [Device Options] tab. For USB connection, check the [SD Memory Card] checkbox manually.

❹ Click [OK].

For Macintosh

In Macintosh, when options are added before installation of the printer driver, device information can be automatically obtained. When options are added after installation of the printer driver, make setting of options according to the following steps.

Network connection

❶ Select the printer in [Chooser] and click [Reconfigure].

❷ Click [Configuration].

❸ Select [Installed] for [SD Memory Card] and click [OK].

❹ Close [Chooser].

For USB connection

❶ Drag the printer icon to the trash on the desktop and empty the trash.

❷ Using the Desktop Printer Utility, create a desktop printer again. When a desktop printer is created again, the settings are updated.

Memo For how to create the desktop printer, see “Creating the Desktop Printer” of “Setup for Macintosh with USB Connection” in the user’s manual.

For Mac OS X

In Mac OS X, if options are added before installation of the printer driver, device information can be automatically obtained, but when connected via IP Print or Bonjour (Rendezvous), device information cannot be obtained automatically.

Also, when connected via AppleTalk, device information cannot be obtained automatically if options are added after installation of the printer driver.

In the above cases, you need to set up options according to the following steps.

❶ Double-click [Application] - [Utilities] - [Printer Setup Utility] in the hard disk.

❷ Select [C530], click [Show Info] and open [Printer Info].

❸ Select [Installable Options].

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

❺ Close [Printer Info].

❻ Check that the name of the added printer is in [Printer List] and then close [Print Center].

3.6 Printing of MenuMap

Print MenuMap to check to make sure that the printer operates correctly.

(1) Load A4 paper in a tray.

(2) Press the ▲ button several times until [Information Menu] appears, and then press the OK button.

(3) After MenuMap Print appears, press the OK button.
Printing of MenuMap is started.

Memo To print Network Information (two pages), press the ▲ button following step (2) until [Network] appears, and then press the OK button.

(C530dn MenuMap sample)

MenuMap C530

プリンタシリアル番号:1234567890　プリンタ管理番号:
CU version:A1.02 [101.23 U00.16 S3.5.3f B01.01 L01.00 PPC 532MHz 14241C00 000C0001 F50 J0]
PU version:00.03.34 [P103.20 L000.00.07]　ET:0000000305060316216200000010000000　KYWC-0000
PCL Program version:05.10 [04.30 X04.05 P F]　IW version:02.00
PS Program version:3017, PSE10
両面印刷:installed　トレイ1:A4　CS 01.00
Total Memory Size:256 MB
Flash Memory:8 MB [F50]　SD Memory Card:16.14 GB [F50]
JP1 LCD:T1 PNL:T1 DPR:1.5 64　MC:CP
Network version:01.02 Web Remote:01.00
ENGINE:139 K:4 C:4 T:1:1:1:1, 1:0, B:0, F:0
Language format:1.00
Language version:1.00
Language:JAPANESE

印刷ジョブメニュー
　暗号ジョブ
　保存ジョブ

インフォメーションメニュー
　メニューマップ印刷
　ネットワーク
　ファイルリスト印刷
　PCLフォント印刷
　PSEフォント印刷
　DEMO1
　エラーログ印刷
　集計結果印刷
　カラープロファイルリスト

シャットダウン メニュー
　シャットダウン スタート

印刷メニュー
　コピー枚数 : 1
　両面印刷 : オフ
　給紙トレイ : トレイ1
　自動トレイ切り替え : オン
　トレイ選択順序 : 下方向
　MPトレイの使い方 : 使用しない
　用紙チェック : 有効
　A4/レター置き換え : はい
　解像度 : 600DPI
　トナーセーブモード : オフ
　モノクロ印刷速度 : 自動
　印刷方向 : 縦
　1ページ行数 : 64 行
　編集サイズ : カセットサイズ
　用紙幅 : 210 ミリメートル
　用紙長さ : 297 ミリメートル

メディアメニュー
　トレイ1用紙サイズ : A4
　トレイ1用紙タイプ : 普通紙
　トレイ1用紙厚 : 普通紙
　MPトレイ用紙サイズ : A4
　MPトレイ用紙タイプ : 普通紙
　MPトレイ用紙厚 : 普通紙
　カスタム用紙設定単位 : ミリメートル

カラーメニュー
　自動濃度補正モード : 自動
　濃度補正
　カラー調整
　シアン HIGHLIGHT : 0
　シアン MID-TONE : 0
　シアン DARK : 0
　マゼンタ HIGHLIGHT : 0
　マゼンタ MID-TONE : 0
　マゼンタ DARK : 0
　イエロー HIGHLIGHT : 0
　イエロー MID-TONE : 0
　イエロー DARK : 0
　ブラック HIGHLIGHT : 0
　ブラック MID-TONE : 0
　ブラック DARK : 0
　シアン濃度 : 0
　マゼンタ濃度 : 0
　イエロー濃度 : 0
　ブラック濃度 : 0
　自動色ずれ補正
　シアン位置ずれ微調整 : 0
　マゼンタ位置ずれ微調整 : 0
　イエロー位置ずれ微調整 : 0
　インクシミュレーション : オフ
　UCR : 少ない
　CMY100%濃度 : 無効
　CMYK変換 : オン

システム構成メニュー
　パワーセーブ移行時間 : 30 分
　スリープ移行時間 : 10 分
　動作モード : 自動
　USB PS-プロトコル : RAW
　NET PS-プロトコル : RAW
　アラーム解除 : オンライン
　エラー自動解除 : オフ
　マニュアルタイムアウト : 60 秒
　タイムアウト印刷 : 40 秒
　トナー不足印刷継続 : 継続
　ジャムリカバー : オン
　エラーレポート印刷 : オフ

PCL エミュレーション
　使用フォント : 内蔵フォント2
　フォントNo. : 01
　フォントサイズ : 12.00 ポイント
　シンボルセット : WIN3.1J
　A4印字幅 : 78 桁
　自紙ページ除外 : オフ
　CR 動作 : CR のみ
　LF 動作 : LF のみ
　印刷領域 : ノーマル
　イメージ濃淡択 : 混合黒
　ペン幅補正 : オン
　トレイ ID#
　　MPトレイ : 4

USBメニュー
　ソフトリセット : 無効
　SPEED : 480Mbps
　オフライン受信 : 無効
　シリアルナンバ : 有効

ネットワークメニュー
　TCP/IP : 有効
　IPバージョン : IP v4
　NETBEUI : 無効
　NETBIOS OVER TCP : 有効
　NETWARE : 無効
　ETHERTALK : 無効
　IPアドレス設定 : 手動
　IPV4アドレス : 192.168.100.100
　サブネットマスク : 255.255.255.0
　ゲートウェイアドレス : 0.0.0.0
　WEB : 有効
　TELNET : 無効

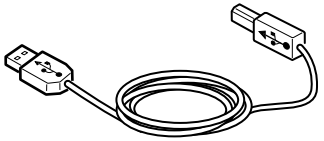
3.7 Connection methods

<USB connection>

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

Preparing a USB cable

Note!
- No printer cable is supplied with the printer. Ask the user to prepare a USB 2.0 printer 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.



Switching off the printer and the computer

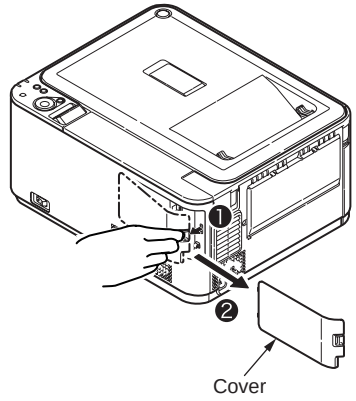
Memo Although a USB cable can be plugged in or unplugged with the computer and the printer switched on, for secure installation of the USB driver and the printer driver to be performed subsequently, the printer should be turned off.

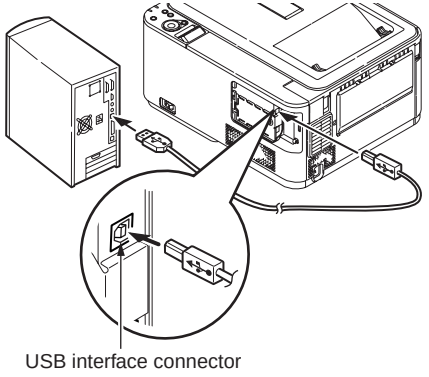
Connecting the computer to the printer

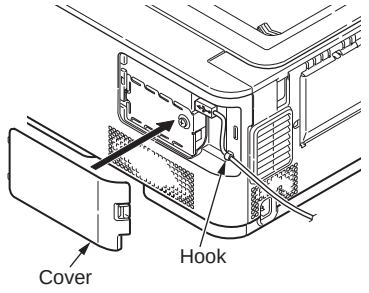
(1) Plug the USB cable into the USB interface connector of the printer.

(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.

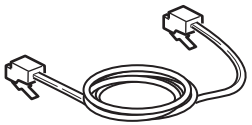
<Ethernet cable connection>

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

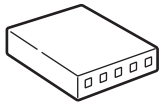
Preparing an Ethernet cable

Note! An Ethernet cable and a hub are not supplied 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>

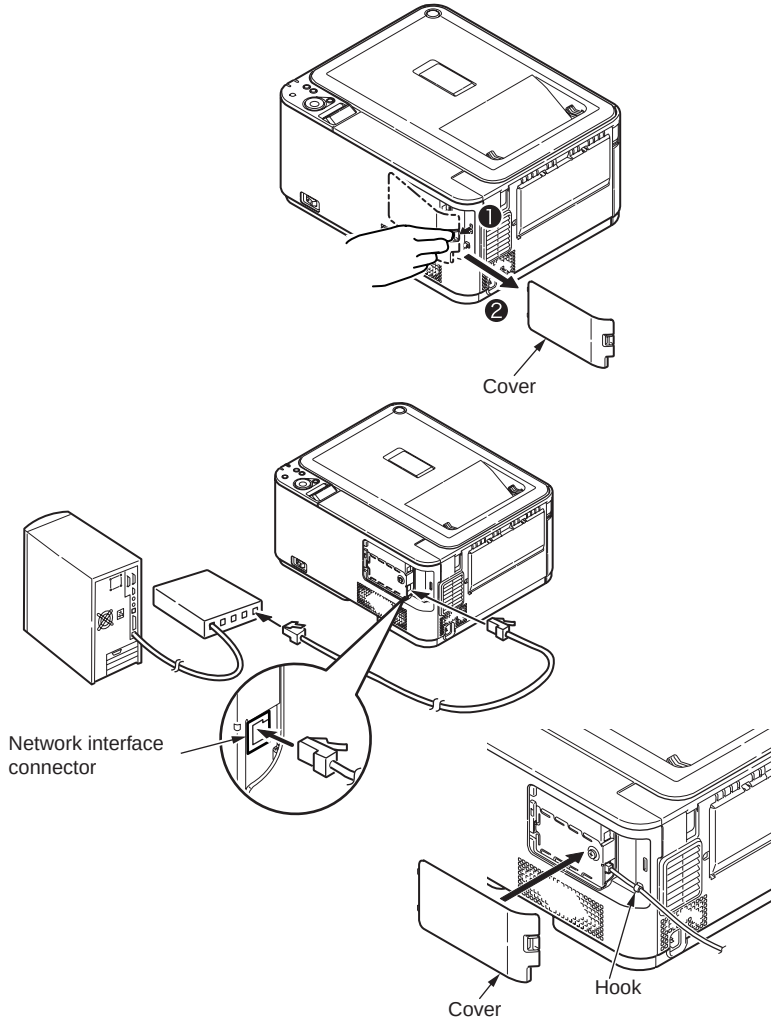


Switching off the printer and the computer

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.

3.8 Checking of paper used by the user

Load the media used by the user in the printer, make media weight/media type setting, print out MenuMap/Demo Page, and check printouts to make sure that no toner flakes off.

Type	Weight or thickness	Settings on the operator panel		Printer driver [Media weight] settings*2
		Media weight (paper thickness)	Media weight (paper thickness) Media type (paper type)*1	
Plain paper*3	55～64kg (64～74g/m2)	LIGHT	PLAIN	Light
	65～70kg (75～82g/m^2)	MEDIUMLIGHT		Medium Light
	71～89kg (83～104g/m^2)	MEDIUM		Medium
	90～103kg (105～120g/m^2)	HEAVY		Heavy
	104～151kg (121～176g/m^2)	ULTRAHEAVY1		Ultra heavy 1
	152～189kg (177～220g/m^2)	ULTRAHEAVY2		Ultra heavy 2
Postcard*4	—	—	—	—
Envelope*4	—	—	—	—
Label	0.1 to under 0.17 mm	HEAVY	LABELS	Label 1
	0.17 to 0.2 mm	ULTRAHEAVY1		Label 2

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

*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 settings on the operator panel when [Auto selection] is selected in [Feed tray] or when [Printer setting] is selected in [Media weight].

*3: The weight of paper supported for duplex print is 64 to 176g/m2 (55 to 151 kg).

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

Memo Print speed decelerates when [MEDIUM] through [ULTRAHEAVY2] of media weight or [LABELS] 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 (44346007TL) and RSPL (44346007TR) for the manual.

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 [the power switch to the off (O) position].

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

③ Remove the ground wire.

④ Unplug the AC cord and the interface cable.

⚠ Warning	Electric shock hazard	⚠

When replacing the low-voltage power supply, electric shock may occur. 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, due to PCB breakdown, could not discharge. Use caution about electric shock.

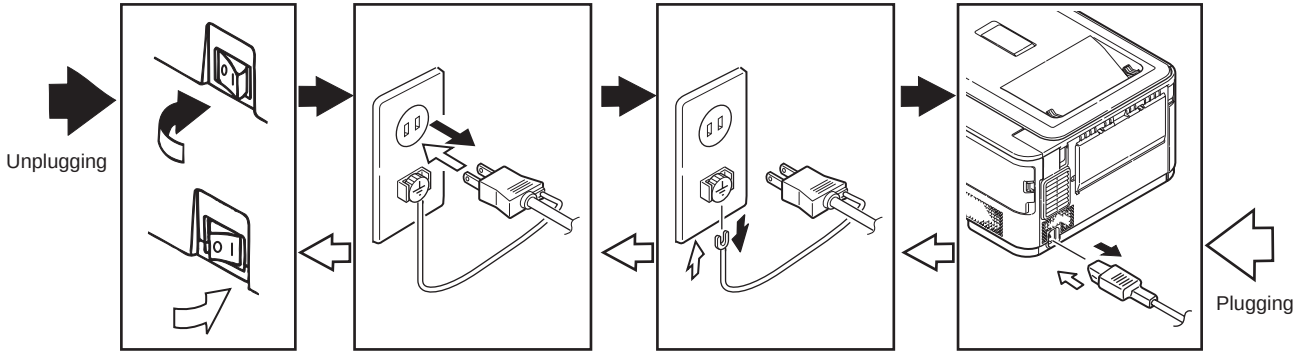
(b) Always use the following procedure to reconnect the printer:

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

② Connect the ground wire.

③ Insert the AC plug into the AC power source.

④ Turn on the printer [the power switch to the on (I) position].



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

(3) Minimize disassembly. Do not detach 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.

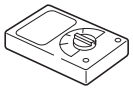
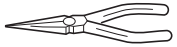
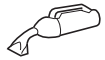
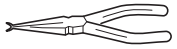
(7) Do not use static-prone gloves when handling integrated circuits (ICs), including microprocessors, and ROM and RAM chips, or circuit boards.

(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:

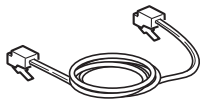
Table 4-1-1: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		Phillips screwdriver with magnetic tip, No. 2-200	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 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		See section 5.2 for Maintenance Utility.
2		USB cable	1		
3		Ethernet cable (crossover cable)	1		

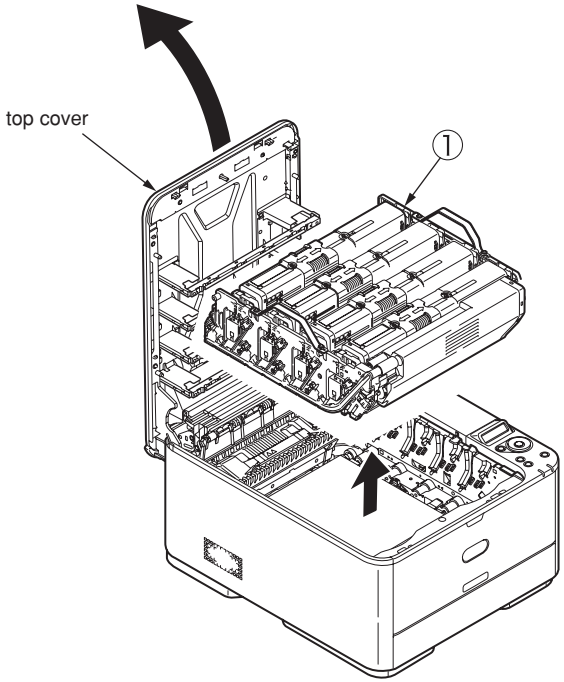
4.2 Part replacement procedure

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

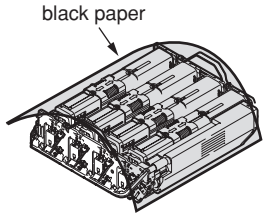
4.2.1 Belt unit

(1) Open the top cover.

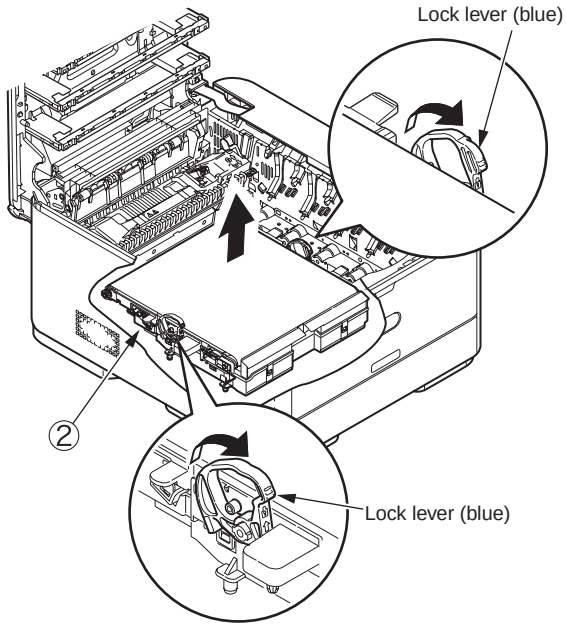
(2) Remove the image drum unit ① .



Note! Cover the removed image drum cartridges with a piece of black paper.



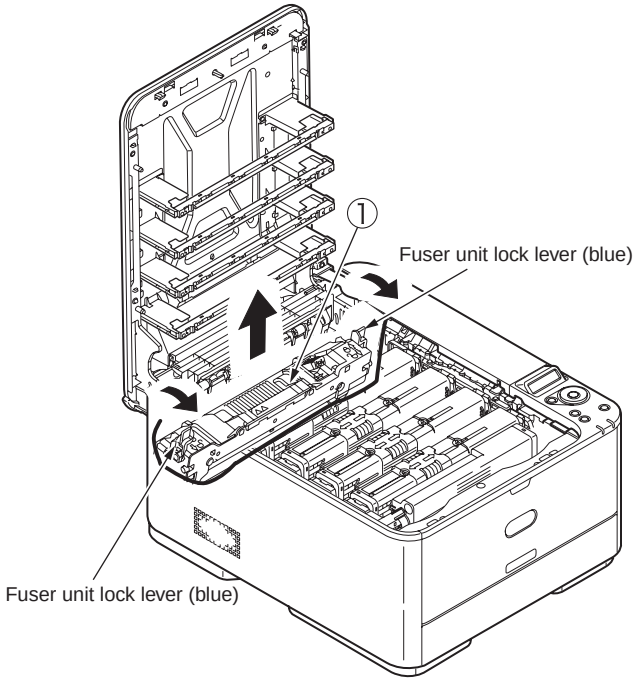
(3) Turn the (two blue) lock handles of the belt unit ② in the direction of the arrows and, holding the unit by the (blue) handle, detach the unit.



4.2.2 Fuser unit

(1) Open the top cover.

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

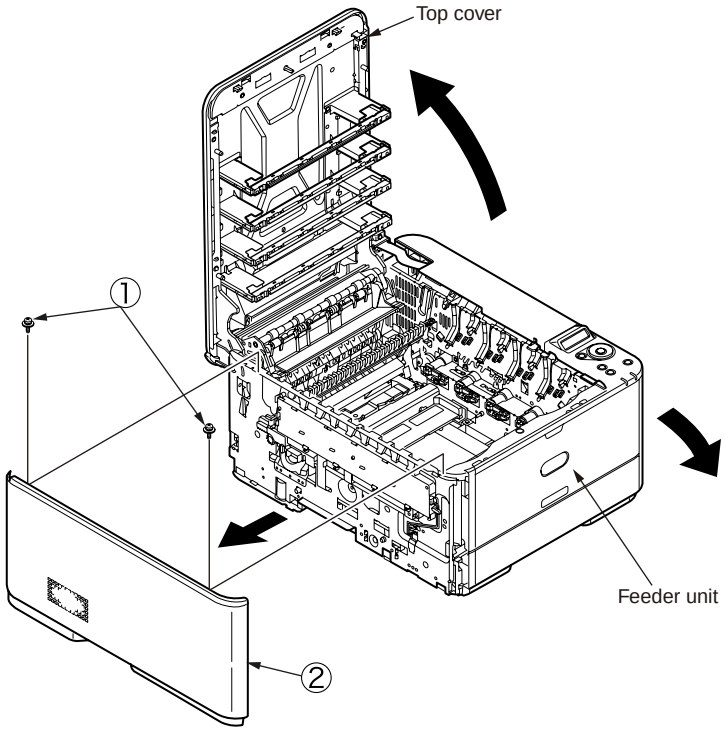


4.2.3 Left side cover

(1) Open the top cover.

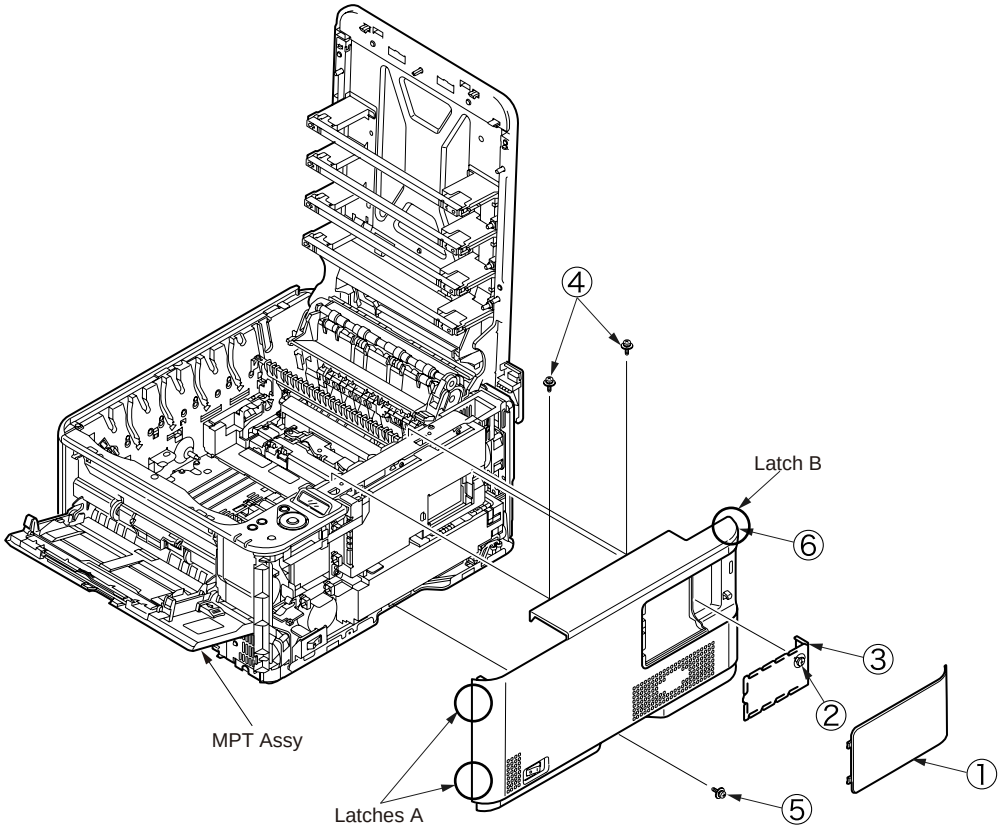
(2) Remove the two (silver-colored) screws ① .

(3) Unlatch and detach the left side cover ② .



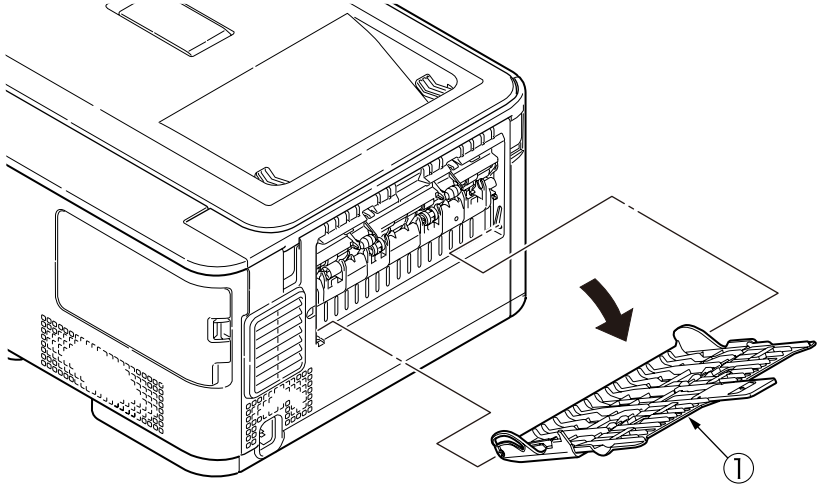
4.2.4 Right side cover

(1) Open the top cover.
(2) Remove the cassette assembly.
(3) Remove the interface cover ① .
(4) Loosen the screw ② to remove the memory cover ③ .
(5) Open the MPT assembly ④ .
(6) Remove the two (black) screws ⑤ and one (silver-colored) screw ⑥ .
(7) Unlatch two portions A and B to detach the right side cover ⑦ .



4.2.5 Face-up tray

(1) Open the face-up tray ① in the direction of the arrow and, warping it, disengage two portions to detach the face-up tray.



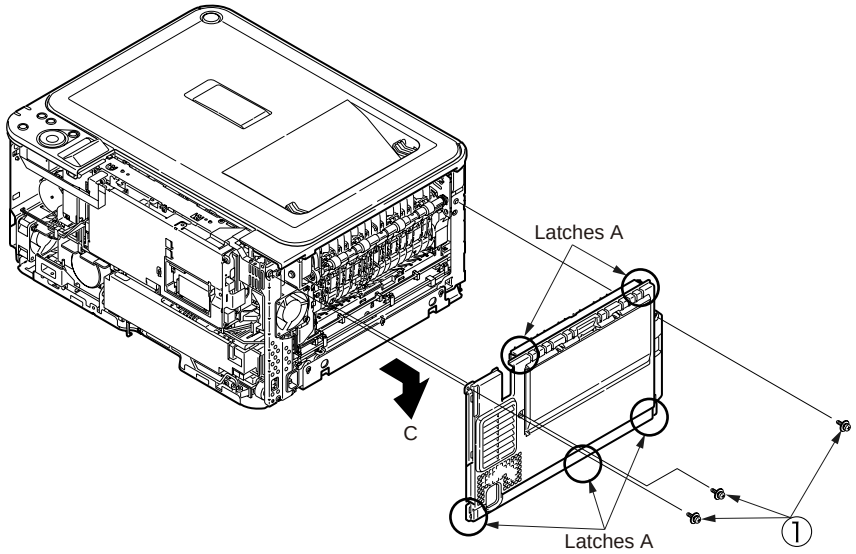
4.2.6 Rear cover

(1) Remove the left side cover and the right side cover.

(2) Remove the three (silver-colored) screws ① .

(3) Unlatch two portions A with a flat-blade screwdriver.

(4) Unlatch three portions B to slide the rear cover ② in the direction of the arrow C to detach it.

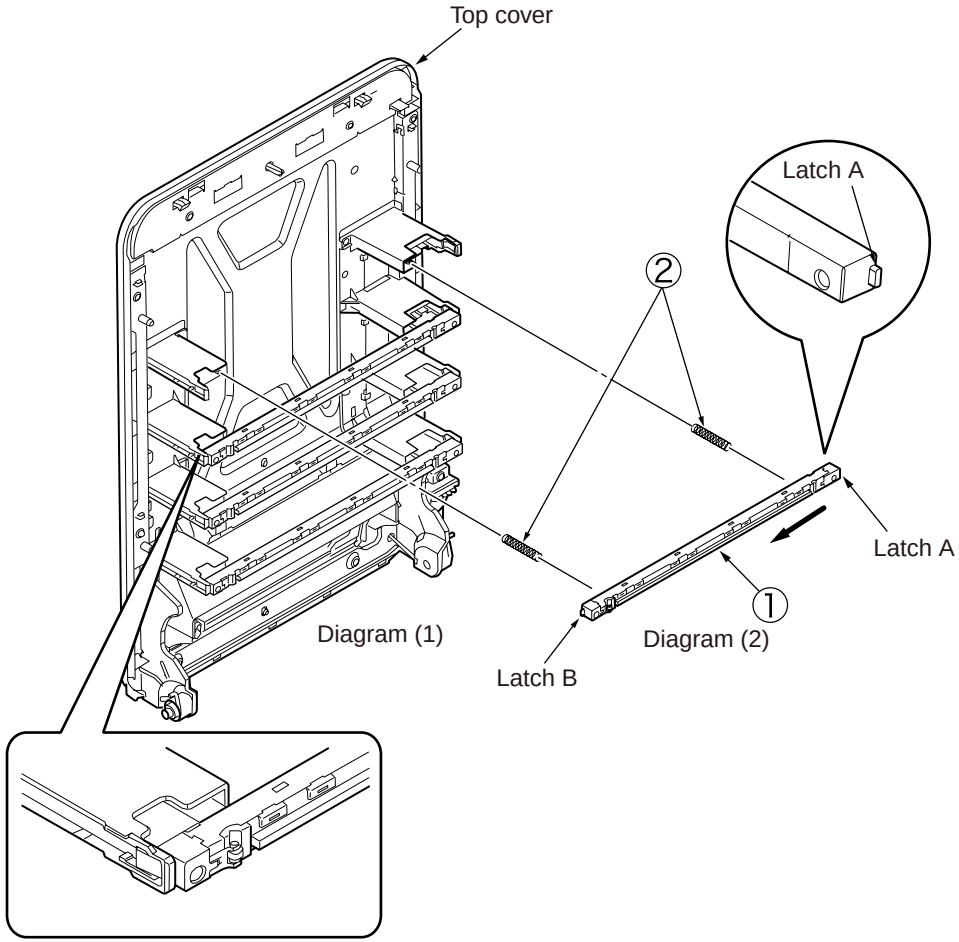


4.2.7 LED assembly. and LED assembly springs

(1) Open the top cover.

(2) Remove the cables of the LED assembly. As shown in diagram (2), apply force in the direction of the arrow to unlatch the portion A and then the portion B to detach the LED assembly ① .

(3) Turning the LED assembly springs ② clockwise, detach it.

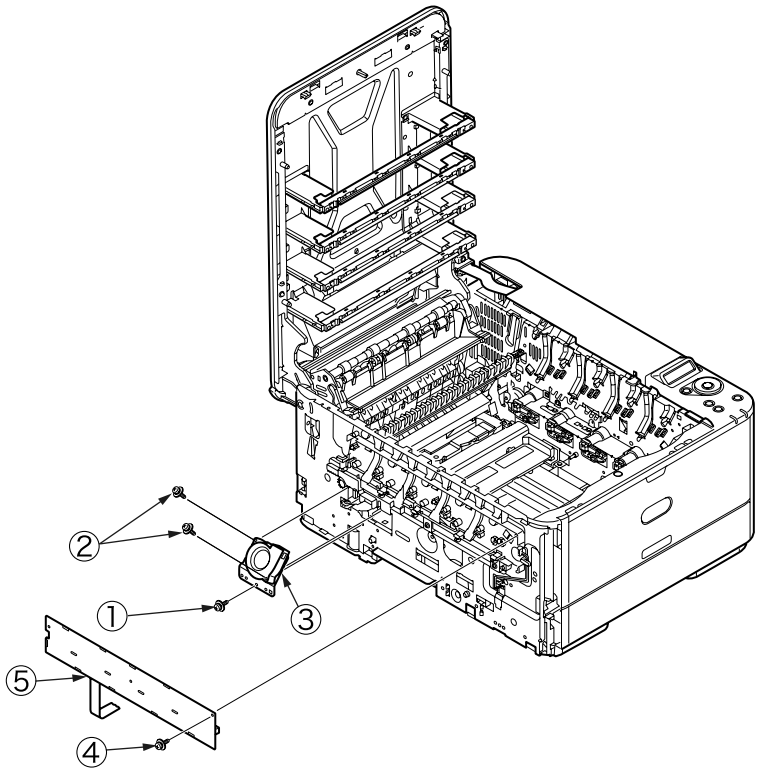


4.2.8 Image drum fan and ZHJ board

(1) Remove the left side cover.

(2) Remove the (silver-colored) screw ① and the two (silver-colored) screws to detach the image drum fan ③.

(3) Remove the (silver-colored) screw ④ and unlatch five portions to detach the ZHJ board ⑤.



4.2.9 CU/PU PCB and low-voltage power supply

⚠Warning | Electric shock hazard

When replacing the low-voltage power supply, electric shock may occur. 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, due to PCB breakdown, could not discharge. Use caution about electric shock.

(1) Remove the right side cover.

(2) Remove the four (silver-colored) screws ① and unlatch and remove the plate shield assembly ②.

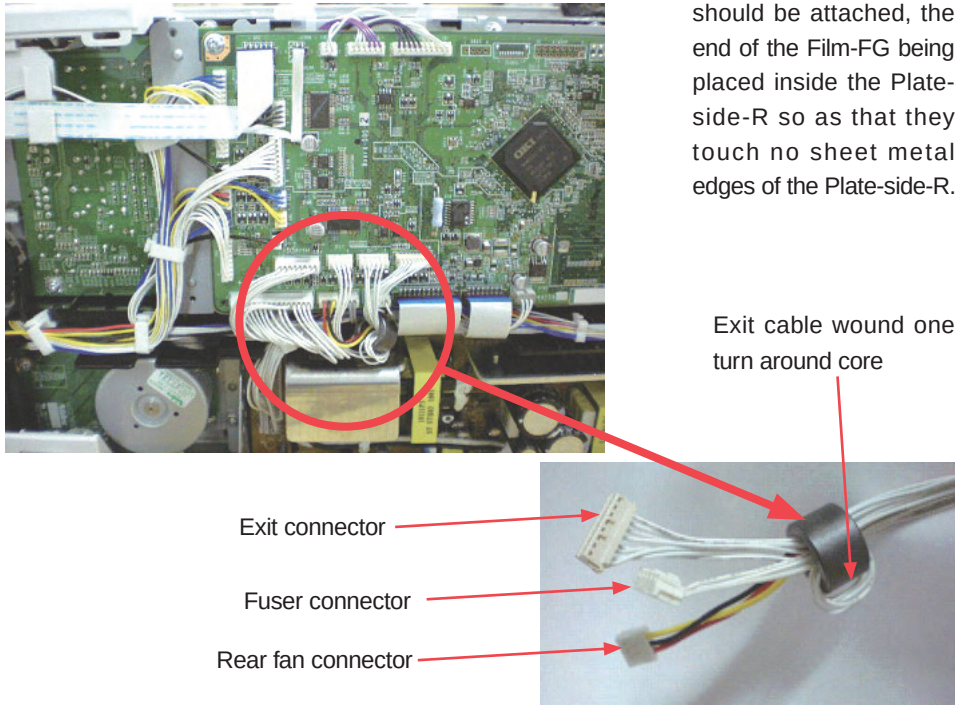
(3) Remove all the CU/PU board cables.

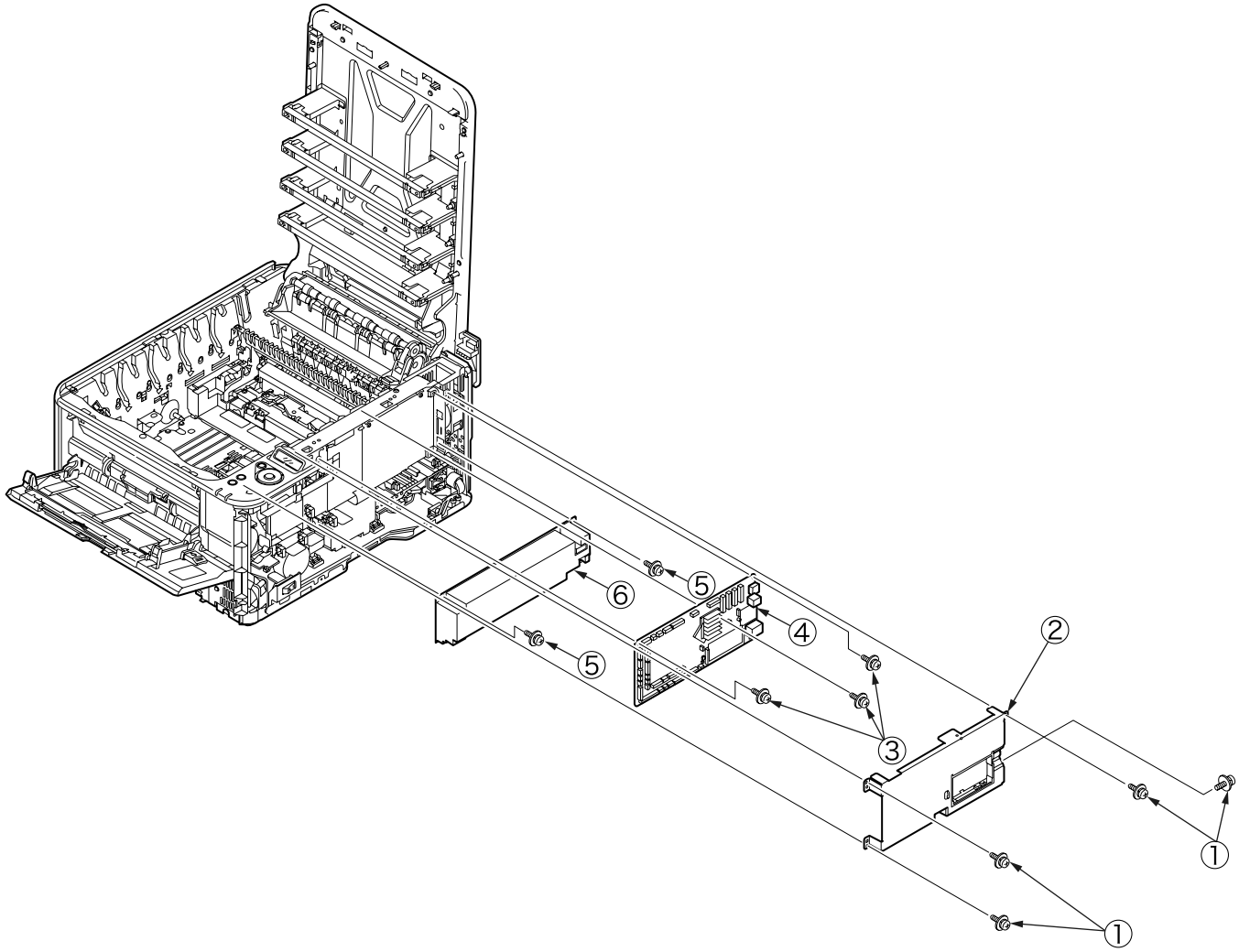
(4) Remove the three (silver-colored) screws ③ to detach the PU/CU PCB ④.

(5) Remove all the low-voltage power supply cables.

(6) Remove the two (silver-colored) screws ⑤ .to detach the low-voltage power supply ⑥.

Note! The LED head cables should be attached, the end of the Film-FG being placed inside the Plate-side-R so as that they touch no sheet metal edges of the Plate-side-R.




⑥
⑤
⑤
④
②
③
①
①

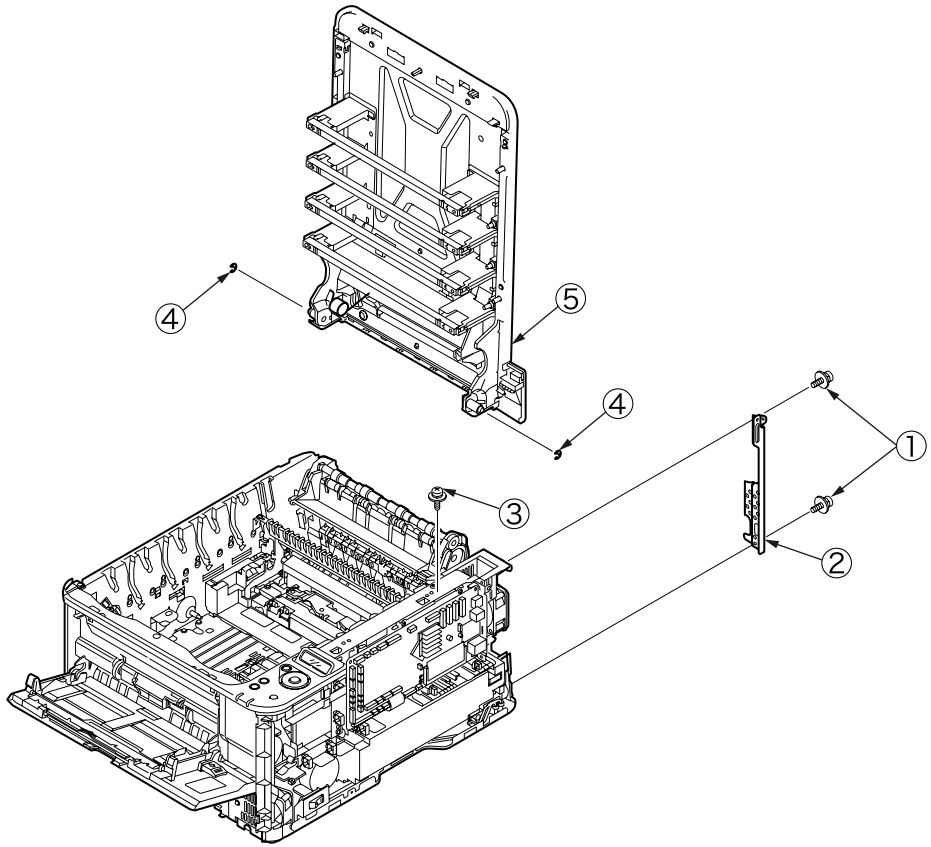
4.2.10 Top cover assembly

(1) Remove the left side cover, the right side cover and the rear cover.

(2) Remove the plate shield assembly and then the LED head cables.

(3) Remove the two screws ① to remove the plate-rear ② .

(4) Remove the (silver-colored) screw ③ and then the two E-shaped retainer rings ④ to detach the top cover ⑤ .

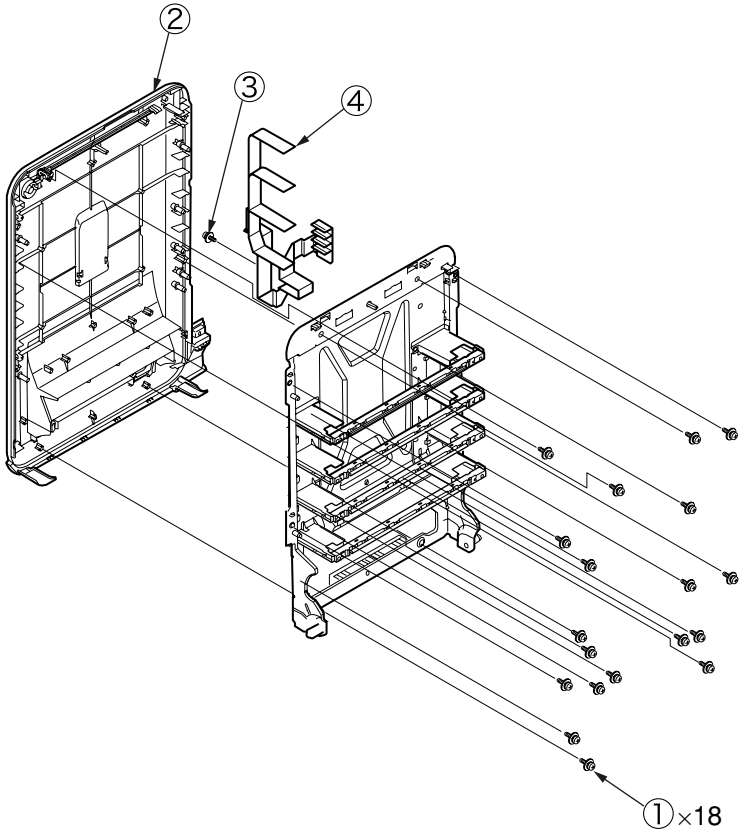


4.2.11 Top cover and LED head cable assembly

(1) Demount the top cover assembly.

(2) Remove the 18 (black) screws ① to detach the top cover ② .

(3) Remove the (silver-colored) screw ③ to detach the LED head cable assembly ④ .



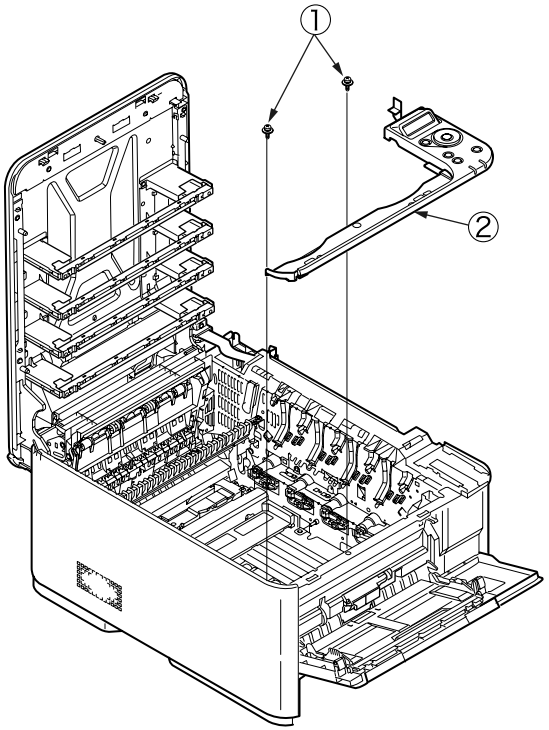
4.2.12 Operator panel assembly

(1) Remove the right side cover and plate shield assembly.

(2) Remove the cable of the operator panel assembly.

* CU/PU PCB OPWE connector

(3) Remove the two screws ① to detach the operator panel assembly ② .



4.2.13 Board IBB and LCD

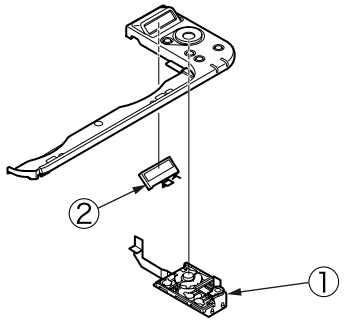
(1) Remove the operator panel assembly.

(2) Unlatch the three portions A.

(3) Detach the Board IBB ① .

(4) Unlatch the two portions B.

(5) Detach the LCD assembly ② .

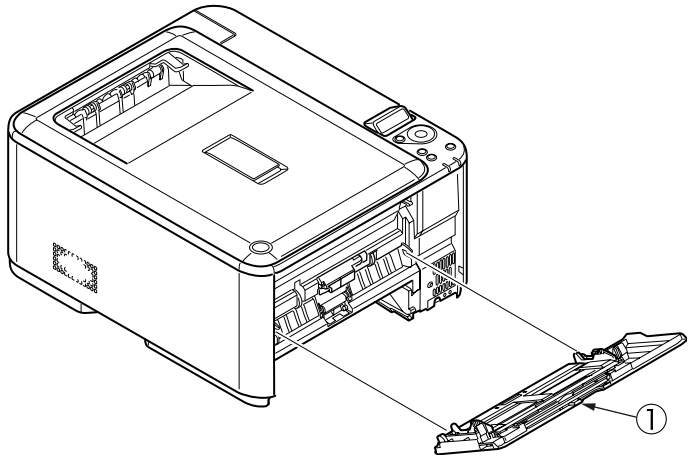


4.2.14 MPT assembly

(1) Remove the cassette assembly.

(2) Open the MPT assembly ①.

(3) Pull the MPT assembly in the direction of the arrow and release the two supports to detach the MPT assembly.



4.2.15 Front fan, hopping motor, rear fan, image drum motor and cover-open switch

(1) Remove the left side cover, the right side cover, the rear cover, the MPT assembly, the plate-rear, the plate shield assembly and the operator panel assembly.

(2) Remove the two (silver-colored) screws ① to detach the hopping motor ② .

(3) Remove the two (silver-colored) screws ③ to detach the rear fan.

(4) Remove the two (silver-colored) screws ④ and unlatch the frame-MPT-side ⑤ to remove it.

(5) Remove the two (silver-colored) screws ⑥ to detach the front fan ⑦ .

(6) Remove the four (silver-colored) screws ⑧ and the (FG) screw ⑨ to remove the plate support ⑩ , the AC inlet ⑪ , the shaft ⑬ and the switch ⑭ .

(7) Remove the four (silver-colored) screws ⑮ to detach the image drum motor ⑯ .

(3) Remove the screw to detach the cover-open switch.

Note!

• Observe the orientation to attach the low-voltage fan ⑥ .

• Be sure of the AC input voltage setting to attach the low-voltage power supply ③ .

100V : Attach a short plug to connector CN6.

230V : Attach no short plug to connector CN6.

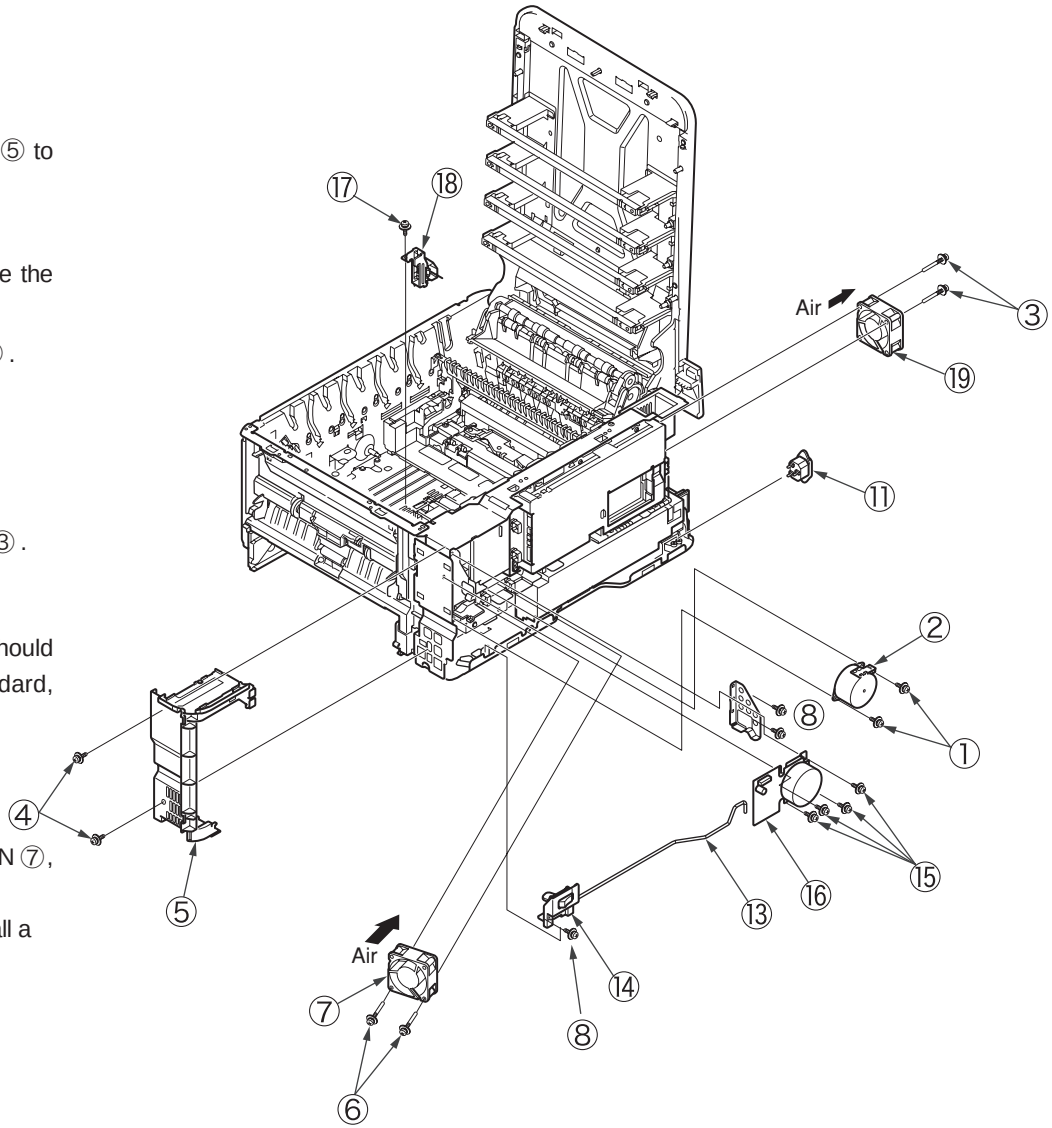
- The low-voltage power supply ③ and the AC inlet assembly ⑤ . should be replaced combined (they have been qualified to a safety standard, combined).
- The number of screws varies depending on the fusing motor:

Three : 43963301 (Sanyo)

Four : 43070601 (Nidec)

- While removing or installing FAN ⑦ , ⑲ , do not press impeller of the FAN ⑦ , ⑲ .

  In case of the impeller unfastened by mistake, do not reuse it and install a new FAN.



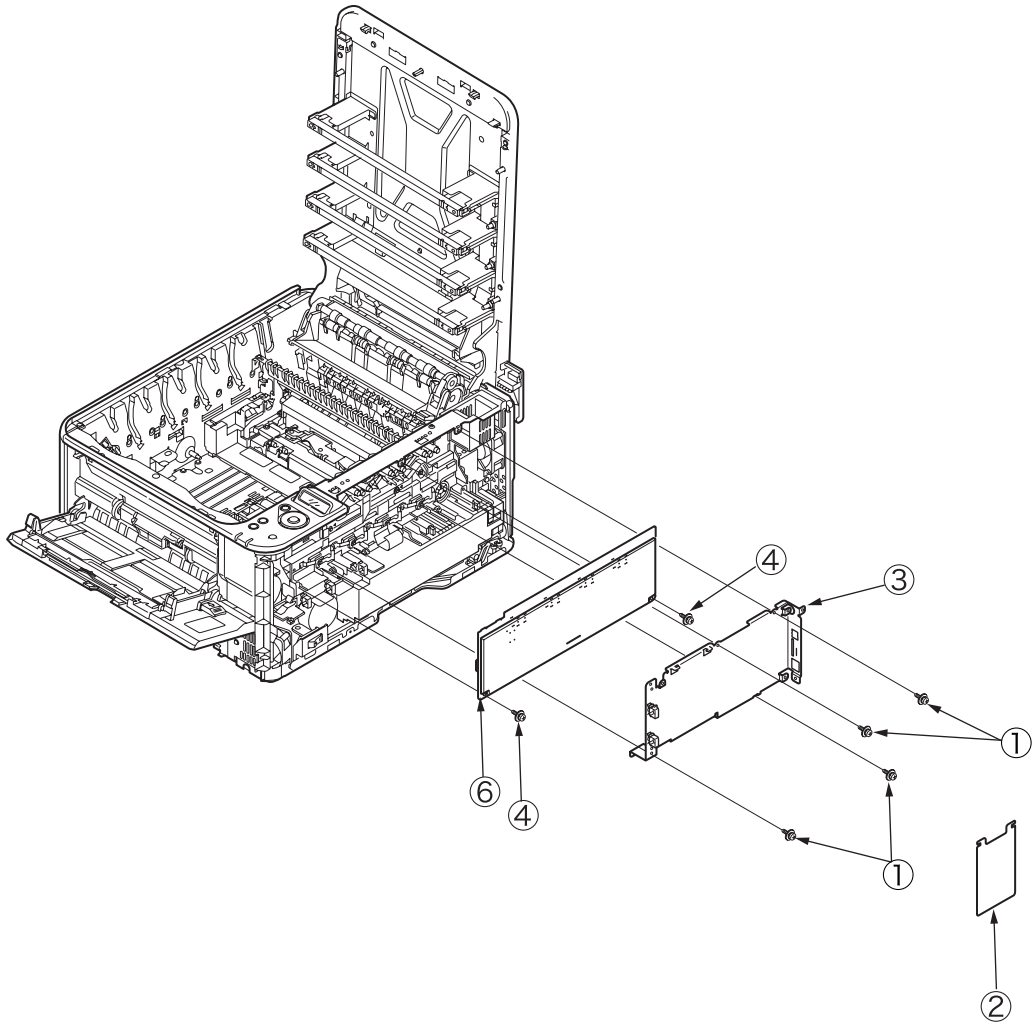
4.2.16 High-voltage power supply board

(1) Remove the right side cover and the CU/PU PCB.

(2) Remove the four (silver-colored) screws ① to remove the film-PUCU board ② and the plate board ③ .

(3) Remove the two (silver-colored) screw to remove the plate-FG ⑤ .

(4) Unlatch the four portions to detach the high-voltage power supply board ⑤ .



4.2.17 Guide-ejection assembly, fuser connector assembly and color-registration assembly

(1) Remove the left side cover, the right side cover, the rear cover and the top cover assembly.

(2) Remove the CU/PU PCB and the low-voltage power supply.

(3) Detach the guide-ejection assembly ① .

(4) Remove the two (silver-colored) screws ② to detach the fuser connector assembly ③ .

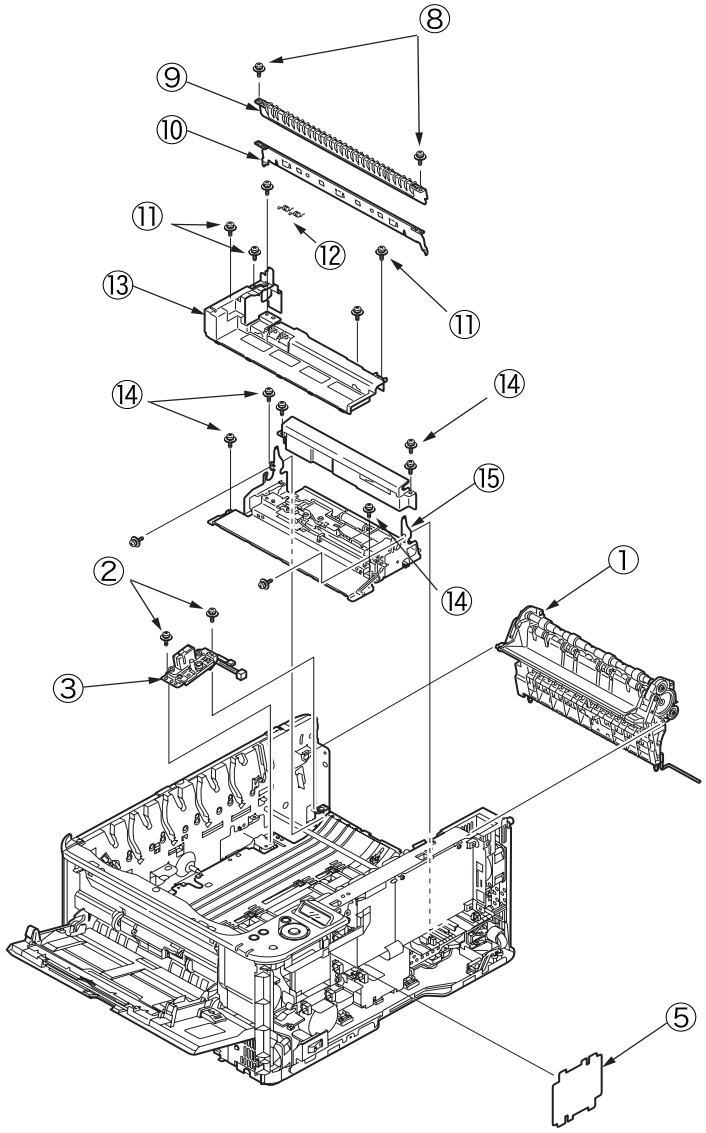
(5) Remove the film-PUCU board ④ and the film-power board ⑤ .

(6) Remove the (silver-colored) screw ⑧ to remove the image drum fan assembly ⑦ .

(7) Remove the two (silver-colored) screws ⑥ to remove the cover-beam ⑨ and the plate-beam ⑩ .

(8) Remove the three (silver-colored) screws ⑪ to remove the two torsion springs ⑫ and then the cover-code ⑬ .

(9) Remove the four (silver-colored) screws to detach the color-registration assembly ⑮.



4.2.18 Frame-MPT assembly and feeder assembly

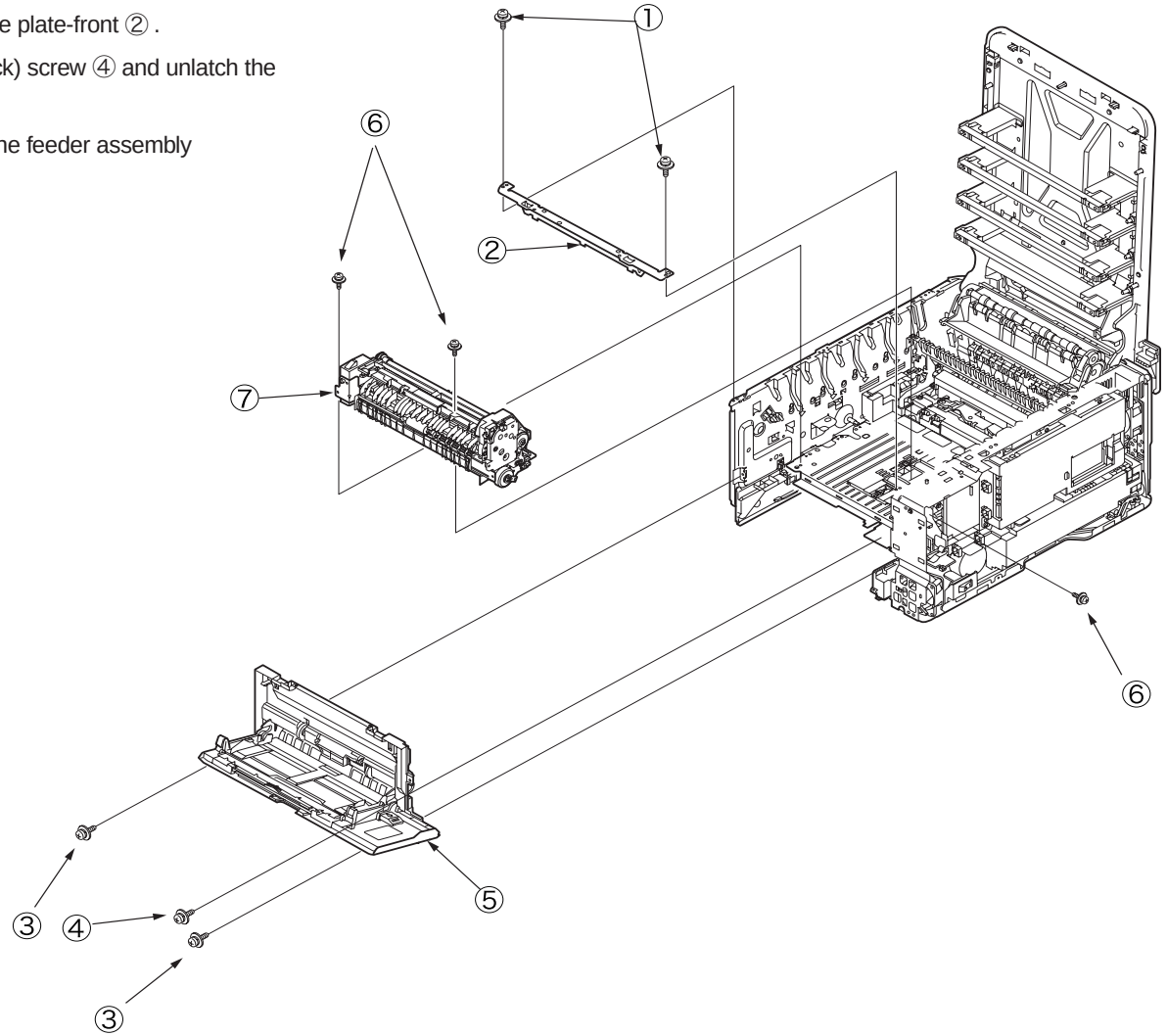
(1) Remove the left side cover, the right side cover, the rear cover, the hopping motor, the plate shield assembly, the operator panel assembly, the cover-open switch and the frame-MPT-side.

(2) Remove the RGSNS, HPSNS and MPC cables of the PU/CUPCB.

(3) Remove the two (silver-colored) screws ① to remove the plate-front ② .

(4) Remove the two (silver-colored) screws ③ and the (black) screw ④ and unlatch the two portions to detach the frame-MPT assembly.

(5) Remove the three (silver-colored) screws ⑥ to detach the feeder assembly



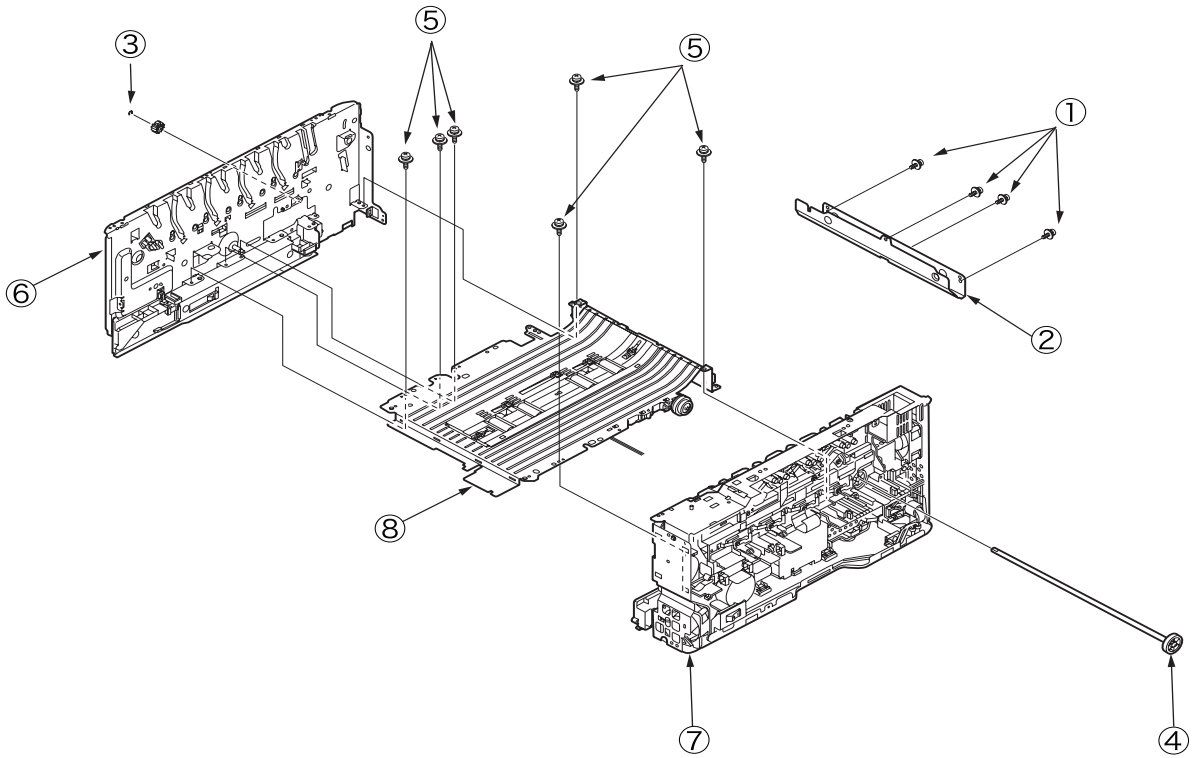
4.2.19 Side-L assembly, side-R assembly and base assembly ⑦ .

(1) Remove the left side cover, the right side cover, the rear cover, the top cover assembly, the operator panel assembly, the feeder assembly, the guide-ejection assembly and the registration assembly.

(2 Remove the four (silver-colored) screws ① to remove the plate-bottom ② .

(3) Remove the E-shaped retainer ring ③ and then the shaft ④ .

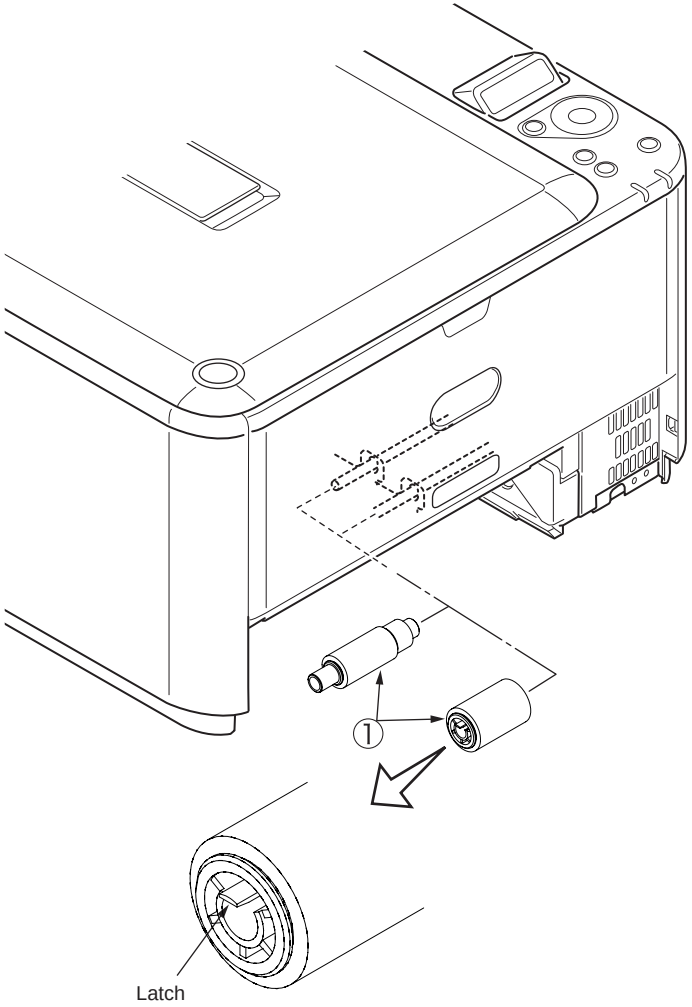
(4) Remove the six (silver-colored) screws ⑤ to detach the side-L assembly ⑥ , the side-R assembly ⑦ and the base assembly ⑧ .



4.2.20 Feed rollers

(1) Remove the cassette.

(2) Unlatch the feed rollers ① .



4.3 Locations to lubricate

This section shows the locations to lubricate. The other locations must not be lubricated. Lubrication is not required during assembly or disassembly, except that, after lubricant is wiped off locations, the appropriate lubricant specified must be applied to the locations.

Each number circled, accompanied with the number and name of a drawing indicates that the lubrication work with the number is specified in the drawing.

Lubrication work

(1) Lubricant notations and names

EM-30L: Molykote EM-30L (part number 44498501)

HP-300: Molykote HP-300

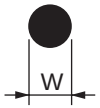
PM: Pan motor oil 10W-40 or ZOA 10W-30

GE-334C: FLOIL GE-334C (part number 41823301)

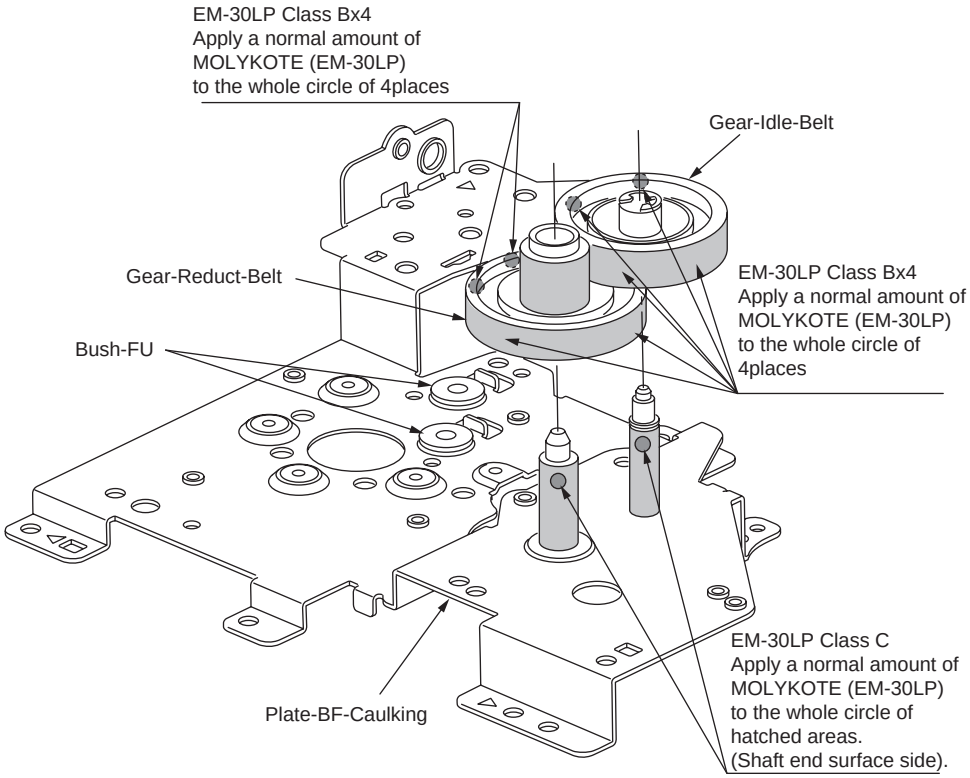
SF-133: HANARL SF-133

(2) Grease boundary samples

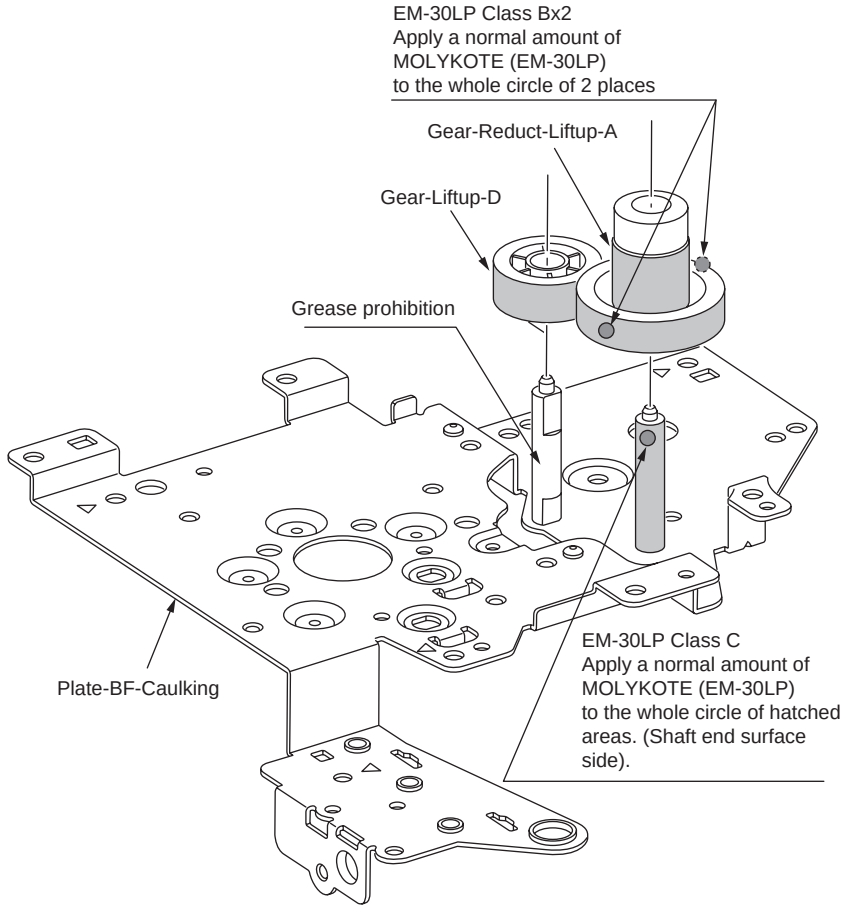
Class	S	A	B	C	D	E	F
Amount applied (cc)	0.0005	0.003	0.005	0.01	0.03	0.05	0.1
W(mm)	1.24	2.25	2.67	3.37	4.86	5.76	7.26
Sample	•	●	●	●	●	●	●



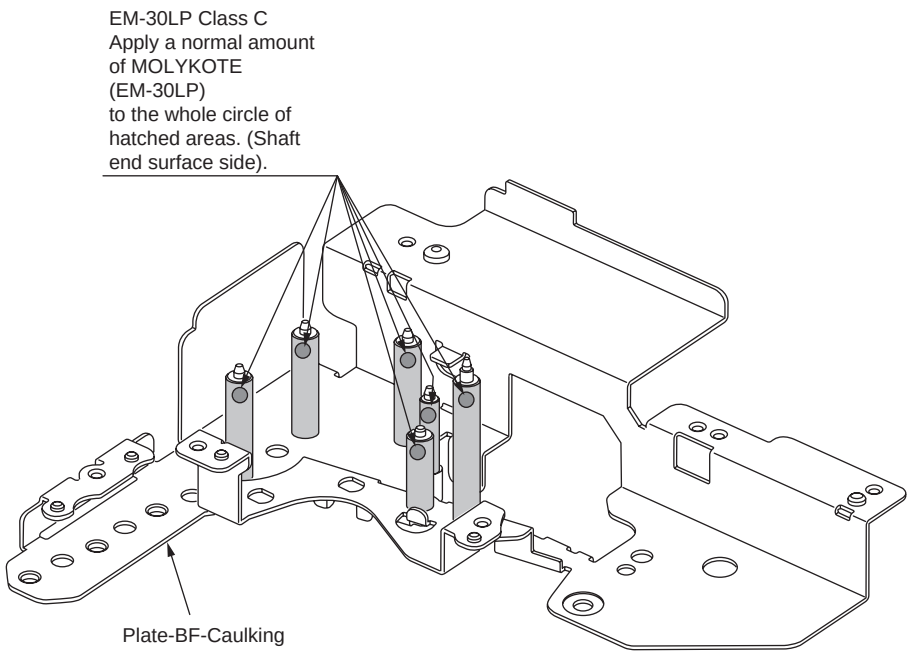
① -1 44452301PA Side-R Assy.



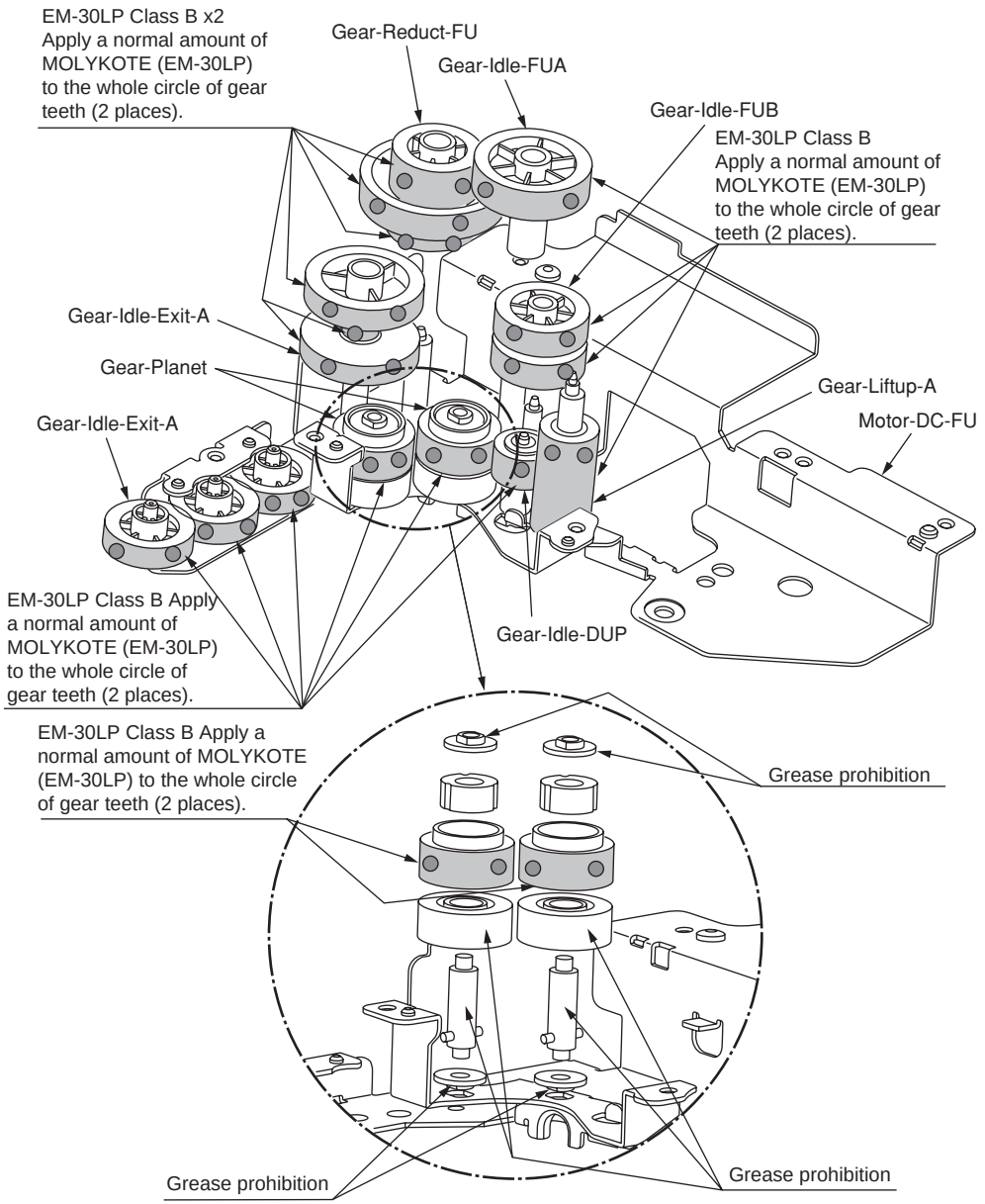
① -2 44452301PA Side-R Assy.



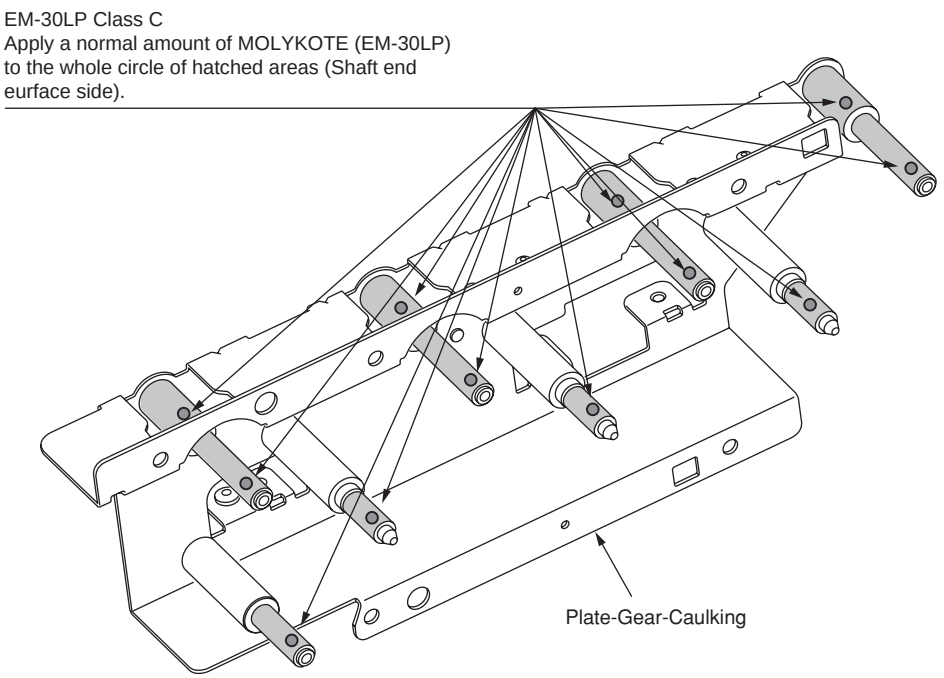
① -3 44452301PA Side-R Assy.

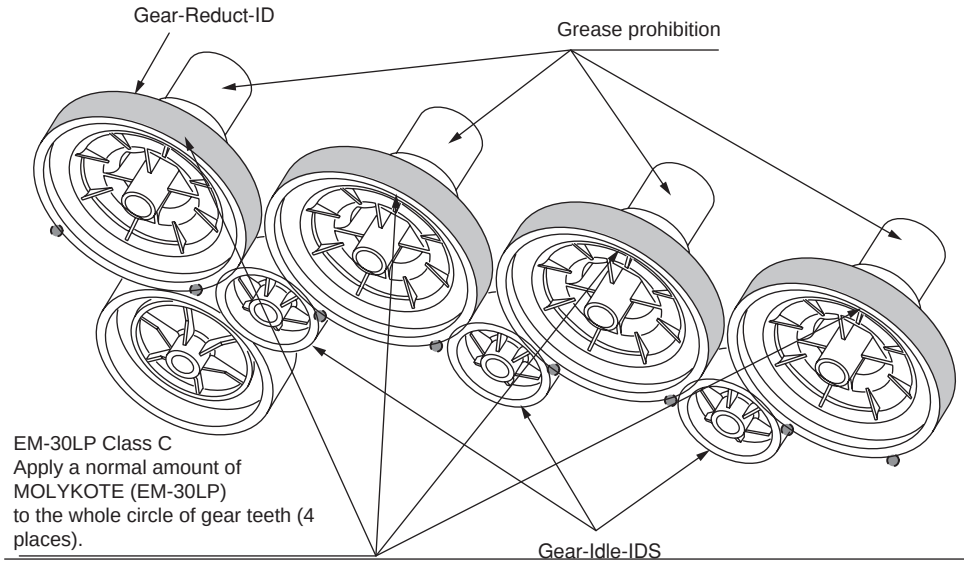


① -4 44452301PA Side-R Assy.

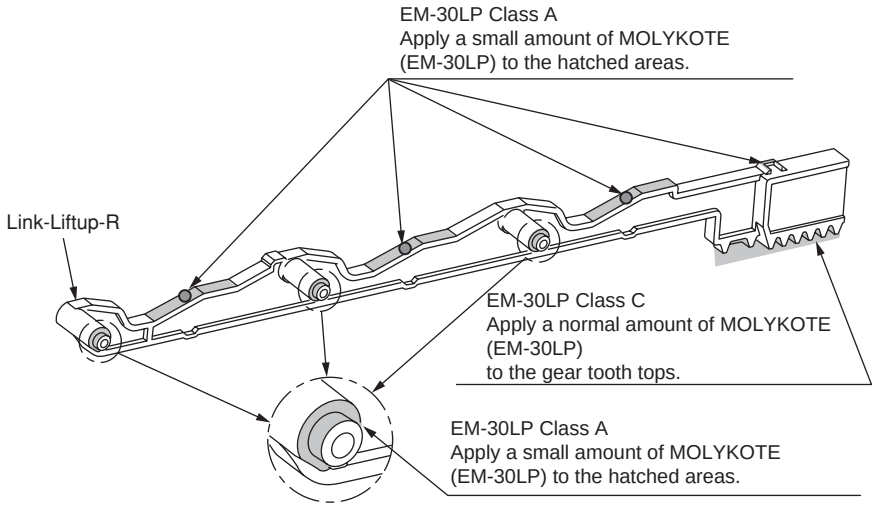


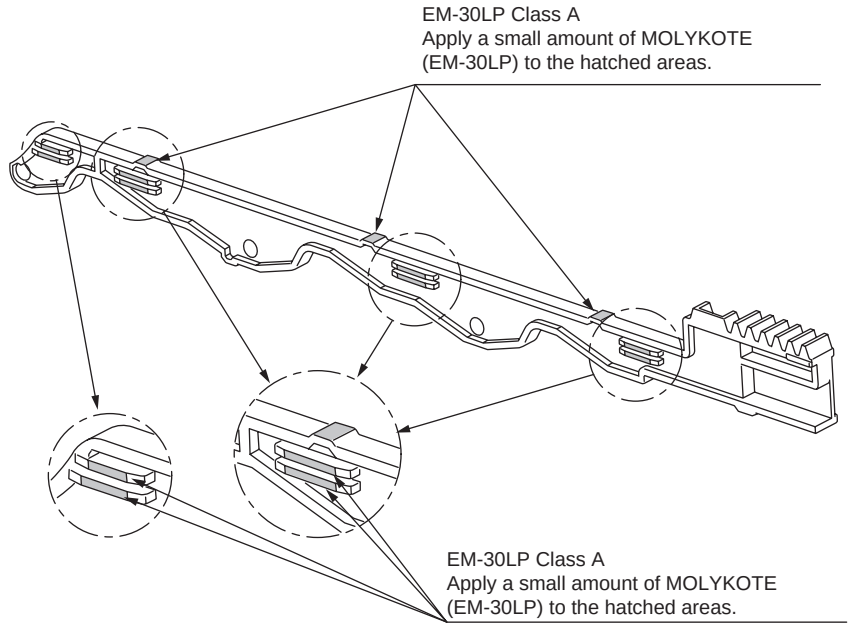
① -5 44452301PA Side-R Assy.



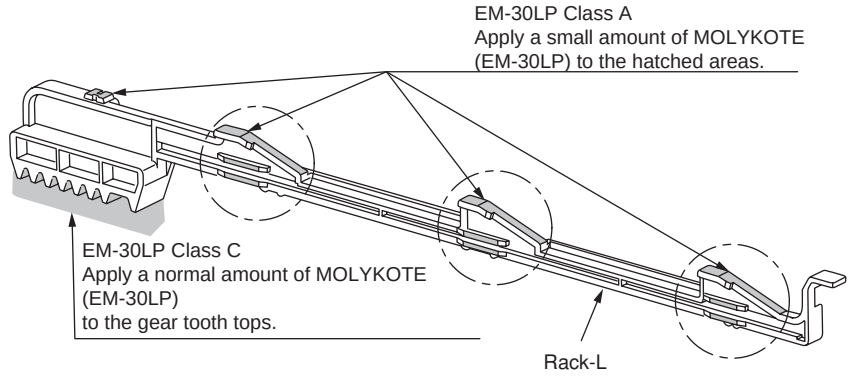


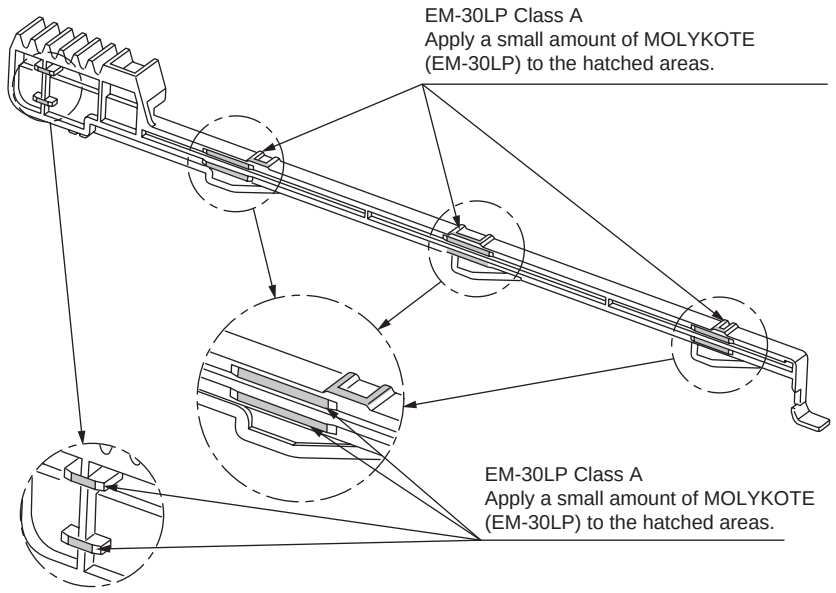
① -6 44452301PA Side-R Assy.



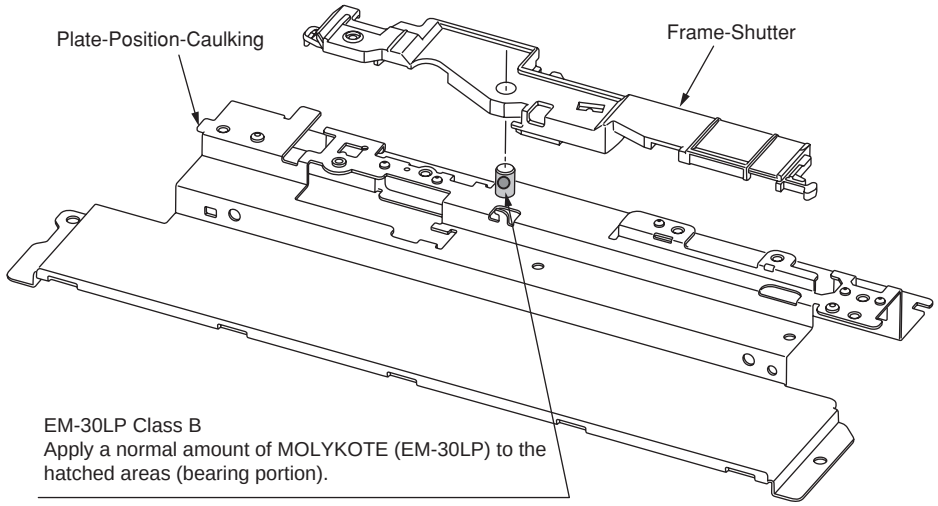


② 44452401PA Side-L Assy.

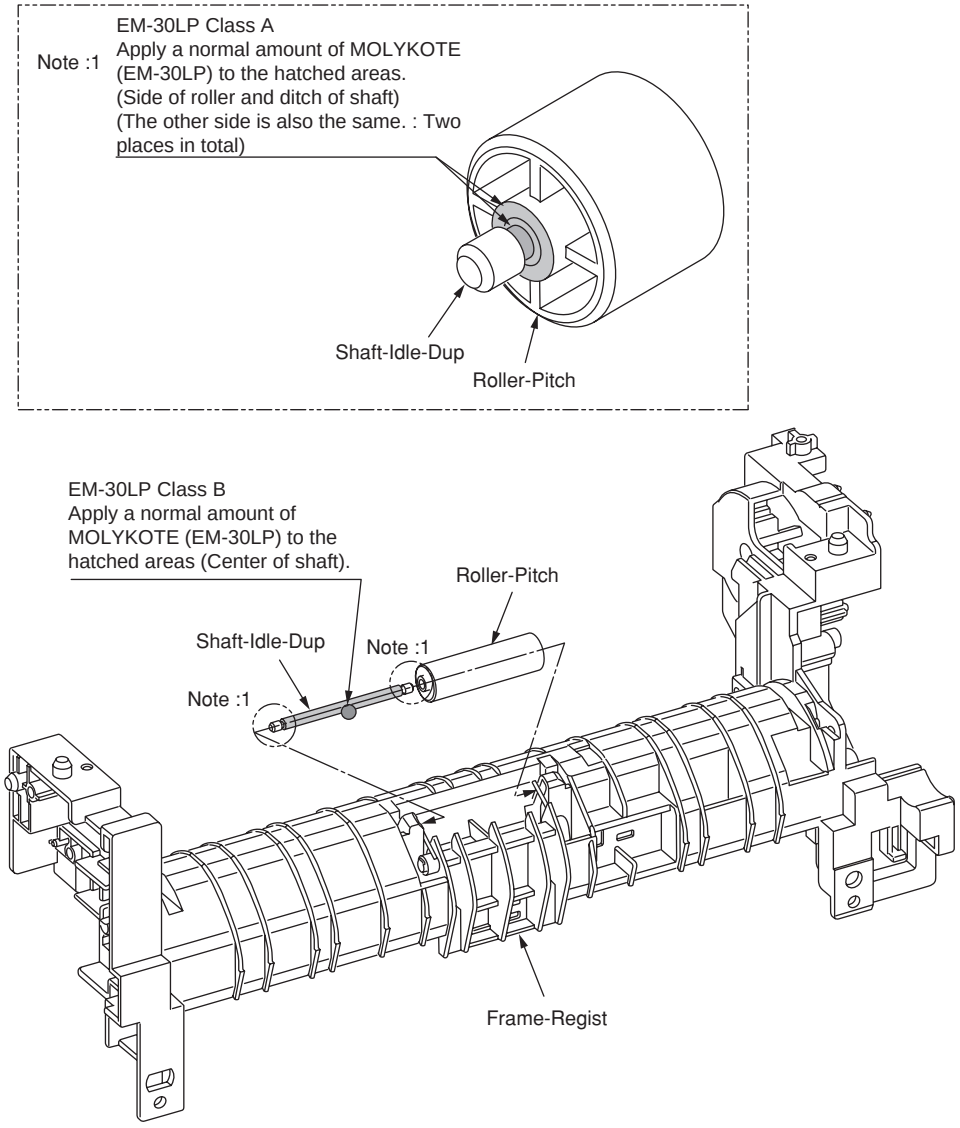




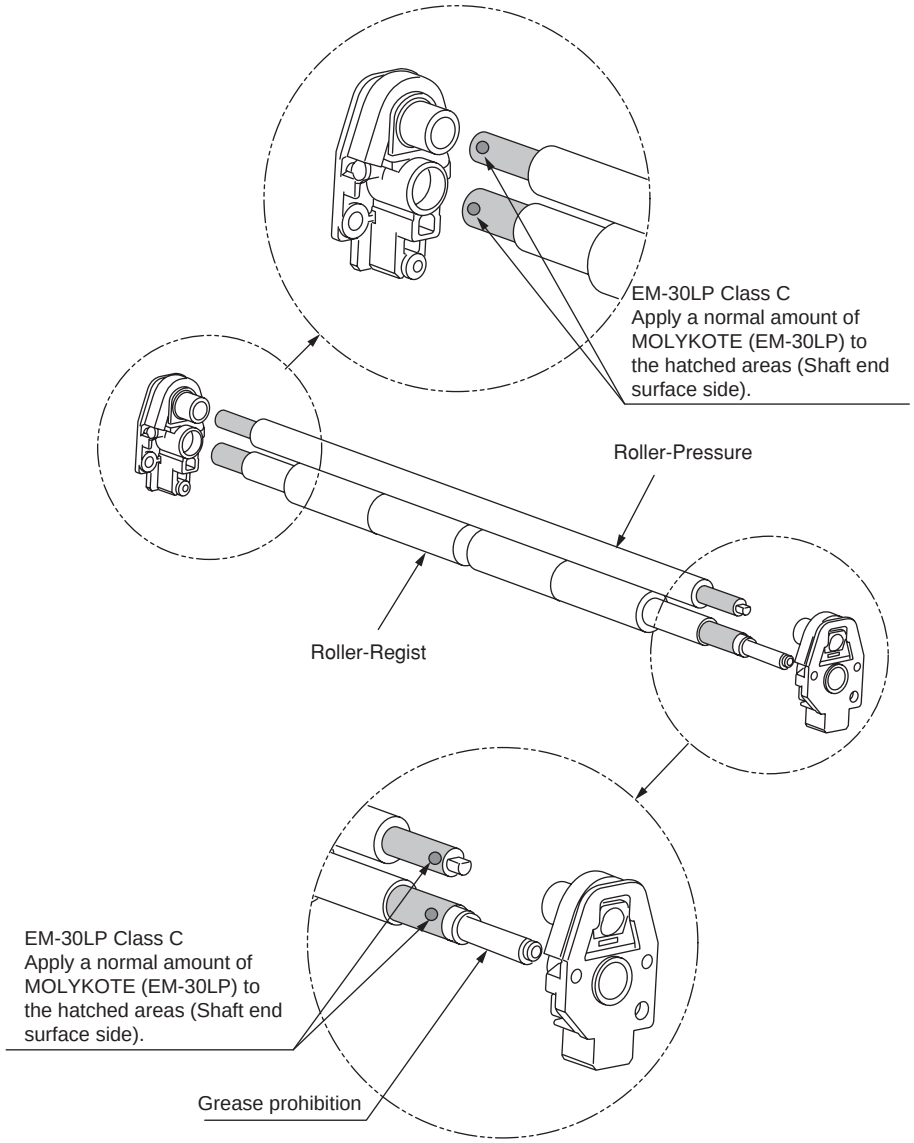
③ 44452601PA Sensor Assy.-Regist



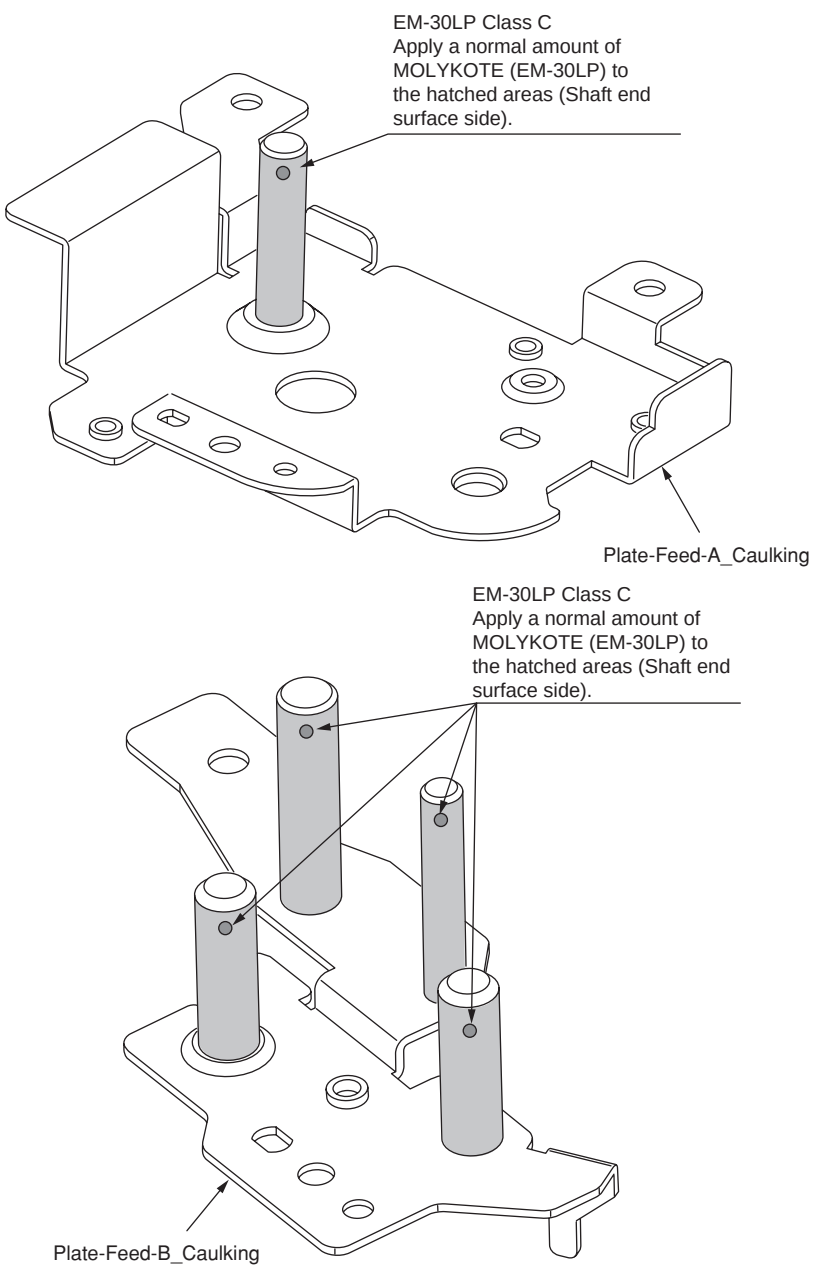
④ -1 44452701PA Front Assy.-Reg/Hop



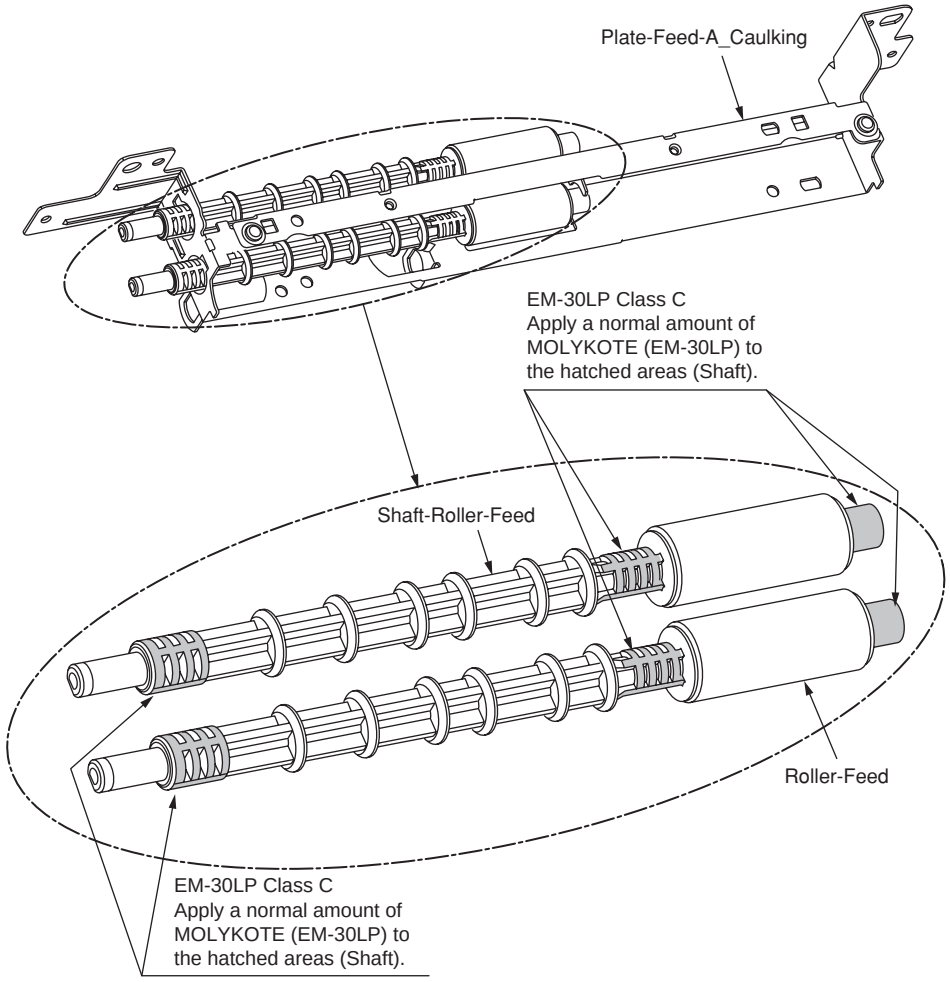
④ -2 44452701PA Front Assy.-Reg/Hop



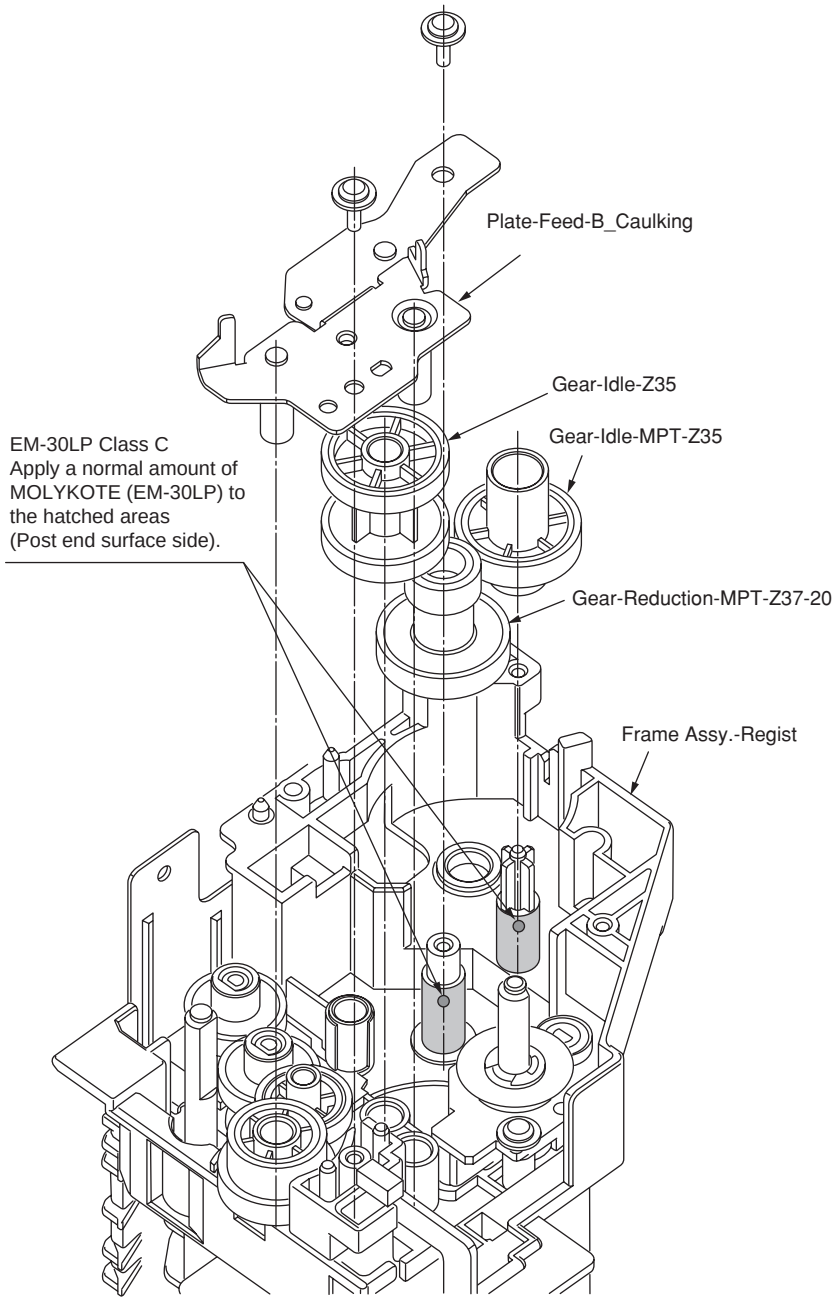
④ -3 44452701PA Front Assy.-Reg/Hop



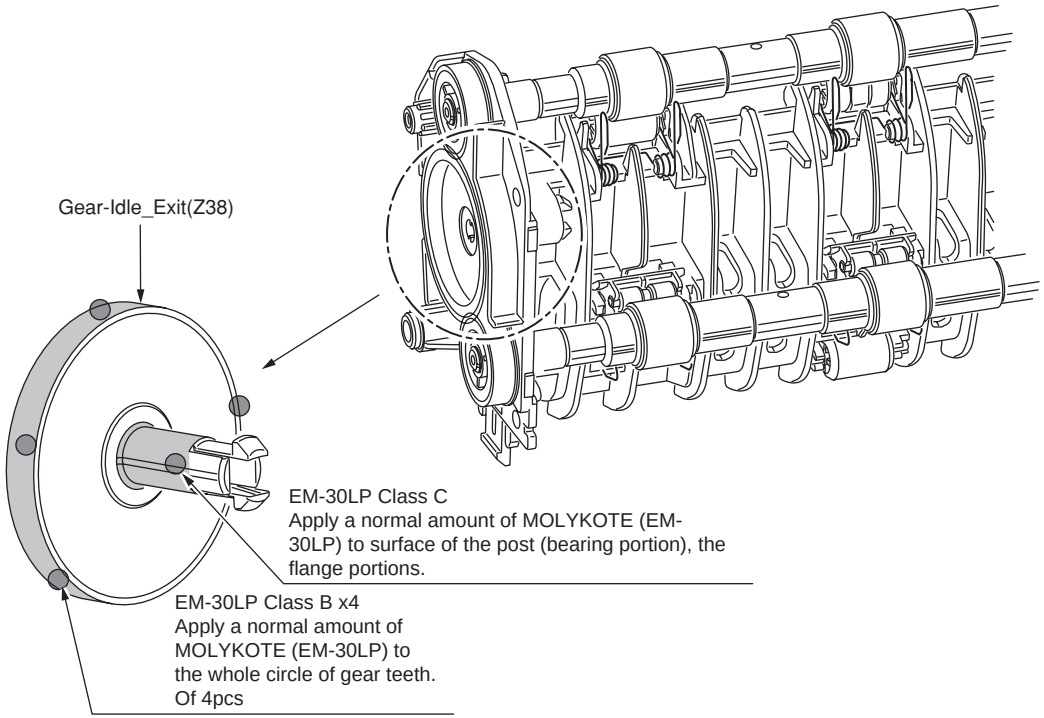
④ -4 44452701PA Front Assy.-Reg/Hop



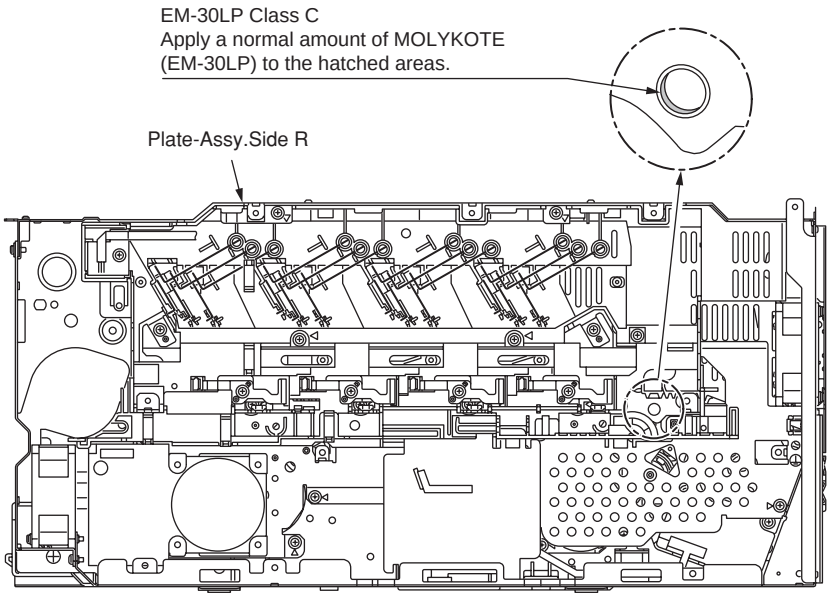
④ -5 44452701PA Front Assy.-Reg/Hop



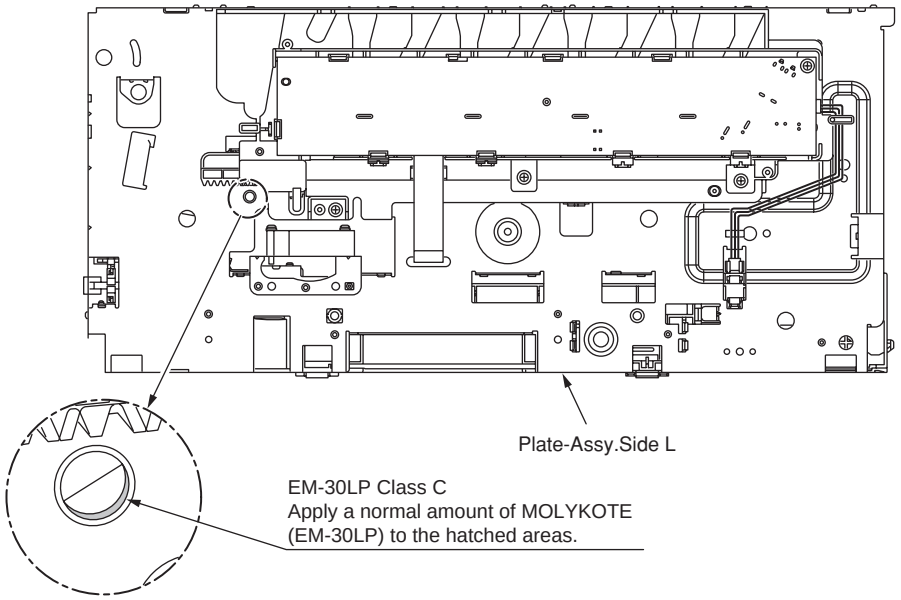
⑤ 44364101PA Eject Assy



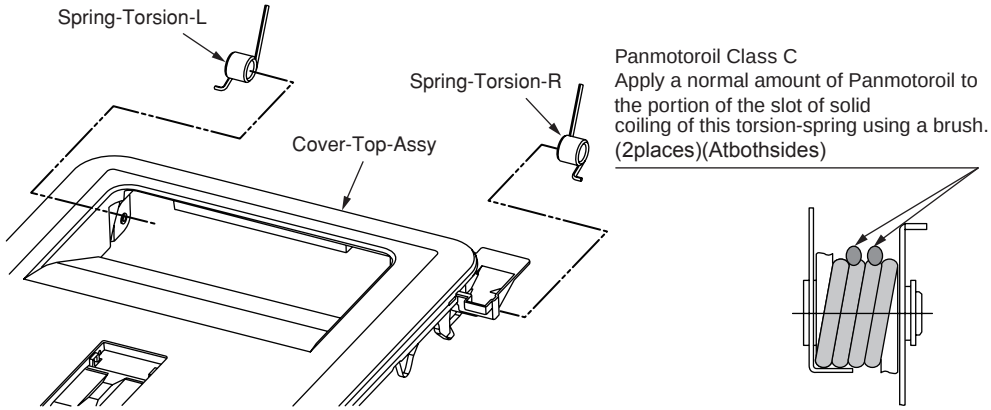
⑥ -1 44453001PA Printer Unit-PX750



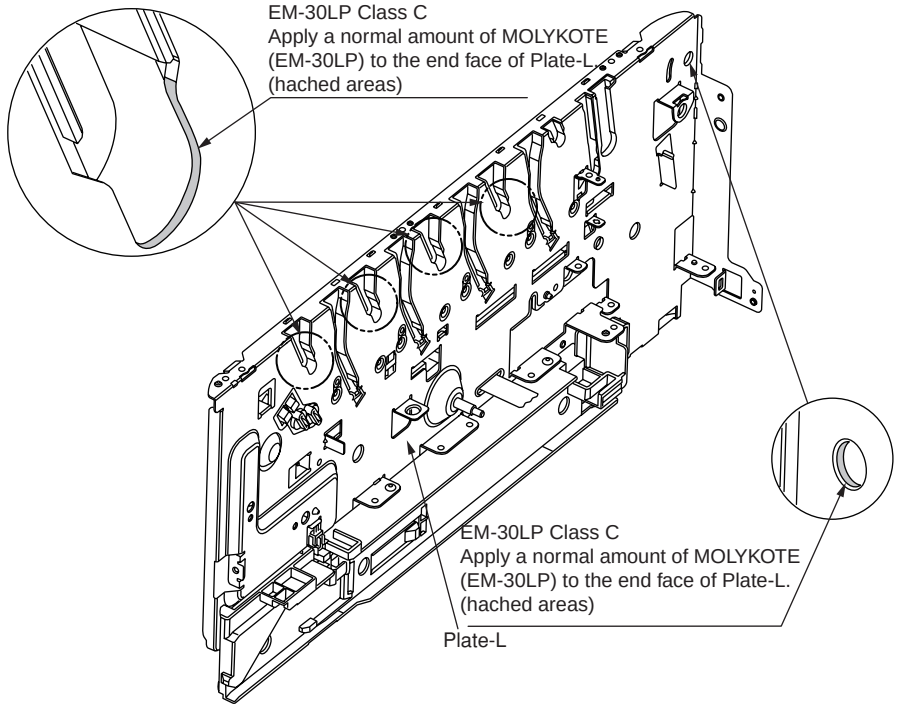
⑥ -2 44453001PA Printer Unit-PX750



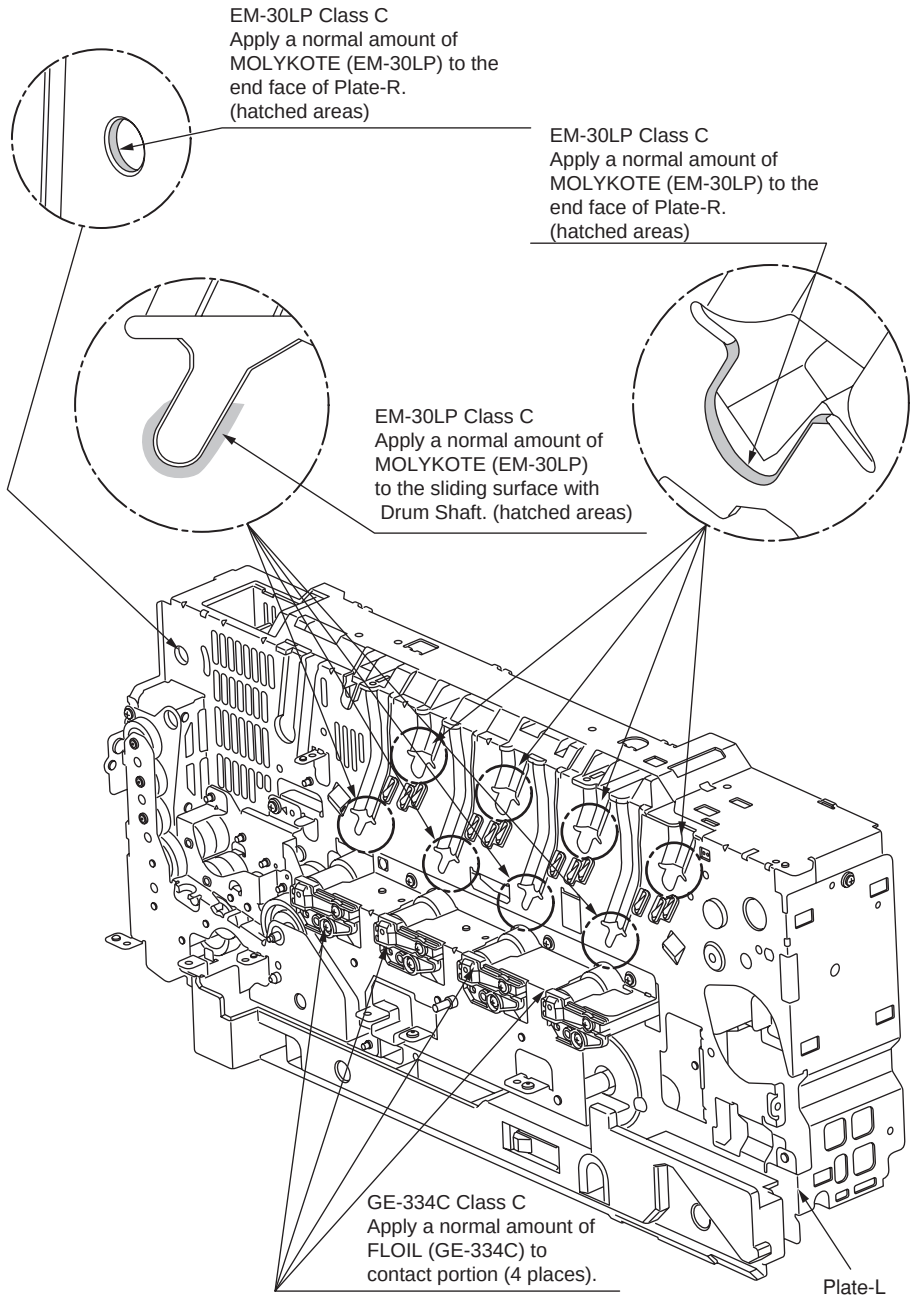
⑥ -3 44453001PA Printer Unit-PX750



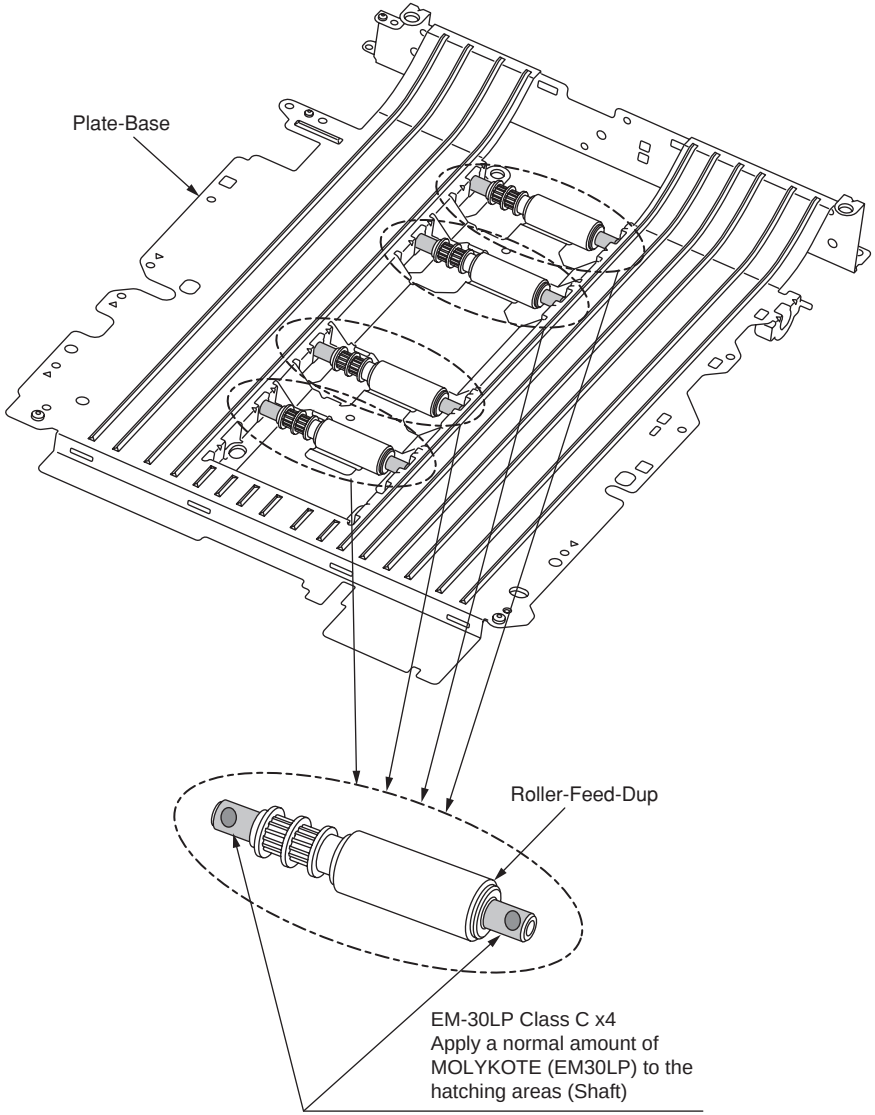
⑥ -4 44453001PA Printer Unit-PX750



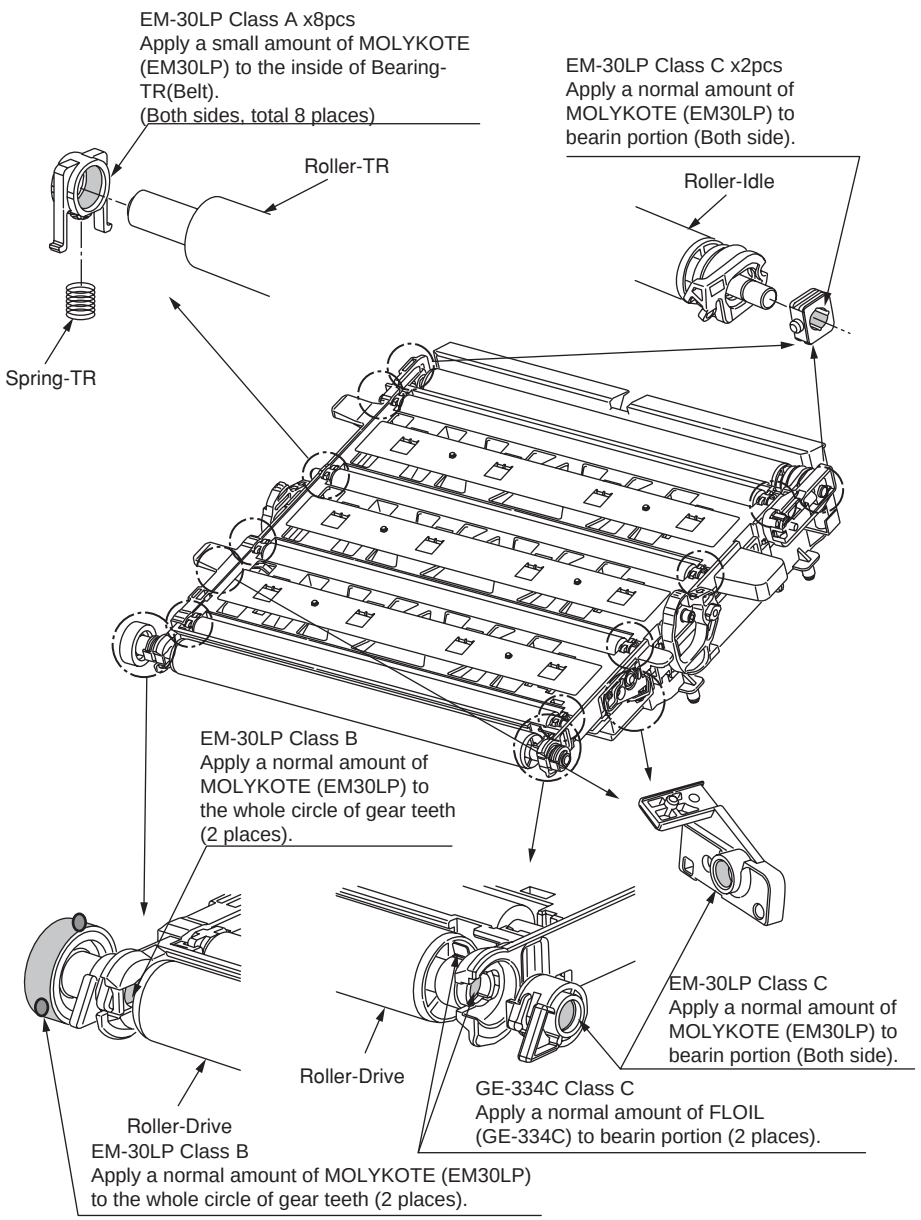
⑥ -5 44453001PA Printer Unit-PX750



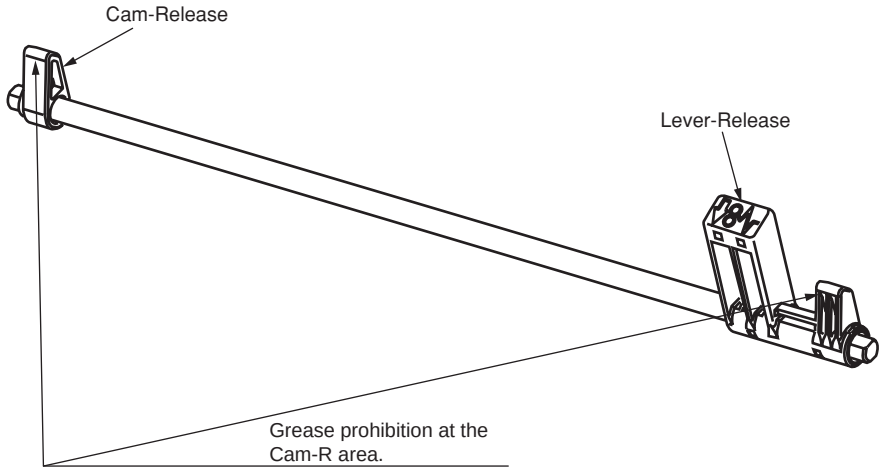
⑦ 44452501PA Base-Assy

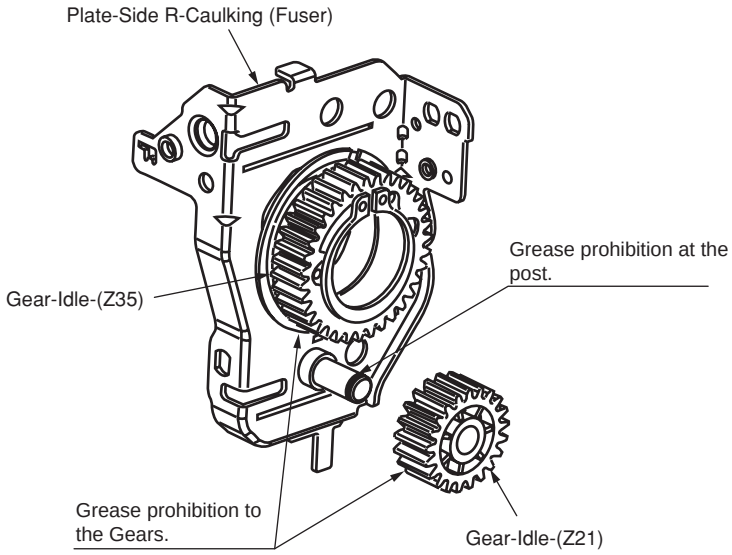


⑧ 44458601PA Belt-Unit

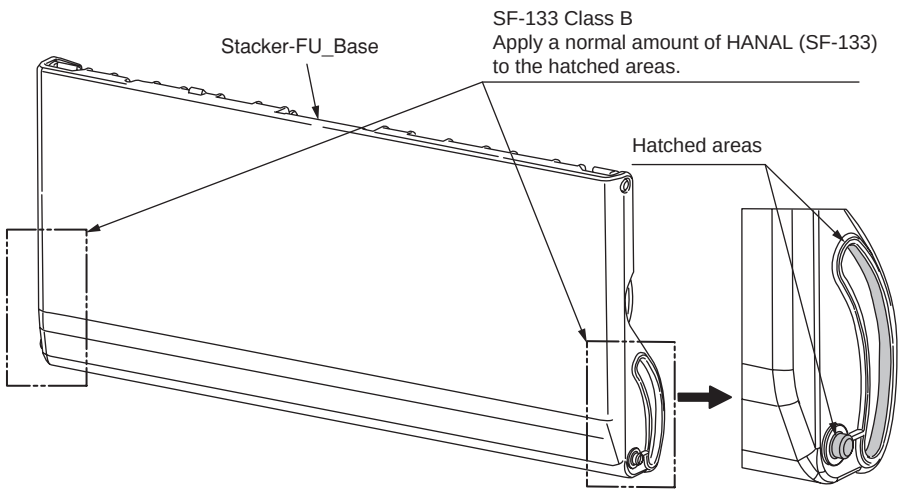


⑨ 44381001PA Fuser-Assy



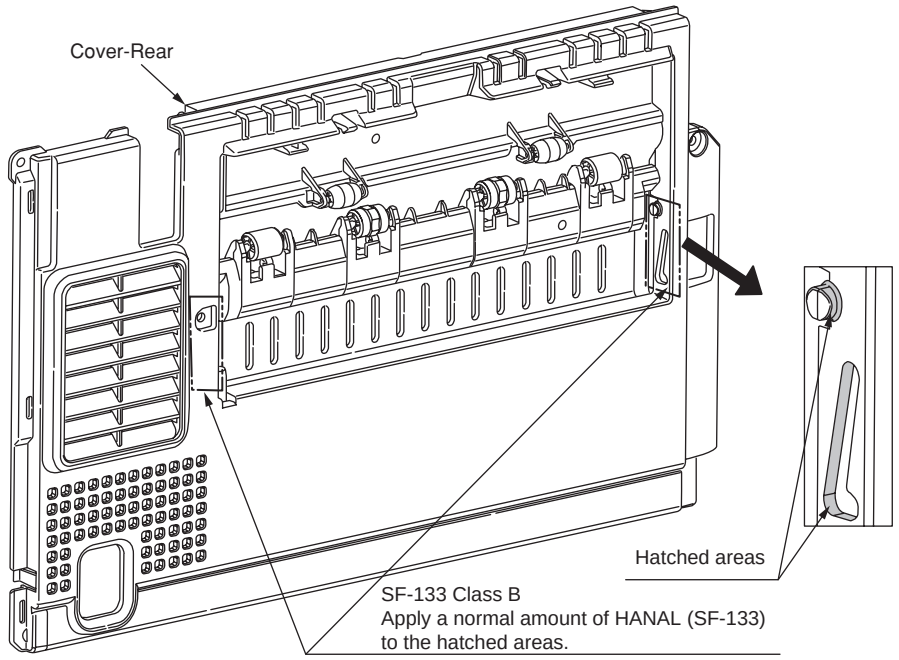


⑩ -1 44453701PA Cover-Assy.-Rear

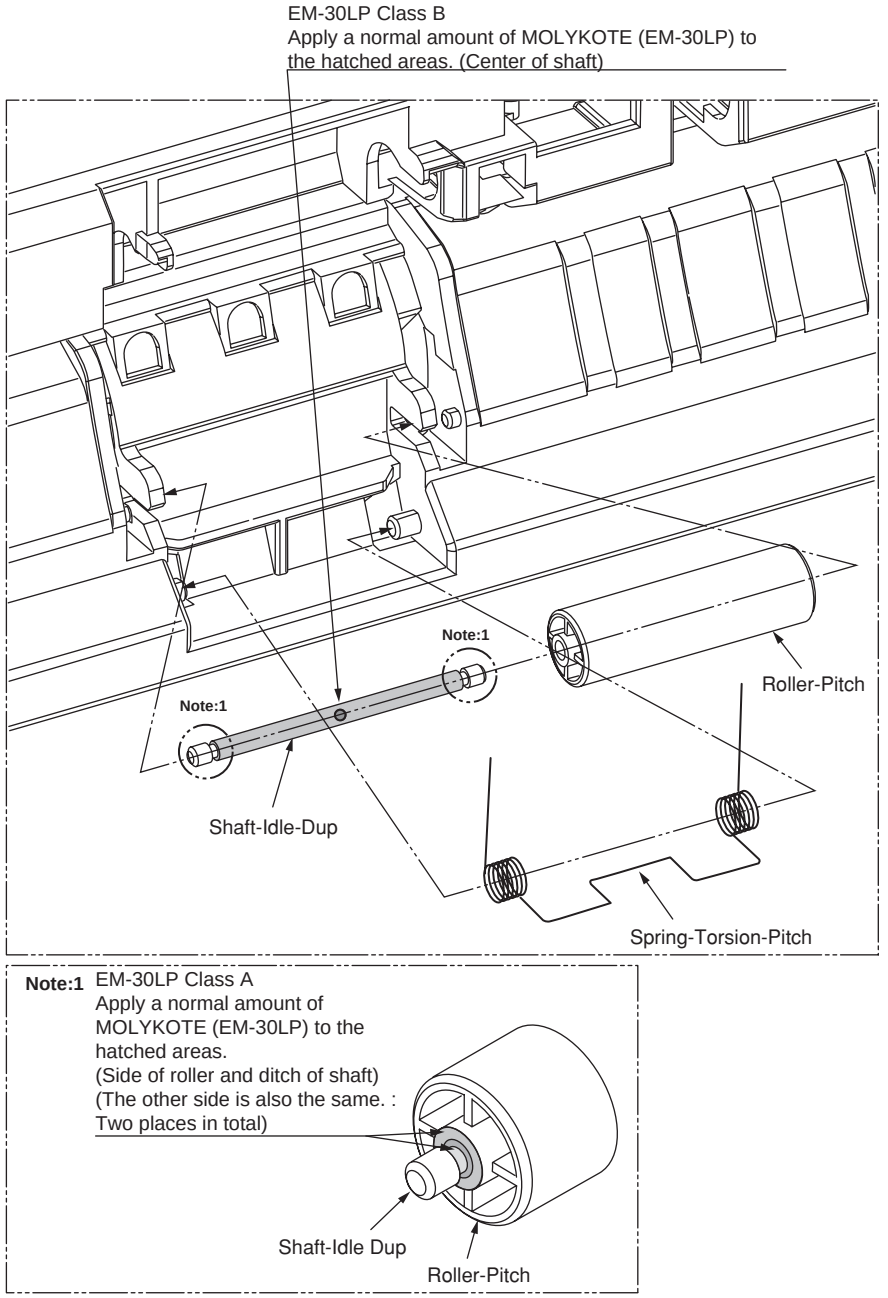


Leave it for about 3 minutes (drying time) after painting HANAL SF-133, and then assemble the Cover-Assy.-Stacker.

⑩ -2 44453701PA Cover-Assy.-Rear



⑪ 44359201PA Frame-Assy.-MPT



Note:1 EM-30LP Class A
Apply a normal amount of
MOLYKOTE (EM-30LP) to the
hatched areas.
(Side of roller and ditch of shaft)
(The other side is also the same. :
Two places in total)

5. MAINTENANCE MENUS

C330dn & C530dn can be adjusted by using Maintenance Utility, or button operation on its operator panel.
The printer has maintenance menus in addition to general menus. The menus intended for adjustment purposes should be selected.

5.1 System Maintenance menu (for maintenance personnel)

By turning on each printer while holding down ▲ and ▼, its System Maintenance menu is started. The menu is displayed only in English irrespective of the destination of the printer.

Note: The menu allows for changes such as the printer's destination changes, and is transparent to end-users of the printer.

Table 5-1: Maintenance menu display table

Category	Item (1st Line)	Value (2nd Line)	DF	Function
SYSTEM MAINTE	ENTER PASSWORD	****** ******	000 000	Enters a password to enter the System Maintenance menu. The default for this item is 000000. Six to 12 alphanumeric characters can be entered for the item.
OKIUSER	OKIUSER	ODA OEL APS JP1 JPOEM1 OEMA OEML	*	Sets a destination. JPOEM1: OEM in Japan OEMA: A4-default Overseas OEM OEML: Letter-default Overseas OEM The printer automatically reboots after this menu is exited.
MAINTE-NANCE MENU				Display condition: The security SD card function is disabled.
	SD CARD FORMAT (Only C530)	EXECUTE	-	Initializes an SD card. When executed, this menu is exited and starts initializing an SD card. Display condition: The printer has the SD card installed on it (ADMIN MENU-FILE SYS MAINTE-SD CARD is set to ENABLE).
	FLASH FORMAT	EXECUTE	-	Displays the following confirmation message in response to the press of the OK button: ARE YOU SURE? YES/NO NO restores the previous menu display when selected. When selected, YES exits this menu, starting formatting the installed resident (on-board) flash device. * Never use this item.
	MENU RESET	EXECUTE	-	Resets the information in the EEPROM to factory default settings. The printer automatically reboots after change to the default settings. * This does not initialize some special items.
CONFIG MENU	CODESET	TYPE1 TYPE2	*	Displayed for all the destinations of the printer. TYPE1: Disables Russian, Grease and Bulgarian (language file downloading). This value uses English for the operator panel language when the printer already has any of the three languages downloaded. TYPE2: Enables Russian, Grease and Bulgarian. The printer automatically reboots after this menu is exited. The default for this item is TYPE2 when the printer's destination is OEL/APS/OEMA, and TYPE1 when it is not OEL/APS/OEMA.
TEST PRINT MENU	TEST PRINT MENU	ENABLE DISABLE	*	Sets whether or not to display PRT CHK PATN and ENG STATUS PRINT in the USER MENU-PRINT INFORMATION category. This item always does not display PRT ID CHK PATN or ENG STATUS PRINT when set to DISABLE. When this menu is exited after change of the setting for the item, the printer restarts.
FUSE KEEP MODE	FUSE KEEP MODE	EXECUTE	-	Places the printer online after a command is issued from the CU to PU by pressing the OK button. With the printer turned on, consumables of the printer can be replaced with new ones, and then the printer can be checked for proper operation (where, not breaking the new ones' fuses, the printer adds no operation counts to the life of the consumables replaced with the new ones). Turning off the printer ends the check mode. Turning it on next time disables the mode.
PERSON-ALITY (Only C530dn)	IBM 5577	ENABLE DISABLE	*	Does not allow USER MENU-SYS CONFIG MENU-PERSONALITY to display PDL languages for which DISABLE is set with this menu. When receiving print data in such languages, the printer displays INVALID DATA, discarding the data. When the printer's destination is Japan and IBM PPR III XL and EPSON FX is set to ENABLE, no operation of the printer is assured.
	IBM PPR III XL	ENABLE DISABLE	*	
	EPSON FX	ENABLE DISABLE	*	
	HP-GL/2	ENABLE DISABLE	*	

Category	Item (1st Line)	Value (2nd Line)	DF	Function
CHANGE PASS-WORD			-	Changes a password. Pressing the OK button for this menu displays NEW PASSWORD and VERIFY PASSWORD, allowing for entry of a new password.
	NEW PASSWORD	****** ******	-	Sets a new password to enter the System Maintenance menu. Six to 12 alphanumeric characters can be entered for this item.
	VERIFY PASSWORD	****** ******	-	Prompts a user to verify and enter again the new password that was set for NEW PASSWORD to enter the System Maintenance menu. Six to 12 alphanumeric characters can be entered for this item.
ENGINE DIAG MODE			-	Enters the engine self-diagnostic mode.

5.2 Maintenance Utility

The adjustments described in table 5-2 should be made by using Maintenance Utility.

The following details the utility:

(1) Maintenance Utility Operating Manuals:

42678801FU01 Ver. 1.25.0 or higher (Japanese)

42678801FU02 Rev. 1,25.0 or higher (English)

(2) Maintenance Utility program:

Applicable operating system	File name	Part number
Win9X/Me/NT/2000/XP (Japanese/ English)	MuWin.zip	42678801FW01 Rev. 1.26.0 or higher

Table 5-2: Adjustment options in Maintenance Utility

	Option	Adjustment	Section in Maintenance Utility Operating Manual	Operation from operator panel (section in this maintenance manual)
1	Board replacement	Copies information in the EEPROM in the PU block, and the settings in the EEPROM in the CU block. Purpose: To copy the above data onto a CU/PU board with which to replace the CU/PU board for a maintenance purpose.	2.4.1.1.9	Unavailable
2	Serial number setting	Rewrites the serial number recorded in the PU block and selects and rewrites the printer serial number recorded in the CU block and rewrites the output mode recorded in it. Purpose: To configure a maintenance replacement PU/CU board onto which the CU/PU board information cannot be copied with the board replacement function (e.g. due to an interface error).	2.4.1.1.10.3	Unavailable
3	Factory/ Shipping mode	Switches between the Factory and Shipping modes. Purpose: To configure a maintenance replacement PU board onto which the CU/PU board information cannot be copied with the board replacement function (e.g. due to an interface error). The maintenance board is put to the Factory mode usually by default and, by using this function, must be set to the Shipping mode.	2.4.1.1.10.4	5.3.2.10
4	Board option setup information	Checks serial number information and the Factory/Shipping mode.	2.4.1.1.7	Unavailable
5	USB software update	Updates the USB software.	2.4.2.2.1	Unavailable
6	NIC software update	Updates the NIC software.	2.4.2.2.17	Unavailable
7	MAC address setting	Sets the MAC address.	2.4.2.2.5	Unavailable
8	Consumable counter maintenance function	Copies the consumable counters: Image drum counters (Y, M, C and K) Fuser counter Belt counter Toner counters (Y, M, C and K) Purpose: To copy the counter value of each consumable in use in the printer to use in another printer.	2.4.1.2.1	Unavailable
9	Destination/ PnP information setup	Sets and checks the printer's (CU) destination, device identification and USB identification.	2.4.1.2.9	5.4.3

	Option	Adjustment	Section in Maintenance Utility Operating Manual	Operation from operator panel (section in this maintenance manual)
10	Password initialization	Initializes a password.	2.4.2.2.13	
11	Network log storage function	Stores a network log file.	2.4.2.2.14	Unavailable
12	PU log file storage function	Stores a PU log file	2.4.2.2.16	Unavailable
13	Consumable counter display	Checks the current consumable counter values.	2.4.1.3.1	5.1 (ENG STATUS PRINT)
14	Menu setting check	Displays the menu settings set on the printer (CU).	2.4.1.3.2	Print a configuration report (Menu Map) (refer to user documentation).
15	Printer information check	Checks the MAC address and each firmware version.	2.4.1.3.3	Print a configuration report (Menu Map) (refer to user documentation).
16	CPU and Memory value check	Checks the information on the printer's installed (CU) CPU and memory.	2.4.1.3.4	Print a configuration report (Menu Map) (refer to user documentation).
17	Test print	Executes the local print function and sends a specified file. Purpose: To check the printer for operation it performs solely and send a download file.	2.4.1.4.1	Perform local printing (refer to System Specification).
18	Switch scan test	Executes the switch scan test. Purpose: To check each sensor for operation.	2.4.1.5.1	
19	Motor clutch test	Executes the motor clutch test. Purpose: To check each item, such as a motor or clutch, for operation.	2.4.1.5.2	
20	Color registration adjustment test	Executes the color registration adjustment test.	2.4.1.5.3	
21	Density adjustment test	Executes the density adjustment test.	2.4.1.5.4	
22	Auto density adjustment control parameter setting (never use this option)	Sets an auto density setting control parameter.	Never use this option.	
23	Counter display	Checks the consumable, continuous consumable and waste toner counters.	2.4.1.5.6	
24	Local parameter setting	Switches between the Factory and Shipping modes and checks the status of the fuse.	2.4.1.5.7	
25	Engine parameter setting	Makes an engine parameter setting.	2.4.1.5.8	
26	Media transfer parameter setting	Makes a print media transfer parameter setting.	2.4.1.5.9	

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

5.3 User maintenance menu functions

5.3.1 Maintenance menu (for end-users)

The maintenance menu category is a general menu category (not the system maintenance menu).

The following is the options available in the maintenance menu:

Maintenance Menu

Default setting in shade area

Category	Operator panel display		Description
	Option (upper display)	Setting (lower display)	
MAINTENANCE MENU	MENU RESET	EXECUTE	Resets the CU EEPROM. This option restores the USER MENU settings to the factory defaults. EXECUTE exits this menu when selected.
	SAVE MENU	EXECUTE	Stores currently-made menu settings. This option stores menu settings made when it is last executed, and overwrites with them those it stored before that. The option displays the following confirmation message when the OK button is pressed: ARE YOU SURE? YES/NO NO restores the previous menu display when selected. When selected, YES stores the currently-made menu settings, exiting this menu.
	RESTORE MENU	EXECUTE	Restores stored menu settings. The option displays the following confirmation message when the OK button is pressed: ARE YOU SURE? YES/NO NO restores the previous menu display when selected. When selected, YES restores the stored menu settings, exiting this menu. * The option is not executed while the printer has print data.
MAINTENANCE MENU	POWER SAVE	ENABLE DISABLE	Sets whether to enable or disable the Power Save mode. The time to establish the power saving mode when ENABLE is selected can be changed with SYS CONFIG MENU-"POW SAVE TIME".
	SLEEP (C530dn)	ENABLE DISABLE	Sets whether to enable or disable the Sleep mode. The time to establish the mode when ENABLE is selected can be changed with SYS CONFIG MENU-"SLEEP TIME".
	PAPER BLACK SET	0 +1 +2 -2 -1	Used for fine adjustment when visible faded black print or a white horizontal dotted line results on plain paper. Decrease the setting when such specks or snow flake-like print occurs in a high-density print area. Increase the setting when faded print occurs.
	PAPER COLOR SET	0 +1 +2 -2 -1	Used for fine adjustment when visible faded color print or a white horizontal dotted line results on plain paper. Decrease the setting when such specks or snow flake-like print occurs in a high-density print area. Increase the setting when faded print occurs.
	SMR SETTING	-3 -2 -1 0 +1 +2 +3	Corrects print variations that occur due to temperature and humidity environment, print density or print frequency variation. Change the setting when an uneven print quality occurs.
	BG SETTING	-3 -2 -1 0 +1 +2 +3	Corrects print variations that occur due to temperature and humidity environment, print density or print frequency variation. Change the setting when a dark background occurs.

5.3.2 Self-diagnostic mode

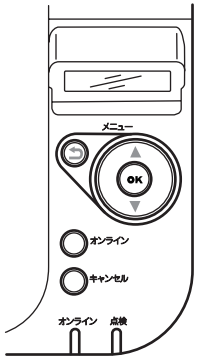
This section describes LEVEL 0 and LEVEL 1.

5.3.2.1 Operator Panel

The following operational description on the self-diagnostic is premised on the following operator panel layout:

C530dn

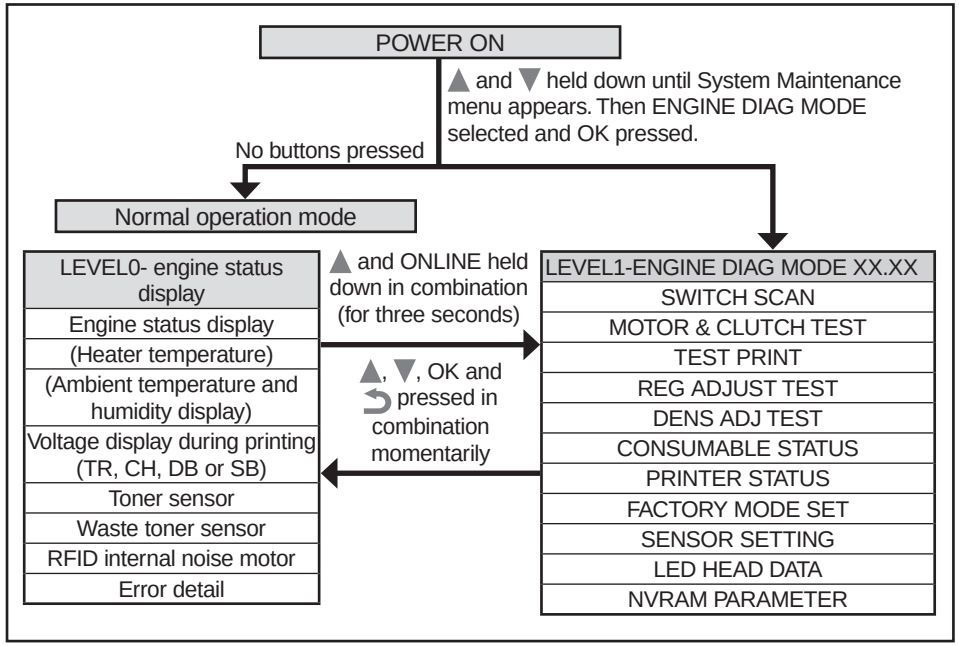
C330dn



Self-diagnostic mode layout (entire)

(1) Menu option switching

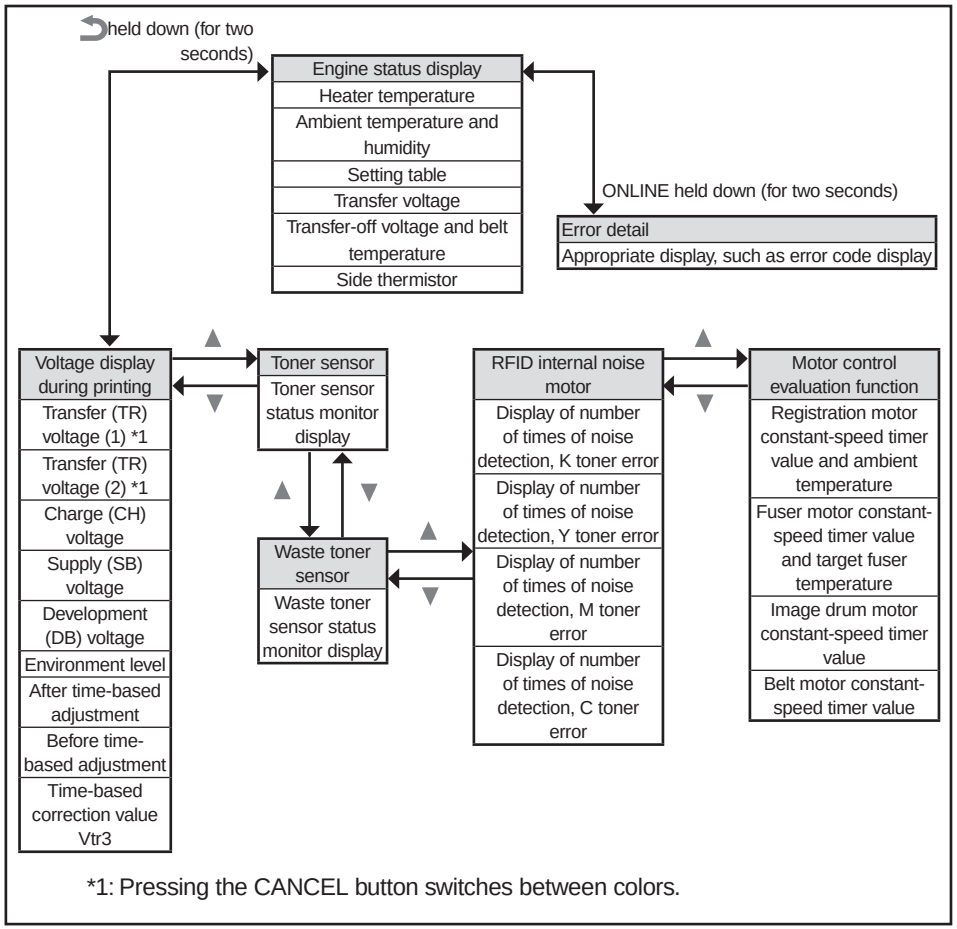
Only while displayed as shown in a shaded area (XXXXX), the level of the self-diagnostic mode can be switched. ▲ or ▼ is used to switch to the option in a non-shaded area (XXXXX).



LEVEL0

(1) Menu option switching

Holding down ↩ or ONLINE or momentarily pressing ▲ or ▼switches between the options in shaded areas (XXXXX). ▲ or ▼ is used to switch between the options in non-shaded areas (XXXXX). Holding down ↩ restores the display that selects an option.

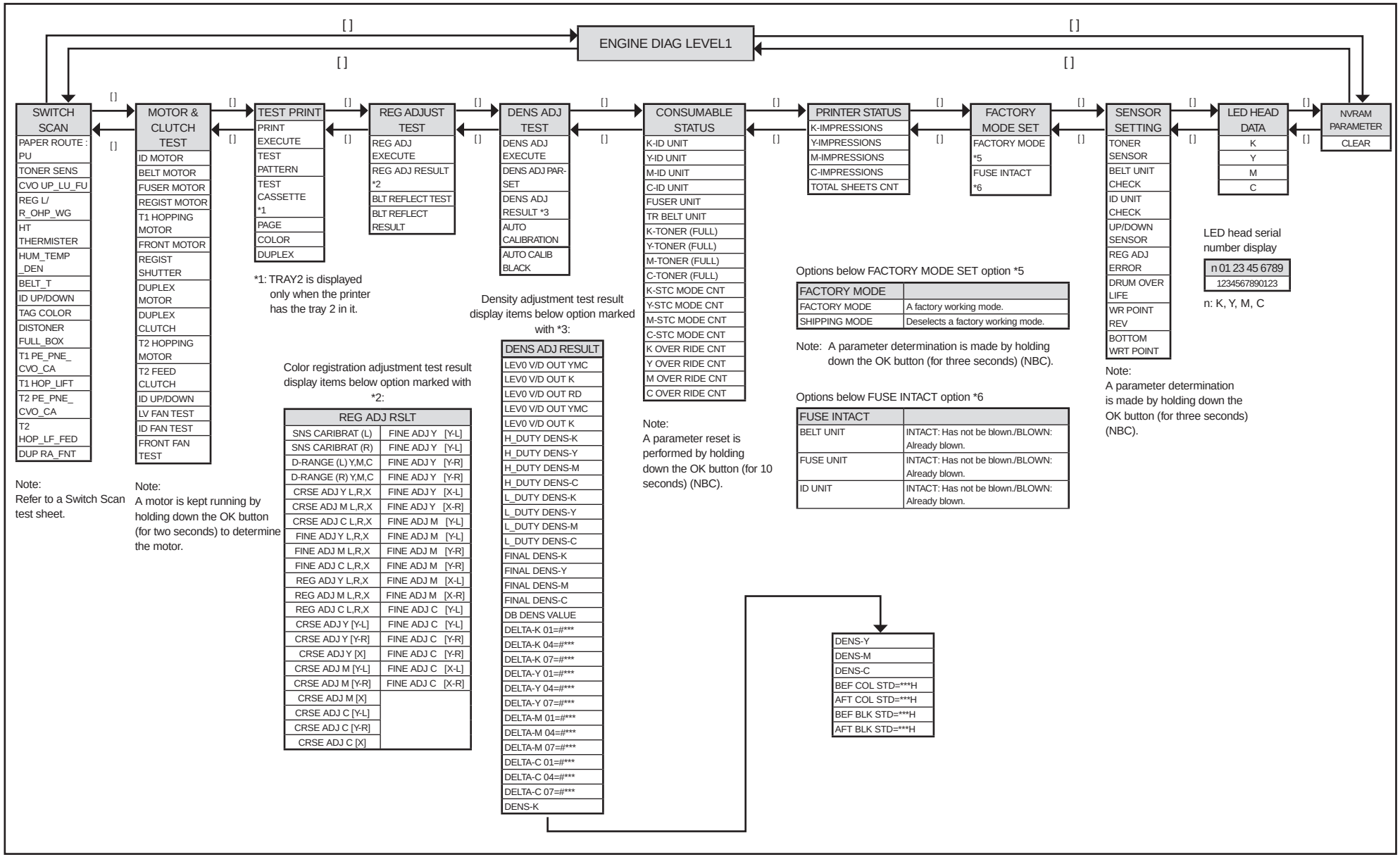


*1: Pressing the CANCEL button switches between colors.

LEVEL1

(1) Menu option switching

▲ or ▼ is used to select the option shown in a shaded area (XXXXX), and pressing OK executes the option. OK or ⮌ is used to switch to the option in a non-shaded area (XXXXX), and, after that, ▲ or ▼ is used to select an option. A selected test is executed by pressing OK, and ended by pressing ⮌.



5.3.2.2 Normal self-diagnostic mode (level 1)

The following is the normal self-diagnostic mode menu:

	Option	Self-diagnostic menu item	Adjustment	Maintenance Utility
1	Switch scan test	SWITCH SCAN	Performs input sensor and switch checking.	No. 18
2	Motor and clutch test	MOTOR&CLTCH TEST	Tests motor and clutch operation.	No. 19
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. 20
5	Density adjustment test	DENS ADJ TEST	Judges the density adjustment mechanism as pass or fail.	No. 21
6	Consumable counter display	CONSUMABLE STATUS	Displays consumable usage.	No. 23
7	Consumable life counter display	PRINTER STATUS	Displays consumable life.	No. 23
8	Factory/Shipping mode setting	FACTORY MODE SET	Switches between the Factory and Shipping modes	No. 3, No. 24
9	Fuse status display		Displays the status of the fuses.	No. 24
10	Engine parameter setting	SENSOR SETTING	Sets whether to enable or disable error detection performed by each sensor.	No. 25
11	NVRAM parameter setting	NVRAM PARAMETER	Must not be used.	Unavailable

5.3.2.2.1 Entering self-diagnostic mode (level 1)

Note: Entering the System Maintenance mode requires a password. Refer to table 5-1

1. By turning on the printer while holding down ▲ and ▼ in combination, enter the System Maintenance mode.
2. Press ▲ or ▼ more than one time until ENGINE DIAG MODE appears. Then press the OK button, and DIAGNOSTIC MODE appears.

```
DIAGNOSTICMODE
XX.XX.XX  F-MODE/S-MODE
```

3. XX.XX.XX on the LCD display identifies the version of the PU firmware. The setting for FACTORY WORKING MODE is provided in the right portion of the lower display. The setting is normally S-MODE, which identifies Shipping.
4. Press ▲ or ▼ to go to each self-diagnostic step (pressing ▲ or ▼ displays the next or preceding menu option).

5.3.2.2.2 Exiting self-diagnostic mode

1. Turn off the printer and, after 10 seconds, turn it on.

5.3.2.3 Switch scan test

The switch scan test is used for input sensor and switch checking.

1. Enter the self-diagnostic mode (level 1) and, until SWITCH SCAN appears on the upper display, press ▲ or ▼ (▲ displays the next test option and ▼ displays the preceding test option). Then press the OK button.

SWITCH SCAN

2. Press ▲ or ▼ until the option for unit(s) to test, which is shown in table 5-3, appears on the lower display (▲ displays the next option and ▼ displays the preceding option).
3. Press the OK button. The switch scan test starts, the unit(s)' name(s) and current status(es) being displayed.

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

   Operate the unit(s) (figure 5-1). Display information in the appropriate area(s) of the LCD display [the information varies depending on the sensor(s)].
4. Press the CANCEL button to restore the state for step 2.
5. Repeat steps 2 through 4 when necessary.
6. Press ⮌ to end the test (the state for step 1 is restored).

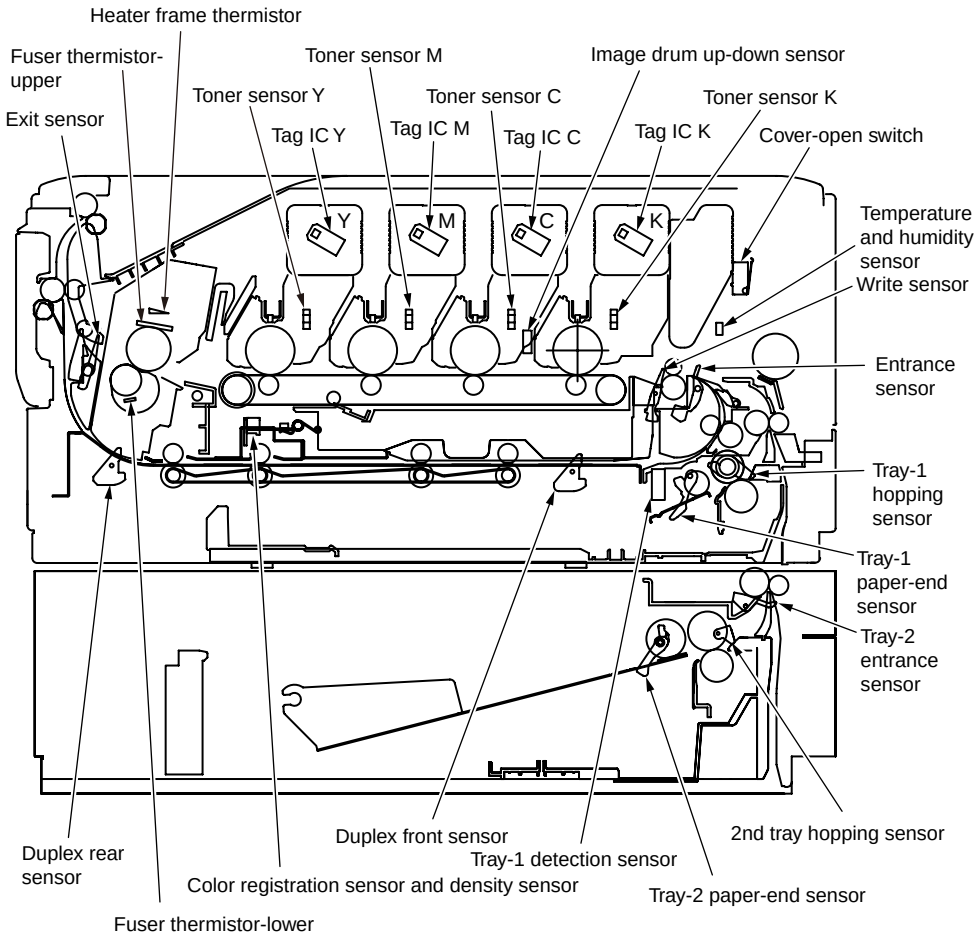


Figure 5-1: Switch sensor locations

Table 5-3: SWITCH SCAN detail

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

*1: An L is displayed when cover is open.

Upper Display	1		2		3		4	
	Detail	Lower display	Detail	Lower display	Detail	Lower display	Detail	Lower display
PAPER ROUTE : PU			Entrance sensor 1	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	Toner sensor K	H: Light shielded. L: Light reflected.	Toner sensor Y	H: Light shielded. L: Light reflected.	Toner sensor M	H: Light shielded. L: Light reflected.	Toner sensor C	H: Light shielded. L: Light reflected.
CVO UP_LU_FU	Cover-open switch	H: Close. L: Open.			Face-up cover-open sensor	H: Close. L. Open.		
REG L/R_OHP_WG	Color registration sensor L	AD value: ***H	Color registration sensor R	AD value: ***H				
HT THERMISTER	Fuser thermistor upper sensor	AD value: ***H	Fuser thermistor lower sensor	AD value: ***H			Heater frame thermistor	AD value: ***H
HUM_TEMP_DEN ※1	Humidity sensor	AD value: ***H	Temperature sensor	AD value: ***H	Density sensor (K)	AD value: ***H	Density sensor (YMC)	AD value: ***H
BELT_T	Belt thermistor	AD value: ***H						
ID UP/DOWN							ID UpDown Sns	H: Down. L. Up.
TAG COLOR	TAG ID	UID: ***H	TAG ID	UID: ***H	TAG ID	UID: ***H	TAG ID	UID: ***H
DISTONER FULL_BOX	Waste toner sensor	H: Light not reflected. L: Light reflected.						
T1 PE_PNE_CVO_CA	Tray-1 paper-end sensor	H: No paper exists. L: Paper exists.					Cassette sensor	H. Cassette exists. L. Cassette does not exist.
T1 HOP_LIFT	Hopping sensor	H: No paper exists. L: Paper exists.						
T2 PE_PNE_CVO_CA	Tray-2 paper-end sensor	H: No paper exists. L: Paper exists.						
T2 HOP_LF_FED	2nd-Hopping Sns	H: No paper exists. L: Paper exists.			Tray-2 entrance sensor	H: No paper exists. L: Paper exists.		
DUP RA_FNT			Duplex rear sensor	H: Light shielded. L: Light reflected.	Duplex front sensor	H: No paper exists. L: Paper exists.		

5.3.2.4 Motor and clutch test

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

1. Enter the self-diagnostic mode (level 1) and, until MOTOR & CLUTCH TEST appears on the upper display, press ▲ or ▼ (▲ displays the next test option and ▼displays the preceding test option). Then press the OK button.
2. Press ▲ or ▼ until the option for a unit to test, which is shown in table 5-4, appears on the lower display (▲ displays the next option and ▼ displays the preceding option).

MOTOR & CLUTCH TEST
ID MOTOR

3. Press the OK button. The motor and clutch test starts, the unit's the name starting to blink, and the unit being driven for10 seconds (refer to figure 5-2).

Note: The state for step 2 is restored after the 10-second driving of the unit. The unit is driven again by pressing an appropriate button.

- The clutch solenoid repeatedly turns on and off in normal printing driving (a motor is driven together with the solenoid when it cannot be driven solely because of its mechanical structure). * ID UP/DOWN continues driving until the CANCEL button is pressed.
- The clutch solenoid is kept driven by holding down the OK button (for two seconds) to determine a motor.

4. Press the CANCEL button to stop driving the unit (the display continues indicating the unit).
5. Repeat steps 2 through 4 when necessary.
6. Press ⮌ to end the test (the state for step 1 is restored).

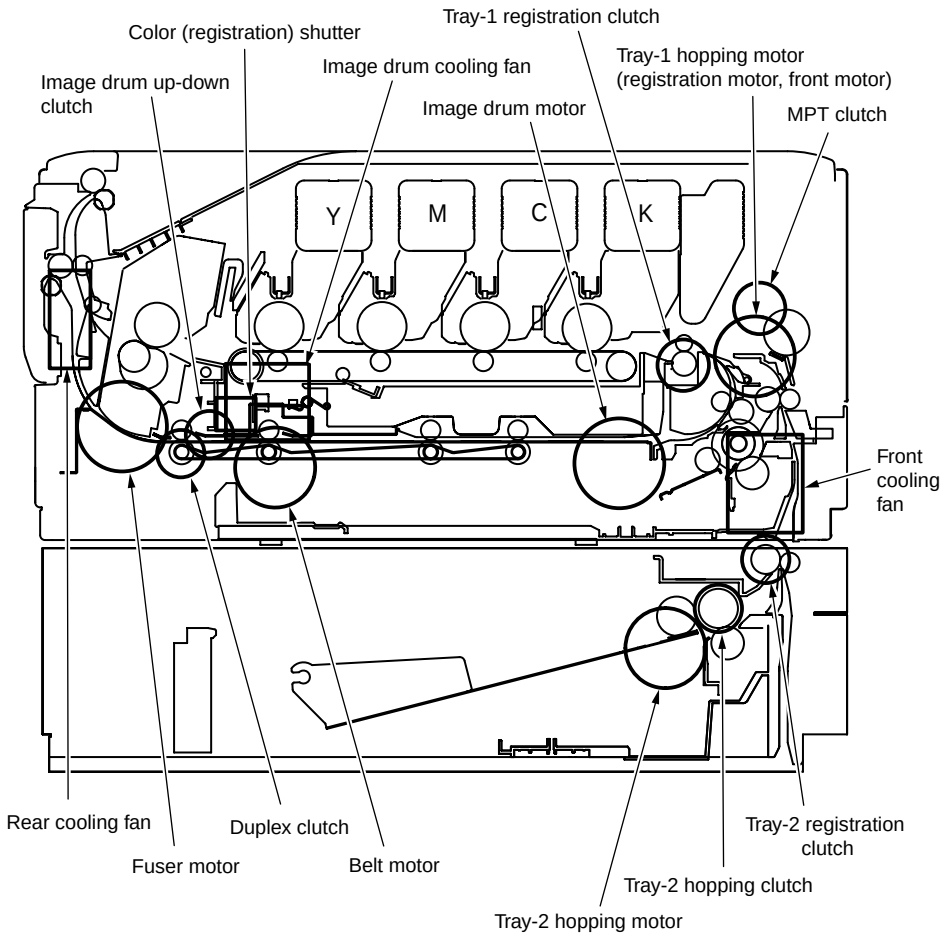


Figure 5-2

Table 5-4

Unit name displayed	Driving restriction	Remarks
ID MOTOR	All of the (black, yellow, magenta and cyan) image drums must be removed.	–
BELT MOTOR	All of the (black, yellow, magenta and cyan) image drums must be removed.	–
FUSER_MOTOR	–	–
REGIST MOTOR	–	–
T1 HOPPING MOTOR	–	–
FRONT MOTOR	–	–
REGIST SHUTTER	–	–
DUPLEX MOTOR	–	–
DUPLEX CLUTCH	–	–
T2 HOPPING MOTOR	–	Option
T2 FEED CLUTCH	–	Option
ID UP/DOWN	The top and front cover must be closed.	–
LV FAN TEST	–	–
ID FAN TEST	–	–
FRONT FAN TEST	–	–

Note: Display while ID UP/DOWN is in progress

MOTOR & CLUTCH TEST
ID UP/DOWN ***

***: Identifies the number of executions

Display after holding down REGIST SHUTTER OK button

MOTOR & CLUTCH TEST
SHT ***

***: Identifies the number of executions

5.3.2.5 Test printing

The test printing is used for printing test patterns stored in the PU. The controller stores the other patterns.

The test printing cannot be used to check print quality.

See chapter 7 for diagnosing problem print images.

1. Enter the self-diagnostic mode (level 1) and, until TEST PRINT appears on the upper display, press ▲ or ▼ (▲ displays the next test option and ▼ displays the preceding option). Then press the OK button.
2. A setting option applied only to test printing appears on the lower display. Press ▲ or ▼ until a target option appears (▲ displays the next option and ▼ displays the preceding option). Then press the OK button. [Go to step 5 when the options do not need to be set (left set to their defaults)].
3. The setting option and its setting appear on the upper and lower displays, respectively. Pressing ▲ displays the next setting and pressing ▼ displays the preceding setting (the setting last displayed is applied. Press ↩ to accept the setting and return to step 2. Repeat step 3 when necessary.

TEST PATTERN
1

Display	Settings	Function
PRINT EXECUTE	–	Starts printing with the press of OK button, and ends printing with the press of the CANCEL button.
TEST PATTERN	0	0: Prints a blank page. 1 to 7: - See the next section (pattern printing) - 8 to 15: Each print a blank page.
TEST CASSETTE	TRAY1	Selects a paper source. TRAY2 is not displayed when the tray 2 is not installed.
	TRAY2	
	MPT	
PAGE	0000	Sets the number of test copies to print.
COLOR	ON	Selects color or monochrome printing. * ON and OFF are provided for each color when the setting ON is specified.
	OFF	
DUPLEX	2 PAGES STACK	Performs duplex printing using a two pages layout.
	OFF	Selects turning off duplex printing.
	1PAGES STACK	Performs duplex printing using a one page stack layout.

- A default is in a shaded area ( ). Set settings are enabled only in this test mode (not written into the EEPROM).

Note: PAGE:.....Moves its input digit with ▲ or ▼. The setting for this option is incremented by pressing the ONLINE button, and decremented by pressing the CANCEL button. Note that, when left set, the setting 0000 endlessly prints pages.

COLOR:.....When set to ON, with the press of the OK button, displays the information shown below.

Setting option for printing colors: Moves its input position with ▲ or ▼. The setting for each color is switched between ON and OFF by the press of the ONLINE or CANCEL button. The panel display is restored to the previous one by pressing ↩.

COLOR
ON

Y:ON M:ON
C:ON K:ON

4. With PRINT EXECUTE displayed on the lower display by the operation in step 2, pressing the OK button executes test printing by using the setting(s) made in steps 2 and 3.

   The test printing is cancelled by pressing the CANCEL button.

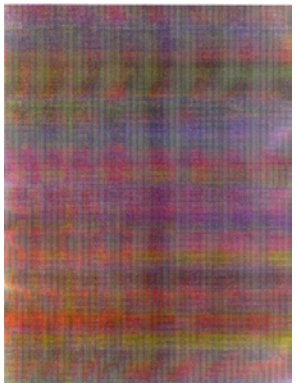
   When detected in starting or performing the test printing, an alarm shown in the Detail section of the following list is displayed on the operator panel, stopping the printing (for error detail, refer to the operator panel display detail in section 5.3.2.14, where the messages displayed are different from those in PU test printing).

Panel Display	Detail
PAPER END SELECTED TRAY	No paper exists.
SELECTED TRAY IS NOT INSTALLED	The selected tray is not installed.
REMOVE PAPER OUT OF DUPLEX	An internal error of the duplex unit.
INSTALL CASSETTE TRAY OPEN	A cassette is slid out.

Print patterns (cannot be used for print quality checking)

0 and 8 to 15: Each print a blank page.

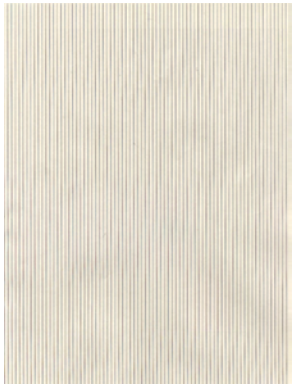
Pattern 1



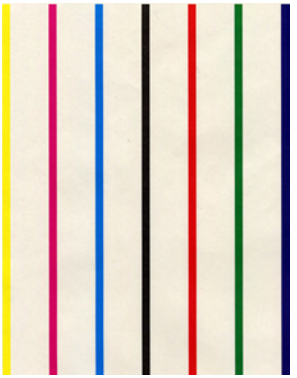
Pattern 2

Pattern 3

Pattern 4



Pattern 5



Pattern 6

Pattern 7

Note: Solid black print (pattern 7) is included in the local printing function. An offset occurs when it is output at 100% in each color. To prevent this, the number of the colors to print concurrently to produce solid print copies of the No. 7 needs to be limited not more than two by making print color settings as instructed in step 3.

- The following message appears during printing:

P=***
W=***

P: Number of test print pages
W: Wait time

- The displays are switched by pressing ▲.

T=*** U=***[###]
H=***%L=***[###]

U: Three asterisks (***) identifies a measured upper heater temperature (in Celsius). Three sharp signs in square brackets ([###]) identifies a target print temperature (in Celsius).
L: Three asterisks (***) identifies a measured lower heater temperature (in Celsius). Three sharp signs in square brackets ([###]) identifies a read lower thermistor AD value (in hex).
T: A measured ambient temperature (in Celsius).
H: A measured ambient humidity (in percent figures).

- The displays are switched by pressing ▲.

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

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

- The displays are switched by pressing ▲.

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

KR: A black transfer roller resistance value (in uA).
YR: A yellow transfer roller resistance value (in uA).
MR: A magenta transfer roller resistance value (in uA).
CR: A cyan transfer roller resistance value (in uA).

- The displays are switched by pressing ▲.

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

ETMP: A parameter for correction of constant hopping motor speed (an ambient temperature) (in decimal).
UTMP: A parameter for correction of constant fuser motor speed (a target fusing temperature) (in decimal).
REG: A hopping motor constant-speed timer value (a set input/output value) (in hex).
EXT: A fuser motor constant-speed timer value (a set input/output value) (in hex).

- The displays are switched to the following by pressing ▲.

ID=****

ID: An image drum motor constant-speed timer value (a set input/output value) (in hex).

- The displays are switched pressing ▲.

BELT=****
FRM [***] (xxx)

BELT: A belt motor constant-speed timer value (a set input/output value) (in hex).
FRM: Three asterisks in square brackets ([***]) identifies a read frame thermistor AD value (in hex).
Three cross signs in brackets ((xxx)) identifies a frame temperature (in Celsius).

- The displays are switched by pressing ▲.

DB:k**y**m**c**

DB: A developing voltage setting table identification number (in hex).

- The displays are switched by pressing ▲.

TR1:k**y**m**c**
TR2:k**y**m**c**

TR1: A transfer voltage parameter VTR1 table identification number (in hex).
TR2: A transfer voltage parameter VTR2 table identification number (in hex).

- The displays are switched by pressing ▲.

TROFF:**
BELT xxx(***)

TROFF: A transfer off voltage setting table identification number (in hex).
BELT: Three cross signs and a minus sign (xxx-) identifies a read belt thermistor AD value (in hex).
Three asterisks and a minus sign (***-) identifies a belt temperature (in hex).

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

5.3.2.6 Color registration adjustment test

The color registration adjustment test is used for adjusting color registration or investigating the causes of color misregistration.

Chapter 2 for an overview of color registration adjustment should be followed for recovery from an error developed by the test.

1. Enter the self-diagnostic mode (level 1) and, until the following message appears, press ▲ or ▼.

REG ADJUST TEST

2. Press the OK button, and the following message appears. Press▲ or ▼ until a target option appears.

REG ADJUST TEST
REG ADJ EXECUTE

3. Press the OK button, and the displayed test option is performed.

   When REG ADJ EXECUTE is executed:

   ① A color registration adjustment test starts (the ONLINE lamp starts blinking).

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

OK
REG ADJ RESULT

   Pressing ▲ displays the next test result. Pressing the ▼ displays the preceding test result. Pressing ⮌ restores the state for step 2.

Remark: While the printer is initialized or issues an alarm or the cover is open, it displays the following message:

NG
REG ADJ RESULT

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

   When REG ADJ RESULT is executed:

   Same button operations as ② used when REG ADJ EXECUTE is executed.

   When BLT REFLECT TEST is executed:

   ① A color registration adjustment belt reflection test starts (the ONLINE lamp 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
BLT REFLECT RSLT

   Pressing ▲ displays the next test result. Pressing ▼ displays the preceding test result. Pressing ⮌ restores the state for step 2.

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

   When BLT REFLECT RSLT is executed:

   Same button operations as used when BLT REFLECT TEST is executed.

Remark: While the printer is initialized or issues an alarm or the cover is open, it displays the following message.

NG
REG REFLECT RSLT

4. Repeat steps 2 and 3 when necessary.
5. Press ⮌ to end the test (the state for step 1 is restored).

Color registration adjustment test items

Display	Detail
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 or not
BLT REFLECT RSLT	Displays the result of color registration adjustment belt reflection judgment.

5.3.2.7 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 for an overview of density adjustment should be followed for recovery from errors.

1. Enter the self-diagnostic-mode and, until the following message appears, press ▲ or ▼.

DENS ADJ TEST

2. Press the OK button, and the following message appears. Press ▲ or ▼ until a target option appears.

DENS ADJ TEST
DENS ADJ EXECUTE

3. Press the OK button, and the displayed test option is performed:

When DENS ADJ EXECUTE is executed:

① A density adjustment test starts (the ONLINE lamp 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 next test result. Pressing ▼ displays the preceding test result. Pressing ⮌ restores the state for step 2.

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

When DENS ADJ RESULT is executed:

Same button operation as ② used when REG ADJ EXECUTE is executed.

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 correction value is automatically set (the ONLINE lamp 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 ▲ displays the next test result. Pressing ▼ displays the preceding test result. Pressing ⮌ restores the sate for step 2.

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

Remark: While the printer is initialized or issues an alarm or the cover is open, it displays the following message:

NG
DENS ADJ RESULT

4. Repeat step 3 when necessary.

5. Press ⮌ to end the test (the state for step 1 is restored).

Density adjustment test items

Display	Detail
DENS ADJ EXECUTE	Executes density adjustment.
DENS ADJ PAR-SET	Sets a control value for auto density adjustment.
DENS ADJ RESULT	Displays the result of density adjustment.
AUTO CALIBRATION	Automatically sets a density sensor sensitivity correction value.
AUTO CALIB BLACK	Automatically sets a black density sensor sensitivity correction value.

5.3.2.8 Consumable counter display

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

1. Enter the normal self-diagnostic mode and, until CONSUMABLE STATUS appears, press ▲ or ▼ (▲ displays the next test option and ▼ displays the preceding test option). Then press the OK button.
2. Press ▲ or ▼, and the usage of each consumable appears (the ONLINE or CANCEL button is disabled).
3. Press ⮌ to end the option (the state for step 1 is restored).

Upper display	Lower display	Format	Unit	Detail
K-ID UNIT	********IMAGES	Decimal	Images	Each display the number of turns performed to date after the installation of a new image drum unit, converted on an A4 and three-pages-per job basis.
Y-ID UNIT	********IMAGES	Decimal	Images	
M-ID UNIT	********IMAGES	Decimal	Images	
C-ID UNIT	********IMAGES	Decimal	Images	
FUSER UNIT	********PRINTS	Decimal	Prints	Displays the number of pages printed to date after the installation of a new fuser unit.
TR BELT UNIT	********IMAGES	Decimal	Images	Displays the number of pages printed to date after the installation of a new belt unit.
K-TONER (FULL)	********%	Decimal	%	Each display the usage of toner of a color.
Y-TONER (FULL)	********%	Decimal	%	
M-TONER (FULL)	********%	Decimal	%	
C-TONER (FULL)	********%	Decimal	%	

Upper display	Lower display	Format	Unit	Detail
K-STC MODE CNT	********TIMES	Decimal	Times	Each display the print dot count of toner of a color (life counter value after the printer goes into operation).
Y-STC MODE CNT	********TIMES	Decimal	Times	
M-STC MODE CNT	********TIMES	Decimal	Times	
C-STC MODE CNT	********TIMES	Decimal	Times	
K OVER RIDE CNT	********TIMES	Decimal	Times	Each display the extension life count of a toner cartridge.
Y OVER RIDE CNT	********TIMES	Decimal	Times	
M OVER RIDE CNT	********TIMES	Decimal	Times	
C OVER RIDE CNT	********TIMES	Decimal	Times	

5.3.2.9 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 ▲ or ▼ (▲ displays the next test option and ▼displays the preceding test option). Then press the OK button.
2. Press ▲ or ▼, and each count is printed (the ONLINE or CANCEL button is disabled).
3. Press ⮌ to end the option (the state for step 1 is restored).

Upper display	Lower display	Format	Unit	Detail
K-IMPRESSIONS	********IMAGES	Decimal	Images	Each display the number of a color's pages printed.
Y-IMPRESSIONS	********IMAGES	Decimal	Images	
M-IMPRESSIONS	********IMAGES	Decimal	Images	
C-IMPRESSIONS	********IMAGES	Decimal	Images	
TOTAL SHEET CNT	********COUNTS	Decimal	Prints	Displays the total number of pages printed.

5.3.2.10 Factory/Shipping mode setting

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

1. Enter the self-diagnostic mode and, until the following message appears, press ▲ or ▼.

FACTORY MODE SET

2. Press ▲ or ▼, and the following message appears. Press ▲ or ▼ until an option to set (refer to the table shown below) appears.

FACTORY MODE
SHIPPING MODE *

3. By pressing the OK button with the option on the display, a setting for the option can be selected.
4. Hold down the OK button (for three seconds) with the display showing the setting to set. The setting is stored in the EEPROM. The state for step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press ⮌ to end the option (the state for step 1 is restored).

Display	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: Six asterisks (******) identifies INTACT or BLOWN.	BELT UNIT ******	Displays the fuse status of the transfer belt unit.
	FUSE UNIT ******	Displays the fuse status of the fuser.
	ID UNIT ******	Displays the fuse status of an image drum unit.

5.3.2.11 Self-diagnostic function setup

The self-diagnostic function setup 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, these self-diagnostic setup should be used carefully.

Be sure to restore the default settings of used options of the self-diagnostic function setup.

1. Enter the self-diagnostic mode and, until the following message appears, press ▲ or ▼.

SENSOR SETTING

2. Press ▲ or ▼, and the following message appears. Press ▲ or ▼ until an option to set (refer to the table shown below) appears.

TONER SENSOR
ENABLE *

3. A setting can be selected on the lower display by pressing the OK button. ▲ displays the next setting and ▼displays the preceding setting.
4. Hold down the OK button (for three seconds) with the display showing the setting to set. The setting is stored in the EEPROM. The state for step 2 is restored.
5. Repeat steps 2 through 4 when necessary.
6. Press ⮌ to end setting the option (except where not in step 4) (the state for step 1 is restored).

Display	Settings	Behavior	Function
TONER SENSOR	ENABLE	Performs detection.	Enables or disables the toner sensor operation.
	DISABLE	Does not perform detection.	
BELT UNIT CHECK	ENABLE	Performs checking.	Enables or disables the belt installation checking operation.
	DISABLE	Does not perform checking.	
ID UNIT CHECK	ENABLE	Performs checking.	Enables or disables the image drum installation checking operation.
	DISABLE	Does not perform checking.	
UP/DOWN SENSOR	ENABLE	Performs detection.	Enables or disables the image drum up-down sensor operation.
	DISABLE	Does not perform detection.	
REG ADJUST ERROR	ENABLE	Has the printer to pause.	Enables or disables the error display based on a color misregistration detection value.
	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 value.	Sets a tear-off length from the bottom edge of paper.

Default is in hatched area

5.3.2.12 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 ▲ or ▼. ▲ displays the next test option and ▼displays the preceding test option). Then press the OK button.
2. Press▲ or ▼, and each of the K, Y, M and C LED head data serial numbers appears.
3. Press ⮌ to end the option (the state for step 1 is restored).

K ** ** ** ****
xxxxxxxxxxxx

** ** ** **** : A revision number.
xxxxxxxxxxxx : A serial number

5.3.3 Various types of printing on stand-alone basis

Menu Map printing

Prints information about program versions and the configuration of the control block.

Operation:

① With the printer placed online, press the OK button once to display INFORMATION MENU.
② Press the OK button to display MENU MAP PRINT EXECUTE.
③ Press the OK button.

Network information printing

Operation:

① With the printer placed online, press the OK button once to display INFORMATION MENU.
② Press the OK button.
③ Press ▲ more than one time to display NETWORK/EXECUTE.
④ Press the OK button.

Demo printing

Prints an each destination's demo pattern of contained in the ROM.

Operation:

① With the printer placed online, press the OK button once to display INFORMATION MENU.
② Press the OK button.
③ Press ▲ more than one time to display DEMO1/EXECUTE.
④ Press the OK button.

5.3.4 Button functions at power-on

C330dn and C530dn have the following button functions operated when turned on. When held down until the upper and lower LCD displays show PAM CHECK and three or four asterisks (****), respectively, the following buttons work.

(1) ↩, ONLINE and CANCEL buttons

Start a CU program, starting no objects added, for example, in the download mode.

(2) ▲ and ▼

Start the System Maintenance menu.

(3) ↩, ▼ and OK button

Ignoring all warnings and errors, start the printer, always placing it to a mode where it is placed online.

(4) ONLINE button

Starts the printer, placing it to a mode dedicated to object downloading, such as network or USB object downloading.

(5) OK button

Starts the Admin menu.

5.4 Setup after part replacement

The following describes the adjustments required after part replacement:

Replaced part	Adjustment
LED head	Requires no adjustments.
Drum cartridge (yellow, magenta, cyan or black)	Requires no adjustments.
Fuser unit	Requires no adjustments.
Belt unit	Requires no adjustments.
PU board	Copying information stored in the EEPROM, which requires utility software.
CU board	Replacement of the EEPROM, which uses EEPROM intended for use in a user printer.

Note: See section 4.2.6, LED assembly for compatibility of LEDs with the LEDs to replace with them, and identification of those LEDs.

5.4.1 Notes on CU/PU board replacement

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

   (1) Remove information from the EEPROM in the PU block, and setting information from the EEPROM in the CU block, of the board, and temporarily store them onto an HDD of a computer, by using the board replacement function of Maintenance Utility (Maintenance Utility Operating Manual, section 2.4.1.1.9 about board replacement functionality).

   (2) By using the board replacement function, copy the information and setting information into the EEPROM of a board to replace with.

   (3) When only the information or setting information can be removed from the board to replace, copy it into the EEPROM of the replacement board by using the board replacement function. With the board replacement function, separately configure the other information, which cannot be removed. Perform PU-block serial-number setting (Maintenance Utility Operating Manual, section 2.4.1.1.9.5), and make a change to the Shipping mode (Maintenance Utility Operating Manual, section 2.4.1.1.9.6), in setting windows when the information cannot be removed. Configure CU-block serial number information (Maintenance Utility Operating Manual, section 2.4.1.1.9.4) when the setting information cannot be removed.

Note: When removing or writing information from/into the EEPROM by using Maintenance Utility, use the procedure shown below to place the printer to the Forced ONLINE mode before accessing the EEPROM. Even in the forced ONLINE mode, the printer provides an error indication when having an error.

1. When turning on the printer, press and hold down ↩, ▼ and the OK button in combination until STATUS MODE appears on the operator panel.
2. The printer displays ONLINE when operating properly, and provides an error indication when having an error, where the printer is internally online, being ready to communicate.

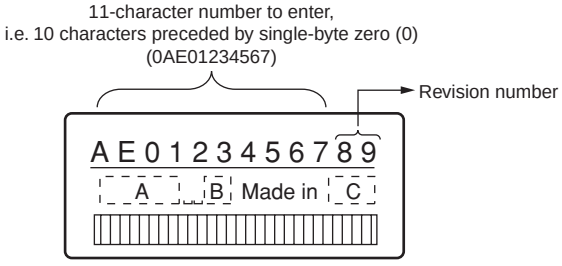
2. When the EEPROM on a board to remove cannot be accessed:

   When the operator panel displays SERVICE CALL 104 (Engine EEPROM Error) for, or data cannot be read from the EEPROM of, a board to remove, follow the following procedure to perform operation by using Maintenance Utility after the board is replaced with a new one:

   (1) Serial number setting (Maintenance Utility Operating Manual, section 2.4.1.1.10.3)

   A SAP serial number is assigned to the printer. The SAP serial number is at the top of the serial number label of the printer, consisting of a total of 12 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 a revision number.

   - Select PU Serial Number under “Select printer serial number”, and “Display the serial number only” under Display mode. Do not enter the CU serial number.
   - The PU serial number is 10 characters a two-character revision number excluded from the 12-character SAP serial number.
   - Make settings in the window for the serial number information setting described in section 2.4.1.1.10.3 in section 2.4.1.1.10 about board setting functionality.
   - To specify a PU serial number, in the PU serial number setting window, enter an 11-character number with the first character a single-byte zero (0) (note a read PU serial number is 10 characters), i.e. a 10-character number prefixed with a single-byte zero (0), such as the number shown in the following image, excluding the revision number two digits.



Serial number label image

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

   (2) Change to Shipping mode (section 2.4.1.1.10.4 of Maintenance Utility Operating Manual)

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

   - Use the window for the Factory/Shipping mode described section 2.4.1.1.10.4 in Maintenance Utility section 2.4.1.1.10 about board setting functionality

Note: Note that replacing the EEPROM (the engine control board) clears life information about units, including the belt, toner and image drums, causing errors in managing the lives of the units until the units are replaced. Below is the counts cleared with such CU/PU board replacement. When the units are replaced with new ones, their respective counts except for Total Sheets Fed are cleared, the errors being corrected.

Item	Description	Count description
Fuser unit	A fuser life count.	A value converted on an A4 page basis from the number of pages printed to date after installation of a new fuser unit.
Belt unit	A belt unit life count.	A value converted on an A4 page basis from the number of pages printed to date after installation of a new belt unit.
Image drum unit black Image drum unit yellow Image drum unit magenta Image drum unit cyan	Each the image drum unit life count for a color.	A value converted on an A4 page basis from the number of pages printed to date after installation of a new image drum unit.
Total number of sheets	A printer life count.	The total number of sheets fed.
Print black Print yellow Print magenta Print cyan	Each the number of pages printed with an image drum.	The number of pages printed after installation of a new image drum unit.

5.5 Manual density adjustment operation

C330dn and the C530dn are shipped with "Automatic" set for the auto density adjustment mode. When "Manual" is set for the mode by a user, the printer may print density out of adjustment while being used. Perform manual density adjustment operation when the printer has a density trouble.

Note: The manual density adjustment operation must be performed with the printer in a static state. Do not perform it while the printer warms up.

(1) Press ▲ or ▼ more than one time. Press the OK button when COLOR MENU appears.

(2) ▲ or ▼ to display ADJUST DENSITY EXECUTE.

(3) Press the OK button.

Auto density adjustment starts.

5.6 Printer ADMIN MENU

To display ADMIN MENU, turn on the printer while holding down the OK button.

Memo: Displaying ADMIN MENU requires entry of a password. The password defaults to six as (aaaaaa).

Category	Option	Settings	Description	C530	C330
ADMIN MENU	ENTER PASSWORD	**********	Enters a password for entry to ADMIN MENU. The password defaults to six as (aaaaaa). The password should be six to 12 numbers or lower-case characters.	○	○
OP MENU	ALL CATEGORY	ENABLE DISABLE	Sets whether to enable or disable all the categories of USER MENU. DISABLE: Does not display USER MENU (except PRINT JOBS MENU.	○	○
	PRINT JOBS MENU	ENABLE DISABLE	Sets whether to enable or disable the PRINT JOBS MENU category. DISABLE: Does not display PRINT JOBS MENU.	○	-
	INFORMA-TION MENU	ENABLE DISABLE	Sets whether to enable or disable the INFORMATION MENU category. DISABLE: Does not display INFORMATION MENU through USER MENU.	○	○
	SHUTDOWN MENU	ENABLE DISABLE	Sets whether to enable or disable the SHUTDOWN MENU category. DISABLE: Does not display SHUTDOWN MENU through USER MENU.	○	○
	PRINT MENU	ENABLE DISABLE	Sets whether to enable or disable the PRINT MENU category. DISABLE: Does not display the PRINT MENU category through USER MENU.	○	○
OP MENU	MEDIA MENU	ENABLE DISABLE	Sets whether to enable or disable the MEDIA MENU category. DISABLE: Does not display the MEDIA MENU category through USER MENU.	○	○
	COLOR MENU	ENABLE DISABLE	Sets whether to enable or disable the COLOR MENU category. DISABLE: Does not display the COLOR MENU category through USER MENU.	○	○
	SYS CONFIG MENU	ENABLE DISABLE	Sets whether to enable or disable the SYSTEM CONFIG MENU category. The category is not displayed through USER MENU when disabled.	○	○
	PCL EMULATION	ENABLE DISABLE	Sets whether to enable or disable the PCL EMULATION menu category. DISABLE: Does not display the PCL EMULATION menu category through USER MENU.	○	○
	USB MENU	ENABLE DISABLE	Sets whether to enable or disable the USB MENU category. DISABLE: Does not display the USER MENU category through USER MENU.	○	○
	NETWORK MENU	ENABLE DISABLE	Sets whether to enable or disable the NETWORK MENU category. DISABLE: Does not display the NETWORK MENU category through USER MENU.	○	○
	MEMORY MENU	ENABLE DISABLE	Sets whether to enable or disable the MEMORY MENU category. DISABLE: Does not display the MEMORY MENU category through USER MENU.	○	○

Category	Option	Settings	Description	C530	C330
OP MENU	SYS ADJUST MENU	ENABLE DISABLE	Sets whether to enable or disable the SYSTEM ADJUST MENU category. DISABLE: Does not display the SYSTEM ADJUST MENU category through USER MENU.	○	○
	MAINTE-NANCE MENU	ENABLE DISABLE	Sets whether to enable or disable the MAINTENANCE MENU category. DISABLE: Does not display the MAINTENANCE MENU category through USER MENU.	○	○
	USAGE MENU	ENABLE DISABLE	Sets whether to enable or disable the USAGE MENU category. DISABLE: Does not display the USAGE MENU category through USER MENU.	○	○
CON-FIG MENU	NEARLIFE STATUS	ENABLE DISABLE	Sets the display provided when consumables are near the end of their lives. DISABLE: Displays no messages when a consumable is near the end of its life.	○	○
	LIFE WARNING	ENABLE DISABLE	Sets whether or not to display warnings for consumable lives. ENABLE: Displays warnings. DISABLE: Displays no warnings.	○	○
	NEARLIFE LED	ENABLE DISABLE	Sets whether or not to turn on the attention LED when consumables are near the end of their lives. ENABLE: Turns on the attention LED.	○	○
	ECO MODE	ON OFF	Sets fuser control. ON: Makes early starts of jobs that print a small number of pages. OFF: Starts, after a determined fusing temperature is reached, jobs that print even a small number of pages	○	○
	HIGH HUM. MODE	ON OFF	when curl is terrible, set it in ON when stack defectiveness occurs. ON: Sets measures control of curl. But there is fall of throughput. OFF: Sets conventional fixing control.	○	○

Category	Option	Settings	Description	C530	C330
SECU-RITY MENU	JOB LIMITA-TION	OFF ENCRYPTED JOB	Sets whether to accept or discard data except encrypted secure print data. The printer displays this message with an SD memory card installed.	○	-
	MAKE SECURE SD-M	EXECUTE	Enables the encryption function for data to store an SD memory card. This option turns on cipher key generation and encryption function (security mode) information and initializes the SD memory card. The printer displays this message with the SD memory card installed and the secure SD card function disabled.	○	-
	MAKE NORMAL SD-M	EXECUTE	Disables the encryption function for data to store an SD memory card. This option turns off cipher key deletion and encryption function (security mode) information and initializes the SD card. The printer displays this message with the SD memory card installed and the secure SD card function enabled.	○	-
	RESET CIPHER KEY	EXECUTE	Enables the encryption function, and re-generates a cipher key with use of an SD memory card. With this processing, all data that is in the SD memory card is made unrestorable. The printer displays this message with the SD memory card installed and the secure SD card function enabled.	○	-

Category	Option	Settings	Description	C530	C330
FILE SYS MAIN-TE1	SD-M INITIALIZE	EXECUTE	Puts an SD memory card back to the factory-shipped configuration. The printer displays this message with the SD memory card installed.	○	-
	PARTITION SIZE	EXECUTE	Displays a list of SD memory card partition sizes. The printer displays this message with an SD memory card installed.	○	-
		PCL nnn%/ COMMON mmm% PSE lll%	Each Set a percentage of partition size. These three sizes should be set to 100% in total.	○	-
	SD-M FORMAT-TING	PCL COMMON PSE	Formats a specified partition. The printer displays this option with an SD memory card installed.	○	-
	FLASH INITIALIZE	EXECUTE	Initializes flash memory.	○	○
FILE SYS MAIN-TE2	CHK FILE SYS	EXECUTE	Repairs the file system. This processing needs several tens of seconds. The printer displays this option with an SD memory card installed.	○	-
	CHK ALL SECTORS	EXECUTE	Repairs the file system and an SD memory card. This processing needs approximately 30 minutes when the size of the SD memory card is 16 GB. The printer displays this option with the SD memory card installed.	○	-

Category	Option	Settings	Description	C530	C330
FILE SYS MAIN-TE2	SD CARD	ENABLE DISABLE	Sets whether or not to use an SD memory card. ENABLE: Uses an SD memory card. DISABLE: Uses an SD memory card. The printer displays this option with the SD memory card installed.	○	-
	SD CARD ERASE	EXECUTE	Completely erases the information in an SD memory card. This option should be operated, for example, before disposal of the SD memory card. This processing needs approximately 30 seconds when the size of the SD memory card is 16 GB. The printer displays the option with the SD memory card installed.	○	-
	INITIAL LOCK	YES NO	Sets whether to enable or disable SD memory card and flash memory initialization. YES: Disables changes that involve initialization. This setting does not display FILE SYS MAINTE1. NO: Enables initialization.	○	○
LAN-GUAGE MENU	LANG INITIALIZE	EXECUTE	Initializes the message file in flash memory.	○	○
PS MENU	L1 TRAY	TYPE1 TYPE2	Sets the type of the tray selection number.	○	○
CHANGE PASS-WORD	NEW PASSWORD	**********	Sets a new password for entry to ADMIN MENU. The password should be set to six to 12 numbers or lower-case characters.	○	○
	VERIFY PASSWORD	**********	Enters for verification the password set for NEW PASSWORD.	○	○

6. PERIODIC MAINTENANCE

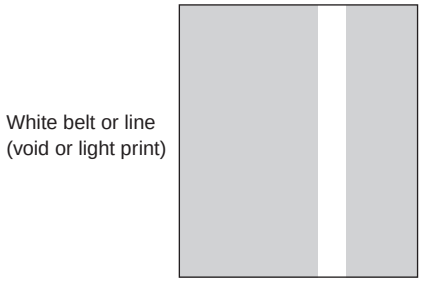
6.1 Cleaning

The inside and outside of of the units should 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 LED head connectors.

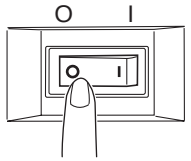
6.2 LED lens array cleaning

The LED lens array should be cleaned when a printed surface contains a vertical white belt or line (void or light print).



LED head cleaning

The LED heads should be cleaned when a printed output contains a faded image, a white line or spread ink of text,

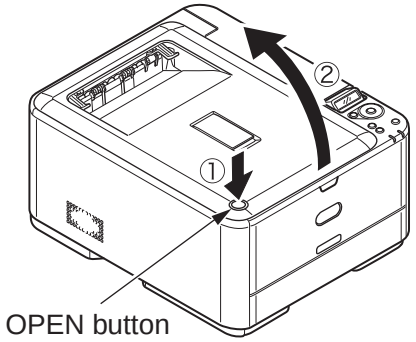


(1) Turn off the printer.

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

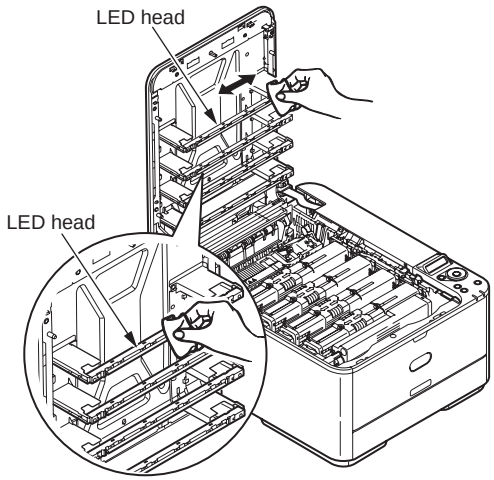
⚠Caution	Burn injury hazard	

The fuser unit is hot. Do not touch it.

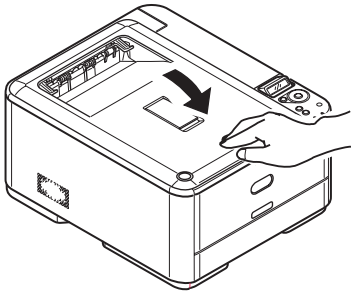


(3) Lightly wipe the (four) LED head lens surfaces with soft tissue paper.

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



(4) Close the top cover.



6.3 Pick-up roller cleaning

The pick-up rollers should be cleaned when a printed surface contains a vertical line.

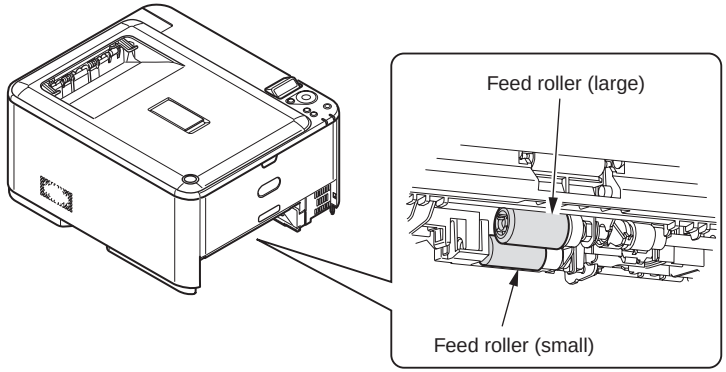
Note! Use a soft cloth for cleaning so as not to damage the roller surfaces.

Feed roller and separator roller cleaning

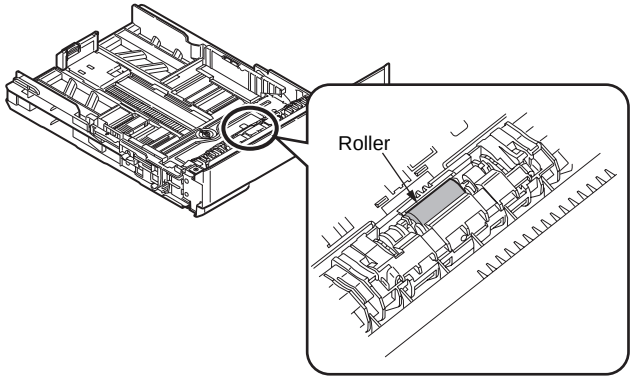
The feed rollers and the separator roller should be cleaned when 391: PAPER JAM frequently occurs.

(1) Pull out the paper cassette.

(2) Wipe the (large and small) feed rollers with a cloth tightly wrung out with water.



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



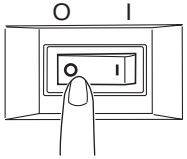
Note!
- Clean the (option) tray 2 in the same way when 392: PAPER JAM frequently occurs.
- Clean the feed roller of the multi-purpose tray in the same way when 390: PAPER JAM frequently occurs.

6.4 Pinter internal cleaning

Toner may adhere to the metal shaft between the fuser and the cyan image drum cartridge depending on print patterns. The inside of the printer should be cleaned when there is a toner adherent on the metal shaft.

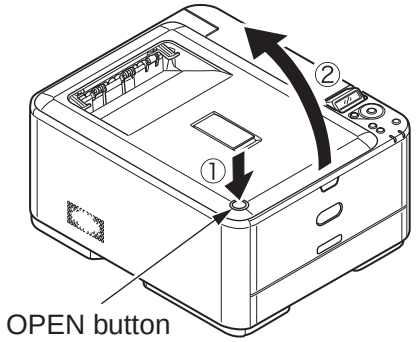
(1) Turn off the printer.

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



⚠Caution	Burn injury hazard	

The fuser unit is hot. Do not touch it.



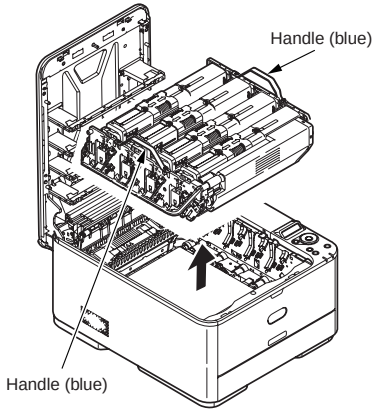
(3) Take out the image drum cartridges:

1. Take out the (four) image drum cartridges, and place them on a flat table.

2. Cover the image drum cartridges with black paper.

Note! • The image drums (the green tubes) are delicate. Handle them carefully.

• Do not expose the image drum cartridges to direct sunlight or very bright interior light (approximately 1,500 lux or more). Do not leave them for five minutes of more even under the normal interior light.

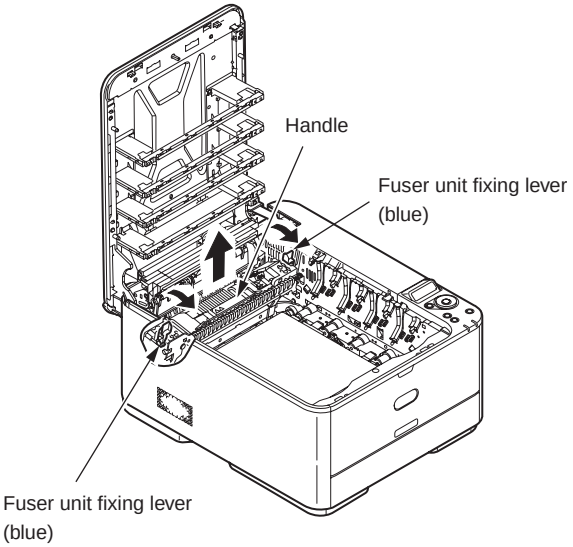


(4) Take out the fuser unit.

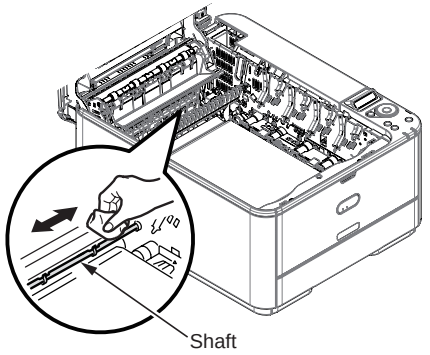
⚠Caution	Burn injury hazard	

The fuser unit is hot. Do not touch it with extreme caution. When it is hot to touch, wait for it to cool, then perform operations.

1. Raise the (two blue) fuser unit fixing levers in the direction of the arrows.
2. Hold the fuser unit by its handle and take out it.



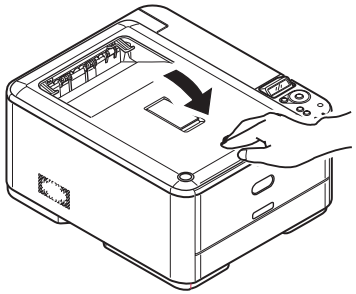
(5) Wipe the metal shaft with a soft cloth or tissue paper.



(6) Reinstall the fuser unit. For details, refer to the fuser unit replacement section of the C330dn and C530dn user documentation about setting up.

(7) Gently put the (four) image drum cartridges back into the printer.

(8) Close the top cover.



7. TROUBLESHOOTING

7.1 Before troubleshooting

(1) Check the basic check items described in the C330dn & C530dn user documentation.

(2) Obtain information as in much detail as possible from customers about in what situations troubles occurred.

(3) Perform checking under situations close to those where troubles occurred.

7.2 Points to check before dealing with image troubles

(1) Operating environment is proper.

(2) Consumables (the toner and image drum cartridges) have been replaced properly.

(3) There are no problems with paper. Refer to applicable paper specifications.

(4) The image drum cartridges are installed properly.

7.3 Precautions for dealing with image troubles

(1) Do not touch, or allow foreign matter to touch, the surfaces of the OPC drums.

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

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

(4) Do not expose the image drums to light for five minutes or more at room temperature.

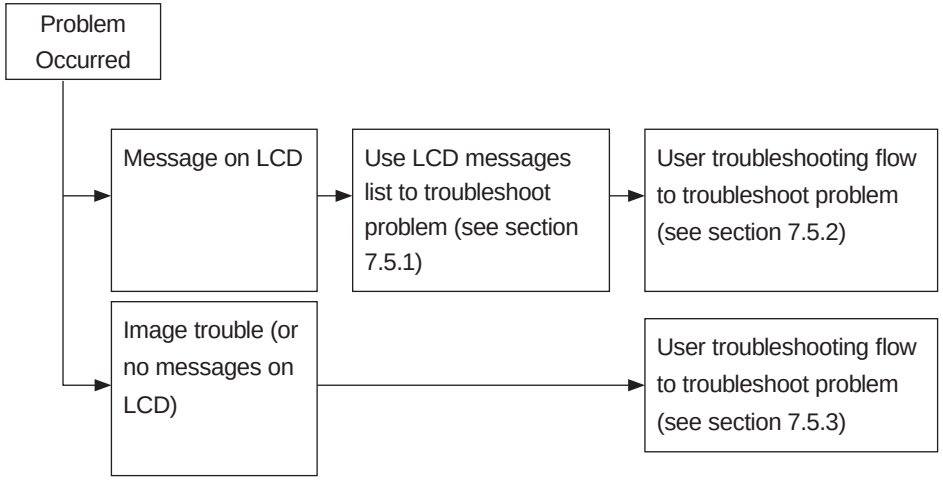
7.4 Preparation for troubleshooting

(1) Operator panel display

C330dn & C530dn displays its trouble status on its operator panel LCD (liquid crystal display). Perform proper troubleshooting according to messages displayed on the LCD.

7.5 Troubleshooting procedure

Use the following procedure to troubleshoot a problem with C330dn and C530dn:



7.5.1 LCD messages list

Initializing

Panel display (identifies that no display is provided)	On-line lamp	Atten-tion lamp	Detail
PLEASE WAIT	On	On	Displayed until the CU program is expanded in the RAM.
INITIALIZING	Off	Off	Indicates the controller side is being initialized.
MENU RESETTING	Off	Off	Indicates the EEPROM on the controller side is being reset. The following is the conditions for the EEPROM to be reset: • The CU ROM is changed (a CU firmware version mismatch is detected). • The destination is changed. • The EEPROM is forcedly initialized (the System Maintenance menu). • OEM is set by a PJL command.
RAM CHECK **********	Off	Off	Indicates the RAM is being checked. The ratio of the checked size to total size of the RAM is indicated in the second row.
WAIT A MOMENT NETWORK INITIAL	Off	Off	Indicates network initialization is being performed.
FLASH CHECK	Off	Off	Indicates information in unformatted resident/ option flash memory is being checked. This message appears after such memory is detected and MAINTENANCE MENU-FLASH FORMAT is executed in the System Maintenance menu. This processing is transparent to users, and this status occurs in no user environments.

Panel display (identifies that no display is provided)	On-line lamp	Atten-tion lamp	Detail
FLASH FORMAT	Off	Off	Indicates unformatted resident/option flash memory is being formatted. This message appears after such memory is detected and MAINTENANCE MENU-FLASH FORMAT is executed in the System Maintenance menu. This processing is transparent to users, and this status occurs in no user environments.
PROGRAM UPDATA MODE	Off	Off	Indicates the printer is in a mode dedicated to update the NIC program (the controller firmware). By turning on the printer while holding down the ONLINE button, the printer is put into the mode.
WAIT A MOMENT DATA RECEIVE	Off	Blink	Indicates update NIC program data is being received.
WAIT A MOMENT DATA RECEIVED OK	Off	Off	Indicates reception of update NIC program data is complete.
CHECK DATA REC DATA ERROR <n>	Off	On	Indicates that the printer has an error during reception processing of update NIC program data. <n> 1: A size error. 2: A checksum error. 3: A printer model number error. 4: A module interface version error. 5: A FAT version error.
WAIT A MOMENT DATA WRITING	Off	Blink	Indicates update NIC program data is being written.
POWER OFF/ON DATA WRITTEN OK	Off	Off	Indicates writing of update NIC program data is complete.

Panel display (identifies that no display is provided)	On-line lamp	Atten-tion lamp	Detail
CHECK DATA DATA WRITE ERROR <n>	Off	On	Indicates that the printer has an error during writing of update NIC program data. <n> 1: A memory allocation error. 2: A download file error. 3: An error in obtaining available device memory. 4: An error of insufficient available device memory 5: A file writing error. 6: A CU firmware mismatch error.
LOADER VERSION XX.XX	Off	Off	Indicates that the PU firmware is running in the Loader mode. The CU firmware sends this message at power-on of the printer. This message may occur in user environments, requiring maintenance by maintenance personnel (like service calls)
COMMUNICATION ERROR	Off	Off	Indicates communication with the PU firmware failed. This message may occur in user environments, requiring maintenance by maintenance personnel (like service calls).
STATUS MODE	Off	Off	Indicates that the printer started in the permanent online mode. Even when having an error after starting in the mode and going online (into a Ready state), the printer processes data (jobs) sent from the outside (a host), indicating an error or warning on the panel. Turning on the printer while using an OK, Back and Down button combination puts the printer into the mode. The button combination is transparent to users, and this state occurs in no user environments.

Normal

Panel display (identifies that no display is provided)	On-line lamp	Atten-tion lamp	Detail	Solution
ONLINE	On	Off	Indicates the printer is online.	–
OFFLINE	Off	Off	Indicates the printer is offline. * The Ready LED is always off while the printer is offline.	To perform printing from a PC, press the ONLINE button to put the printer online.
DATA ARRIVE	Varies	Varies	Indicates the file system (the SD memory card/flash memory) is being accessed.	–
DATA ARRIVE	Varies	Varies	The printer is receiving data and has started no processing. Typically while performing PJL processing that involves no text print data, or performing spooling, the printer provides this display.	–
PROCESSING	Blink	Varies	Indicates the printer is receiving data or performing output processing.	–
DATA	Varies	Varies	Indicates that, in the buffer, unprinted data remains. The printer is waiting data to follow.	When the printer pauses with indicating it has data, press the ONLINE button to print the data forcedly, or the CANCEL button to delete the data.
PRINTING	Varies	Varies	Indicates the printer is performing printing.	–
PRINT DEMO PAGE	Varies	Varies	Indicates the printer is printing a demo page.	–
PRINT FONT	Varies	Varies	Indicates the printer is printing a Menu Map.	–
PRINT NETWORK CONFIG	Varies	Varies	Indicates the printer is printing a network configuration. Selecting INFORMATION MENU-NETWORK allows the printer to start printing a network configuration.	–
PRINT MENU MAP	Varies	Varies	Indicates the printer is printing a fonts list.(C530 and C330)	
PRINT FILE LIST	Varies	Varies	Indicates the printer is printing a list of the files stored in the file system.(C530 and C330)	
PRINT ERROR LOG	Varies	Varies	Indicates the printer is printing an error log.(C530 and C330)	
□ COLLATE COPY iii/jjj	Varies	Varies	Indicates the printer is making collated copy sets of a multipage document. The count for the collated copy set the printer is making is identified by iii, and the total number of collated copy sets the printer is making is identified by jjj. When the total number is 1, the printer displays PRINTING it normally displays.	–
□ COPY kkk/lll	Varies	Varies	Indicates the printer is performing copy printing. The count for the copy the printer is printing is identified by kkk. The total number of copies the printer is printing is identified by III.	–
CANCELING JOB	Blink	Varies	Indicates that, with instruction to cancel a job, until the job ends, the printer is receiving and discarding the job.	–
CANCELING JOB (JAM)	Blink	Varies	Indicates that, when the printer has a paper jam with the jam recovery set to OFF, until a job ends, the printer is receiving and discarding the job.	–
CANCELING JOB	Blink	Varies	Indicates the printer is canceling unauthorized printing of a job (in connection with job accounting): 1. When the job is from a user not authorized for printing. 2. When the job is from a user not authorized for color printing.	–
CANCELING JOB (BUFFER FULL)	Blink	Varies	Indicates that, as the internal log storage area is depleted and the operation for the printer to perform in a log-full state is job cancellation, the printer is canceling a job (in connection with job accounting).	–

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
C M Y K ■ ■ ■ ■	On	Off	Indicates toner gages.	
□ CALIBRATING	Varies	Varies	Indicates toner TAG is being checked.	
□ ADJUSTING TEMP	Varies	Varies	Indicates the printer is warming up.	–
□ OPTIMIZING TEMP	Varies	Varies	Indicates that: the printer temporarily stops printing as an image drum is hot; or it is in a wait state for a thermal measure with change from narrower to wider paper.	–
□ POWER SAVE	Varies	Varies	Indicates the printer is in a power saving state. The printer turns off the LCD backlight simultaneously with entering a power saving mode and, after exiting the mode, turns on the backlight. When a button is pressed with the backlight not lighting (during a power saving mode), the printer turns on the backlight and, after 30 seconds, turns off it, where the printer does not exit the power saving mode. While shutting down, the printer stays the backlight lighting.	–
□ ADJUSTING COLOR	Varies	Varies	Indicates the printer is performing auto color registration adjustment.	–
□ ADJUSTING DENSITY	Varies	Varies	Indicates the printer is performing auto density adjustment. The status code 10988 corresponds to density reading and the status code 10994 corresponds to density adjustment.	–
PU DOWNLOADING	Varies	Varies	Indicates PU firmware program data is being downloaded. PU firmware downloading is transparent to users, and this status occurs in no user environments.	–

Warning

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
□ ORDER %COLOR% TONER	Varies	On (Blink) (Off)	Indicates that the printer is low on toner, or a waste toner near-full warning. With MENU-SYS CONFIG MENU-"SYS CONFIG MENU"-"LOW TONER"=STOP, the printer flashes the attention LED, going offline. When the ONLINE button is pressed, or the printer has an error and the error is cleared, the printer goes online and, until TONER EMPTY, continues printing. With MENU-SYS CONFIG MENU-"SYS CONFIG MENU"-"LOW TONER"=STOP, when the printer is in the TONER LOW state when turned on, the printer flashes the attention LED at completion of initialization, going offline. Pressing the ONLINE button makes the printer still able to perform printing until TONER EMPTY. With ADMIN MENU-CONFIG MENU-NEARLIFELED set to DISABLE, the printer stays the attention LED turned off.	–
□ %COLOR% WASTE TONER FULL. REPLACE TONER	Varies	On	A warning, which is displayed by cover opening and closing, or turning off and on the printer, after a toner-full error occurs once. The printer displays this warning and the first row's message in combination. While providing this display, the printer has a waste toner-full error every time printing approximately 50 pages, going offline and stopping. %COLOR% K	Replace the toner cartridge for the displayed color.
□ NON OEM %COLOR% TONER DETECTED	Varies	On	Indicates a toner cartridge is not for the printer. %COLOR% Y M C K	Ask the customer to use a proper part.

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
□ %COLOR% TONER REGIONAL MISMATCH	Varies	On	Indicates a toner cartridge is not for the printer. %COLOR% Y M C K	Ask the customer to use a proper part.
□ NON GENUINE %COLOR% TONER	Varies	On	Indicates a toner cartridge is not for the printer. %COLOR% Y M C K	Inform the customer that failures out of improper use of a part are not repaired without charge, and ask the customer to use a proper part.
□ %COLOR% TONER SENSOR ERROR	Varies	On	Indicates a toner sensor error. When having an error during printing in the shipping mode, the printer provides this warning. When the printer detects an error while warming up, it has an ERROR 540 to 543. %COLOR% Y M C K The printer provides a Service Call 160 to 163 in the Factory mode.	Check the toner sensor.
□ PS3 EMUL ERROR	Blink	Varies	Indicates the PostScript interpreter detected an error. Check the print data(C530 and C330)	Check the print data
□ ORDER IMAGE DRUM UNIT	Varies	On (Off)	Indicates an image drum is near the end of its life. The printer can still perform printing until causing an image drum life error. With ADMIN MENU-CONFIG MENU-NEARLIFE LED set to DISABLE, the attention LED is not lighting.	–
□ ORDER FUSER	Varies	On (Off)	Indicates the fuser is near the end of its life. With ADMIN MENU-CONFIG MENU-NEARLIFE LED set to DISABLE, the attention LED is not lighting.	–
□ ORDER BELT	Varies	On (Off)	Indicates the transfer belt is near the end of its life. This display is a warning and the printer does not stop printing. With ADMIN MENU-CONFIG MENU-NEARLIFE LED set to DISABLE, the attention LED is not lighting.	–
□ FUSER LIFE	Varies	On	Indicates the fuser is at the end of its life (a warning). This display is only a warning (not a life error). By cover opening and closing after the printer has a fuser life error, this status is displayed.	Replace the fuser to a new one.
□ BELT LIFE	Varies	On	Indicates the transfer belt is at the end of its life (a warning). This display is only a warning (not a life error). By cover opening and closing after the printer has a transfer belt life error, this status is displayed.	Replace the belt unit to a new one.
□ %COLOR% TONER EMPTY	Varies	On	Indicates the printer ran out of toner. When temporally recovered by cover opening and closing during a toner-empty error, the printer develops this status (warning). %COLOR% Y M C K	Replace the cartridge of the toner to a new one.

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
□ %COLOR% REPLACE TONER	Varies	On	Indicates the printer ran out of toner. Having no print data, the printer develops this status. The printer can print monochrome data with issuing this warning, and changes the display to an Empty error for color data to print. %COLOR% Y M C K	Replace the cartridge of the toner to a new one.
□ %COLOR% TONER NOT INSTALLED	Varies	On	Indicates the toner cartridge is not installed. This status is only a warning. %COLOR% Y M C K	Install the toner cartridge properly. Note the cartridge shipped, installed in the printer cannot be used after a supply toner cartridge is used in it.
□ DRUM UNIT LIFE	Varies	On	Indicates an image drum reached the end of its life. When temporarily recovered by cover opening and closing during an image drum life error, the printer develops this status (warning).	Replace the image drum for the displayed color.
□ BELT REFLEX ERROR	Varies	On	A belt reflection rate check error. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	−
□ DENSITY SHUTTER ERROR2	Varies	Varies	A density adjustment shutter error 2. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	−

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
□ DENSITY SHUTTER ERROR1	Varies	Varies	A density adjustment shutter error 1. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	−
□ DENSITY COLOR CALIBRATION ERROR	Varies	Varies	A density adjustment calibration error. The error has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	−
□ DENSITY COLOR SENSOR ERROR	Varies	Varies	A density adjustment color sensor error. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	−
□ DENSITY BLACK CALIBRATION ERROR	Varies	Varies	A density adjustment black calibration error. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	−
□ DENSITY BLACK SENSOR ERROR	Varies	Varies	A density adjustment black sensor error. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	−

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
□ %COLOR% IMAGE DRUM SMEAR ERROR	Varies	Varies	A density adjustment image drum error 2. The printer has the error when detecting a density problem due to an LED head being out of focus (extremely dirty). The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware. %COLOR% Y M C K	–
□ %COLOR% LOW DENSITY ERROR	Varies	On	A density adjustment image drum error. The printer has the error when, due to image drum failure, outputting dirty print and detecting a density problem. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware. %COLOR% Y M C K	–
□ SENSOR CALIBRATION ERROR	Varies	On	A sensor calibration error. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware.	–

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
□ REGISTRATION ERROR <n>	Varies	On	A color registration adjustment error. This display indicates that the printer has an error in rough adjustment or main-scanning line adjustment. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware. <n> 2 = Y 3 = M 4 = C 5 =	–
□ REGISTRATION SENSOR ERROR <n>	Varies	On	A color registration sensor error. The printer has the error in no user environments because, when it is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware. <n> 2 = Y 3 = M 4 = C 5 =	–
□ %COLOR% HEAD DATA ERROR	Varies	On	No LED head adjustment data is found or invalid. This occurs in no user environments because, when the printer is in the Shipping mode and the PU firmware detects this status, the PU firmware provides no notice to the CU firmware. %COLOR% Y M C K	–

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
□ %TRAY% EMPTY	Varies	On	Indicates the tray ran out of paper. This is deemed as a warning until printing from the tray is specified. %TRAY% TRAY1 TRAY2 MP TRAY	Add paper to the displayed tray.
□ FILE SYSTEM FULL	Varies	On	Indicates that no space became available in the file system in a recording device (an SD memory card/flash memory). This is a temporary warning, and the display is provided until and disappears at the end of a job.	Explain to the customer that the warning requires no actions.
□ DISK WRITE DISABLED	Varies	Varies	Indicates an attempt to write into a file unauthorized to be written into the file system in a recording device (an SD memory card/flash memory) was made. This is a temporary warning, and the display is provided until and disappears at the end of a job.	Explain to the customer that the warning requires no actions.
PRESS ONLINE SW COLLATE FAIL	Varies	On	Indicates memory became full of MOPY data. This display is provided until the ONLINE button is pressed.	Reduce the number of pages to print at a time.
PRESS ONLINE SW JOB LOG. DISK FULL	Varies	On	Indicates the available memory space of the storage device to execute a print accounting function is too small.	Delete unnecessary files to make appropriate available memory space in the device.

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
PRESS ONLINE SW COLOR RESTRICTED. MONO PRINTED PRESS ONLINE SW COLOR RESTRICTED. JOB REJECTED PRESS ONLINE SW PRINT RESTRICTED. JOB REJECTED	Varies	On	Notifies the user that, as the user was not authorized to print a job, the job was canceled (in connection with job accounting). This display is provided until the ONLINE button is pressed.	Set a print job accounting user ID in the printer driver. Check a user ID and the setting for the user ID with the job accounting administrator when the user ID is already set in the driver.
PRESS ONLINE SW LOG BUFFER FULL. JOB REJECTED	Varies	On	Notifies the user that the log buffer was full and a job was canceled (in connection with job accounting). This display is provided until the ONLINE button is pressed.	Execute ログを直ちに取得 on the print job accounting server PC.
PRESS ONLINE SW EXPIRED SECURE JOB	Varies	On	Indicates a job of which storage period for secure printing was exceeded was canceled.	-
PRESS ONLINE SW INVALID SECURE DATA	Varies	On	Indicates that, as data damage was detected through completeness checking in secure printing, a job was deleted.	-

Panel display (identifies that no display is provided)	On-line lamp	Attention lamp	Detail	Solution
PRESS ONLINE SW DISK USE FAILED %FS_ERR%	Varies	On	Indicates a file system error other than the above file system-related status states occurred. Processing that does not use the file system is available. %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 memory card only for use of printing, such as secure printing.
PRESS ONLINE SW INVALID DATA *PDL PRESS ONLINE SW INVALID DATA OR TIMEOUT *GDI	Varies	Varies	Prompts pressing the ONLINE button to clear this warning as the printer received invalid data. This display is provided at reception of an unsupported PDL command.	Press the ONLINE button.
%MEDIA_SIZE% MP LOAD %MEDIA_SIZE% IN MP TRAY AND PRESS ONLINE SWITCH	On	Off	Indicates a request for printing by manual feeding occurred. This display prompts feeding manually paper identified by %MEDIA SIZE%. The unit of Custom paper size conforms to the specified (menu-set) display unit for the MP tray unless specified with a driver. With a unit specified for Custom paper size in a driver, the display shows a Custom paper size in the unit. Custom paper size is expressed by <width> x <length> <unit>. Examples: 210 x 297 mm 8.5 x 11.0 inches	Press the ONLINE button. * Data is deleted unless the button is pressed within the time set for MANUAL TIMEOUT.

C330dn and C530dn displays the following service call error when detecting an unrecoverable error:

Service Call

nnn: Error

Note! An error code is identified by nnn.

The printer displays a service call with an error code and corresponding error information in the lower LCD display. The error information (such as a number indicating an address) is used for problem analysis and solution, and must be retained, and notified to related departments. Tables 7-1-1 and 7-1-2 outline error codes, their meanings and the solutions for them.

Table 7-1-1: Operator Alarms

Operator panel display	Online lamp	Attention lamp	Description	Code nnnnnn
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% MEDIA MISMATCH	Off	Blink	Indicates a mismatch between a tray media type and print data occurred. This display prompts loading paper in a tray. Error 461: TRAY1. Error 462: TRAY2. The unit of Custom paper size conforms to the specified (menu-set) display unit for the MP tray unless specified with a driver. With a unit specified for Custom paper size in a driver, the display shows a Custom paper size in the unit. Custom paper size is expressed by <width> x <length> <unit>. Examples: 210 x 297 mm 8.5 x 11.0 inches The user needs to press the ONLINE button after changing paper.	Error 461 462
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% MEDIA MISMATCH	Off	Blink	Indicates a mismatch between a tray media type and print data occurred. This display prompts loading paper in a tray. Error 460: MP TRAY. The unit of Custom paper size conforms to the specified (menu-set) display unit for the MP tray unless specified with a driver. With a unit specified for Custom paper size in a driver, the display shows a Custom paper size in the unit. Custom paper size is expressed by <width> x <length> <unit>. Examples: 210 x 297 mm 8.5 x 11.0 inche The user needs to press the ONLINE button after changing paper.	Error 460
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% SIZE MISMATCH	Off	Blink	Indicates a tray paper size, or paper size, and a media type did not match. This display prompts loading paper in a tray. Error 461: TRAY1. Error 461: TRAY2. The unit of Custom paper size conforms to the specified (menu-set) display unit for the MP tray unless specified with a driver. With a unit specified for Custom paper size in a driver, the display shows a Custom paper size in the unit. Custom paper size is expressed by <width> x <length> <unit>. Examples: 210 x 297 mm 8.5 x 11.0 inches The user needs to press the ONLINE button after changing paper.	Error 461 462

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% SIZE MISMATCH	Off	Blink	Indicates a tray paper size, or paper size, and a media type did not match. This display prompts loading paper in a tray. Error 460: MP TRAY. The unit of Custom paper size conforms to the specified (menu-set) display unit for the MP tray unless specified with a driver. With a unit specified for Custom paper size in a driver, the display shows a Custom paper size in the unit. Custom paper size is expressed by <width> x <length> <unit>. Examples: 210 x 297 mm 8.5 x 11.0 inches The user needs to press the ONLINE button after changing paper.	Error 460
DOWNLOAD MESSAGE PROCESSING	Varies	Varies	Indicates update message data is being processed.	Error (ONLINE)
DOWNLOAD MESSAGE WRITING	Varies	Varies	Indicates update message data is being written.	Error (ONLINE)
DOWNLOAD MESSAGE SUCCESS	Varies	Varies	Indicates wiring update message data succeeded.	Error (ONLINE)

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
DOWNLOAD MESSAGE FAILED %CODE%	Varies	Varies	Indicates wiring update message data succeeded. %CODE% identifies a decimal number (one digit) that indicates writing failed. =1: FAIL, which means no causes are known. =2: DATA_ERROR, which means a hash check error/flash memory error in writing data. =3: OVERFLOW, which means that, because flash memory became full in or during language file writing, downloading failed. =4: MEMORYFULL, which means making available memory space failed. =5: UNSUPPORTED DATA, which means downloading data unsupported by the printer.	Error (ONLINE)
NETWORK CONFIG WRITING	Varies	Varies	A change of the setting for a network-related option is being saved in the flash memory.	Error (ONLINE)
WAIT A MOMENT NETWORK INITIAL	Varies	Varies	Indicates network initialization is being performed.	Error (ONLINE)
LOAD %MEDIA_SIZE% %ERRCODE%:%TRAY% EMPTY	Off	Blink	Indicates a request for printing from an empty tray occurred. This display prompt loading paper. Error 491: TRAY1. Error 492: TRAY2. The unit of Custom paper size conforms to the specified (menu-set) display unit for the MP tray unless specified with a driver. With a unit specified for Custom paper size in a driver, the display shows a Custom paper size in the unit.	Error 491 492

Operator panel display	Online lamp	Attention lamp	Description	Code nnnnnn
LOAD %MEDIA_SIZE% AND PRESS ONLINE SWITCH %ERRCODE%:MP TRAY EMPTY	Off	Blink	Indicates that, with the multi-purpose tray empty of paper, a request for printing from it occurred. The printer re-feeds paper Error 490: MP TRAY. The unit of Custom paper size conforms to the specified (menu-set) display unit for the MP tray unless specified with a driver. With a unit specified for Custom paper size in a driver, the display shows a Custom paper size in the unit.	Error 490
INSTALL PAPER CASSETTE %ERRCODE%:TRAY1 OPEN	Off	Blink	Indicates the cassette of the tray 1 included in the paper route for attempted printing from the tray 2 is slid out.	Error 440
INSTALL PAPER CASSETTE %ERRCODE%:%TRAY% MISSING	Off	Blink	Indicates that the cassette of the tray from which printing was attempted is slid out and paper cannot be from it.	Error 430
ADD MORE MEMORY %ERRCODE%:MEMORY OVERFLOW	Off	Blink	Indicates that memory overflowed for the reason below. Press the ONLINE button to proceed. Install expansion memory or reduce the data volume. - Much print data in one page	Error 420
CLOSE FACE UP STACKER %ERRCODE%:DUPLEX NOT AVAILABLE	Off	Blink	Indicates that the face-up stacker is open and attempted duplex printing cannot be performed. (With the face-up stacker open, in duplex printing, the exit motor is reversed, print media cannot be input to the duplex path and an error results.)	Error 581

Operator panel display	Online lamp	Attention lamp	Description	Code nnnnnn
REPLACE TONER %ERRCODE%:%COLOR% WASTE TONER FULL	Off	Blink	Indicates that the printer is full of waste toner identified by %COLOR% and requires replacement. Error 417: K By cover opening and closing, the printer is placed in a warning state, made able to print approximately further 50 pages.	Error 417
REPLACE TONER %ERRCODE%:%COLOR% TONER EMPTY	Off	Blink	Indicates the printer is empty of toner. Cover opening and closing puts the printer into a warning state. Error 410 : Y Error 411 : M Error 412 : C Error 413 : K	Error 410 411 412 413
REPLACE TONER OR PRESS ONLINE SWITCH %ERRCODE%:%COLOR% TONER EMPTY	Off	Blink	Indicates that, after the printer is turned on, it has a toner-empty error. Cover opening and closing does not put the printer into a warning state. The printer is put into a warning state by pressing the ONLINE button. Error 410 : Y Error 411 : M Error 412 : C	Error 410 411 412
REPLACE TONER %ERRCODE%:%COLOR% TONER REGIONAL MISMATCH	Off	Blink	Indicates a toner cartridge is not for the printer. The printer is recovered by replacing the toner cartridge with a one for the printer. Error 554 : Y Error 555 : M Error 556 : C Error 557 : K	Error 554 555 556 557

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
REPLACE TONER %ERRCODE%: INCOMPATIBLE %COLOR% TONER	Off	Blink	Indicates a toner cartridge is not for the printer. The printer is recovered by replacing the toner cartridge with a one for the printer. Error 614 : Y Error 615 : M Error 616 : C Error 617 : K	Error 614 615 616 617
REPLACE TONER %ERRCODE%: INCOMPATIBLE %COLOR% TONER	Off	Blink	ndicates a toner cartridge is not for the printer. The printer is recovered by replacing the toner cartridge with a one for the printer. Error 620 : Y Error 621 : M Error 622 : C Error 623 : K	Error 620 621 622 623
GENUINE TONER IS RECOMMENDED %ERRCODE%:NON GENUINE %COLOR% TONER	Off	Blink	Indicates a toner cartridge is not for the printer. The printer is recovered by replacing the toner cartridge with a one for the printer. Error 550 : Y Error 551 : M Error 552 : C Error 553 : K	Error 550 551 552 553
INSTALL TONER %ERRCODE%:%COLOR% TONER MISSING	Off	Blink	Indicates a toner cartridge is not installed. Error 610 : Y Error 611 : M Error 612 : C Error 613 : K	Error 610 611 612 613

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
CHECK TONER CARTRIDGE %ERRCODE%:%COLOR% TONER SENSOR ERROR	Off	Blink	Indicates a toner sensor detected an error. Error 540 : Y Error 541 : M Error 542 : C Error 543 : K	Error 540 541 542 543
OPEN TOP COVER %ERRCODE%:PAPER SIZE ERROR	Off	Blink	Notifies that, from the tray, paper of an improper size was fed. Check the paper in the tray, or the printer for a multi feed. Cover opening and closing makes the printer to perform recovery printing to proceed.	Error 400
CHECK MP TRAY %ERRCODE%:PAPER JAM	Off	Blink	Indicates that, during feeding paper from the MP tray, a paper jam occurred. Error 390 : MPTray	Error 390
OPEN TOP COVER %ERRCODE%:PAPER JAM	Off	Blink	Indicates that, during feeding paper from the tray, a paper jam occurred. Error 391 : Tray1 Error 392 : Tray2	Error 391 392
OPEN TOP COVER %ERRCODE%:PAPER JAM	Off	Blink	Indicates that a paper jam occurred in a paper path. Error 380 : Feed	Error 380
OPEN TOP COVER %ERRCODE%:PAPER JAM	Off	Blink	Indicates that a paper jam occurred in a paper path. Error 381 : Transport Error 382 : Exit Error 385 : Around Fuser Unit Error 389 : Printing Page Lost	Error 381 382 385 389
OPEN TOP COVER %ERRCODE%:FACE UP STACKER ERROR	Off	Blink	Indicates that, during printing, the face-up stacker is operated and the printer pauses, causing error.	Error 409

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
CHECK UNDER BELT %ERRCODE%:PAPER JAM	Off	Blink	Indicates a paper jam occurred near the duplex unit. Error 370 : Duplex Reversal Error 371 : Duplex Input	Error 370 371
CHECK UNDER BELT %ERRCODE%:PAPER JAM	Off	Blink	Indicates a paper jam occurred near the duplex unit. Error 372 : Duplex Misfeed	Error 372
REPLACE IMAGE DRUM UNIT 353:DRUM UNIT LIFE	Off	Blink	Notifies the end of the life of an image drum (an alarm). Cover opening and closing puts the printer into a warning state.	Error 353
REPLACE IMAGE DRUM UNIT 563:DRUM UNIT LIFE	Off	Blink	Notifies the end of the life of an image drum (an alarm). This display is provided until the image drum is replaced.	Error 563
REPLACE FUSER %ERRCODE%:FUSER LIFE	Off	Blink	Notifies the end of the life of the fuser. This is an error that indicates a counter shows the end of the fuser life is reached. The printer stops printing with the error. Cover opening and closing puts the printer into a warning state.	Error 354
REPLACE BELT %ERRCODE%:BELT LIFE	Off	Blink	Notifies the end of the life of the transfer belt. This is an error that indicates a counter shows the end of the belt life is reached. The printer stops printing with the error. Cover opening and closing puts the printer into a warning state.	Error 355
REPLACE BELT %ERRCODE%:BELT LIFE	Off	Blink	Indicates the printer is full of waste toner. Cover opening and closing puts the printer into a warning state only once, and then after printing 500 pages, the printer has an error.	Error 356

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
CHECK TONER CARTRIDGE %ERRCODE%:%COLOR% IMPROPER CARTRIDGE LOCK POSITION	Off	Blink	Indicates the lever of a toner cartridge is not locked. Error 544 : Y Error 545 : M Error 546 : C Error 547 : K	Error 544 545 546 547
CHECK IMAGE DRUM UNIT 343:DRUM UNIT MISSING	Off	Blink	Indicates an image drum is not properly installed.	Error 343
CHECK FUSER %ERRCODE%:FUSER MISSING	Off	Blink	Indicates the fuser is not properly installed. (The error may occur when the printer is not more than 0ºC. When then the temperature of the printer has risen, turn off and on the printer.)	Error 320
CHECK BELT %ERRCODE%:BELT MISSING	Off	Blink	CHECK BELT %ERRCODE%:BELT MISSING	Error 330
CLOSE COVER %ERRCODE%:COVER OPEN	Off	Blink	Indicates a cover is a cover is open Error 310 : Top cover	Error 310
WAIT A MOMENT DATA RECEIVE	Off	Blink	Indicates update NIC program data is being received.	Error
WAIT A MOMENT DATA RECEIVED OK	Off	Off	Indicates reception of update NIC program data is complete.	Error
CHECK DATA REC DATA ERROR <%DLCODE%>	Off	On	Indicates that the printer has an error during reception processing of update NIC program data. %DLCODE% 1: size error. 2: checksum error. 3: printer model number error. 4: module interface version error. 5: FAT version error.	Error

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
WAIT A MOMENT DATA WRITING	Off	Blink	Indicates update NIC program data is being written.	Error
POWER OFF/ON DATA WRITTEN OK	Off	Off	Indicates writing of update NIC program data is complete.	Error
CHECK DATA DATA WRITE ERROR <%DLCODE%>	Off	On	Indicates that the printer has an error during writing of update NIC program data. %DLCODE% 1: memory allocation error. 2: download file error. 3: error in obtaining available device memory. 4: error of insufficient available device memory 5: file writing error. 6: CU firmware mismatch error.	Error
REBOOTING %CODE%	Off	On	Indicates the controller is being rebooted. %CODE% identifies a decimal number (on digit), showing a cause of the rebooting. =0: cause other than the above. =1: PJL command =2: menu change =4: From a network utility (such as on the WEB).	Error
SHUTTING DOWN	Off	Off	Indicates the printer is shutting down. With holding down of the BACK button for four seconds or more after initialization processing of the printer is complete, the printer starts shutdown processing.	Error
SHUTDOWN	Off	Off	ndicates the printer completed its shutdown processing.	Error

Operator panel display	Online lamp	Atten-tion lamp	Description	Code nnnnnn
PLEASE POW OFF SHUTDOWN COMP	Off	Off	Indicates the printer completed its shutdown processing (the LCD backlight turns off).	Error
POWER OFF AND WAIT FOR A WHILE %ERRCODE%: CONDENSING ERROR	Off	Blink	A due condensation error (this display is different from that for a service call error, but handled in the same way as it). * No languages are supported on a country basis for Fatal errors.	Fatal 126
POWER OFF/ON %ERRCODE%: ERROR	Off	Blink	Indicates the printer has a fatal error. Refer to Service Calls List for details. * No languages are supported on a country basis for Fatal errors.	Fatal <nnn>
SERVICE CALL %ERRCODE%: ERROR	Off	Blink	Indicates the printer has a fatal error. Refer to Service Calls List for details. * No languages are supported on a country basis for Fatal errors.	Fatal <nnn>
SERVICE CALL %ERRCODE%: ERROR	Off	Blink	Indicates the printer has a fatal error. Refer to Service Calls List for details. * No languages are supported on a country basis for Fatal errors.	Fatal 096 231 128 168
POWER OFF/ON %ERRCODE%: ERROR nnnnnnnn nnnnnnnn nnnnnnnn	Off	Blink	Indicates the printer has a fatal error. Refer to the service call errors list for details. Detail information about the error is identified by nnnnnnnn. * No languages are supported on a country basis for Fatal errors.	Fatal 002 011, F0C F0D FFE FFF
POWER OFF/ON %ERRCODE%: DOWNLOAD ERROR	Off	Blink	A failure of media table downloading to the PU.	Fatal 209

Table 7-1-2: Service call errors list.

Display	Causes	Error detail		Actions
POWER OFF/ON 002:ERROR 〜 006:ERROR 009:ERROR 〜 011:ERROR	CPU Exception	Is the error display provided again?	Yes No	Remove any RAM DIMM and turn off and on the printer. Replace the CU/PU board. Reinstall the RAM DIMM.
SERVICE CALL 020:ERROR	CU ROM Hash Check Error	Is the error display provided again?	Yes	OFF/ON Replace the CU/PU board.
SERVICE CALL 024:ERROR 025:ERROR	Kanji Font Error			
SERVICE CALL 030:ERROR	CU RAM Check Error	Is the error display provided again?	Yes	Turn off and on the printer. Replace the CU/PU board.
SERVICE CALL 031:ERROR 036:ERROR	CU optional RAM check error	Is RAM DIMM installed properly? Does the printer recover by replacing the RAM DIMM?	No Yes No	Reinstall the RAM DIMM. Replace the RAM DIMM. Replace the CU/PU board.
SERVICE CALL 040:ERROR	CU EEPROM error	s the error display provided again?	Yes	Turn off and on the printer. Replace the CU/PU board.
SERVICE CALL 041:ERROR	CU flash memory error or CU board flash ROM error	Is the error display provided again?	Yes	Turn off and on the printer. Replace the CU/PU board.
SERVICE CALL 042:ERROR 〜 043:ERROR 045:ERROR	Flash memory file system error	Accessing the flash ROM directly mounted on the CU/PU board failed.		Turn off and on the printer. Replace the CU/PU board.
POWER OFF/ON 052:ERROR	Image processor driver error			
SERVICE CALL 067:ERROR 068:ERROR	Interface monitor error			
POWER OFF/ON 070:ERROR	PostScript error			
POWER OFF/ON 072:ERROR xx	Engine interface error or PU-CU interface error	Is the CU/PU board installed properly?	No Yes	Reinstall the CU/PU board properly. Replace the CU/PU board.
POWER OFF/ON 073:ERROR xxxxxxxx	Video error. An error was detected in expanding image data (an invalid data was received)	Is the CU/PU board installed properly? Does the error occur again?	No Yes Yes	Reinstall it properly. Change the PC to a high-specification one or decrease the resolution, and perform printing again. Replace the CU/PU board.
				Replace the interface cable. Reinstall the PC printer driver.
		Is the CU/PU board installed properly? Does the error occur again? Does the error depend on print data?	No Yes Yes No Yes	Reinstall it properly. Perform printing again. Print other data. Replace the CU/PU board. Ask design people to analyze the data.

Display	Causes	Error detail		Actions
POWER OFF/ON 074:ERROR xxxxxxxx 075:ERROR xxxxxxxx	Video error. An error was detected in expanding image data.	Is the CU/PU installed properly?	No Yes	Reinstall it properly. Replace it.
SERVICE CALL 081:ERROR	Parameter matching check error	Reading from or writing into EEPROM or flash memory cannot be made properly.		Turn off and on the printer. Replace the CU/PU board when the symptom persists.
SERVICE CALL 104:ERROR	An engine EEPROM read/write error was detected.	Does the error occur again?	Yes	Turn off and on the printer Replace the CU/PU board.
SERVICE CALL 106:ERROR	Engine control logic error	Does the error occur again?	Yes	Turn off and on the printer Replace the CU/PU board.
SERVICE CALL 112:ERROR	The 2nd tray for a model different from the printer was detected.	Is the 2nd tray for the printer installed?	No	Install proper 2nd tray.
SERVICE CALL 121:ERROR	High-voltage power supply interface error	Is the cable between the CU/PU board and the high-voltage power unit connected properly? Is a contact faulty?	No Yes No	Reconnect it properly. Check the high-voltage line for no poor connection. Replace the high-voltage power supply.

Display	Causes	Error detail		Actions
SERVICE CALL 122:ERROR	Rear-fan error	Does the fan at the rear of the printer operate? Is the connector of the fan connected properly?	No Yes No Yes	Be sure of the connection of the fan. Replace the CU/PU board. Connect the fan properly. Replace the CU/PU board.
SERVICE CALL 123:ERROR	Ambient humidity error or non connection of humidity sensor	Is the cable from the CU/PU board to the toner sensor board connected properly?	No Yes	Re-connect it properly. Replace the toner sensor board.
SERVICE CALL 124:ERROR	Ambient temperature error	Is the cable from the CU/PU board to the toner sensor board connected properly?	No Yes	Re-connect it properly. Replace the toner sensor board.
SERVICE CALL 128:ERROR-05	Image drum fan error	Is the connector of the fan connected properly? Does the error occur again?	No Yes No	Re-connect it properly. Replace the fan motor. Replace the CU/PU board.
SERVICE CALL 128:ERROR-08	Front fan error	Is the connector of the fan connected properly? Does the error occur again?	No Yes No	Re-connect it properly. Replace the fan motor. Replace the CU/PU board.

Display	Causes	Error detail		Actions
SERVICE CALL 131:ERROR 〉 134:ERROR	LED head detection error (131=Y, 132=M, 133=C, 134=K)	Is the LED head installed properly?	No	Install the LED head unit.
			Yes	Check the LED head fuse.
		Is the LED head fuse broken?	Yes	Check the fuse.
			No	Turn off and on the printer.
		Does the error occur again?	Yes	Replace the LED head unit.
SERVICE CALL 142:ERROR	Image drum up-down movement position detection error	Is the image drum unit removed and installed smoothly?	Yes	Re-install it.
			No	Be sure of the connection of the image drum up-down clutch connector.
		Is the connector of the image drum up-down clutch is connected properly?	Yes	Replace the toner sensor board.
			No	Connect the image drum up-down clutch properly.
SERVICE CALL 153:ERROR	Image drum unit fuse-cut error	Is the image drum unit installed properly?	No	Re-install it.
			Yes	Turn off and on the printer.
		Does the error occur again?	Yes	Be sure of the cable connection from the CU/PU board to the toner sensor board, and then replace the toner sensor board.
		Is the printer recovered by replacing the toner sensor board.	No	Replace the CU/PU board.

Display	Causes	Error detail		Actions
SERVICE CALL 154:ERROR	Belt unit fuse-cut error	Is the belt unit installed properly?	No	Re-install it.
			Yes	Turn off and on the printer.
		Does the error occur again?	Yes	Be sure of cable connection, and then replace the CU/PU board.
SERVICE CALL 155:ERROR	Fuser unit fuse-cut error	Is the fuser unit installed properly?	No	Clean the connection connector of the fuser unit, and then re-install the fuser unit.
			Yes	Turn off and on the printer.
		Does the error occur again?	Yes	Be sure of cable connection, and then replace the CU/PU board.
SERVICE CALL 160:ERROR 〉 163:ERROR	Toner sensor detection error (160=Y, 161=M, 162=C, 163=K). This error does not occur with the printer in the factory shipped configuration.	Is the toner cartridge installed?	No	Install the toner cartridge.
		Is the toner slide shutter set?	No	Turn it to the fixed position. Turn off and on the printer.
			Yes	Replace the toner sensor assembly.
SERVICE CALL 167:ERROR	Thermistor slope error	Does an error message appear? Does the error occur again?	Yes	Turn off and on the printer. Turn off and on the printer after leaving it for 30 minutes.

Display	Causes	Error detail		Actions
SERVICE CALL 168:ERROR (Note)	Compensation thermistor error	Does an error message appear? Does the error occur again?	 Yes	Turn off and on the printer. Turn off and on the printer after leaving it for 30 minutes.
SERVICE CALL 170:ERROR 171:ERROR (Note)	A fuser thermistor short or open circuit was detected.	Does the error occur again?	Yes	Turn off and on the printer. Replace the fuser unit.
SERVICE CALL 172:ERROR 173:ERROR	A fuser thermistor temperature error (high or low temperature) was detected.	Does the error occur again? Does the error occur again?	Yes Yes	Turn off and on the printer. Replace the fuser unit. Replace the low-voltage power supply, and then replace the CU/PU board when the error occurs again.
SERVICE CALL 174:ERROR	A backup thermistor shot circuit was detected (high temperature)	Does the error occur again?	Yes	Turn off and on the printer. Replace the fuser unit.
SERVICE CALL 175:ERROR (Note)	A backup thermistor open circuit was detected (low temperature)	Does the error occur again?	Yes	Turn off and on the printer. Replace the fuser unit.

Display	Causes	Error detail		Actions
SERVICE CALL 176:ERROR 177:ERROR	A backup thermistor temperature error (high or low temperature) was detected.	Does the error occur again? Does the error occur again?	Yes Yes	Turn off and on the printer. Replace the fuser unit. Replace the low-voltage power supply.
SERVICE CALL 182:ERROR	Option unit interface error	Does the error occur again?	Yes Yes	Turn off and on the printer. Be sure of connector connection. Replace the option unit.
POWER OFF/ON 190:ERROR	System memory overflow	Does the error occur again?	Yes	Turn off and on the printer. Replace the CU/PU unit.
SERVICE CALL 200:ERROR 〜 202:ERROR	PU firmware download error	An error occurred in re-writing the PU firmware.		Turn off and on the printer, and then re-download it (In general use of the printer, this re-writing is not performed and this error does not occur).
POWER OFF/ON 209:DOWNLOAD ERROR	Custom Media Type table downloading failure	Custom Media Type table downloading failed.		Turn off and on the printer, and then re-download it (In general use of the printer, this downloading is not performed and this error does not occur).

Display	Causes	Error detail		Actions
POWER OFF/ON 203:ERROR 204:ERROR 207:ERROR 208:ERROR 213:ERROR 214:ERROR F0C:ERROR FFE:ERROR FFF:ERROR	CU program error (203 to 214 do not occur in general use of the printer)	Invalid processing was performed with a CU program.		Replace the CU/PU board.
SERVICE CALL 231:ERROR	TAG interface error	A TAG interface error was detected. 01: A short-circuit error. 02: TAG communication error.		Be sure the toner cartridges and the image drums are properly set. Replace the toner cartridges. When the error occurs again after the image drums are re-installed, be sure of the cable connection from the CU/PU board to the toner sensor board.
POWER OFF/ON 250:ERROR	SD card error			
SERVICE CALL 251:ERROR	SD card erasure error			
POWER OFF/ON 252:ERROR 〉 255:ERROR	SD card security error			
POWER OFF/ON 256:ERROR 257:ERROR	SD card error			

Display	Causes	Error detail		Actions
POWER OFF/ON 901:ERROR 〉 904:ERROR (Note)	Belt temperature error 901: Short circuit 902: Open circuit 903: High temperature 904: Low temperature	Is the cable from the belt thermistor to the CU/PU board connected properly? Does the error occur again?	No Yes No	Connect the cable properly. Turn off and on the printer. Replace the belt thermistor.
POWER OFF/ON 923:ERROR	A lock error with black image drum	The image drum does not revolve properly. Does the error display is provided again by turning off and on the printer?	 Yes Yes	Be sure the image drum is properly installed properly. Replace the image drum unit. Replace the image drum motor.
SERVICE CALL 928:ERROR	Fuser motor lock error	The fuser does not operate properly? Does the error occur again?	 Yes Yes	Check that the fuser is properly installed. Replace the fuser. Replace the fuser motor.
SERVICE CALL 933:ERROR	A clock error correction error with an option unit (which does not occur with the printer in the factory shipped configuration)	Does the error occur again? Does the error occur again?	Yes Yes	Be sure of connector contacts. Replace the option unit.

Display	Causes	Error detail		Actions
POWER OFF/ON 933:ERROR	Tray-2 CPU clock frequency error			
SERVICE CALL 980:ERROR	Fuser Problem	Fuser failed or not detected .		Turn off the printer. Replace the fuser.
SERVICE CALL 983:ERROR	Duplicate toner cartridge detection error	Multiple toner cartridges for the same color ware detected.		Install toner cartridges for specified colors at the proper positions.
SERVICE CALL 990:ERROR	Waste toner sensor detection error	Is the K toner cartridge installed? Does the error occur again?	No Yes	Install the K toner cartridge. Be sure of cable connection, and then perform board replacement.
xxxxxxxxxxxxxxxx CRC CHECK NG ( )	PU download data CRC check error	A CRC check error was detected after downloading of PU data (PU firmware and custom media data).		Turn off and on the printer, and then re-download it (In general use of the printer, the downloading is not performed and this error does not occur).
WDT ERROR ADR=×××××××××	PU firmware runaway	Does the error occur again?	Yes	Turn off and on the printer. Replace the CU/PU board.
COMMUNICATION ERROR	PU-CU interface error	Does the error occur again?	Yes	Replace the CU/PU board.

Note! With the printer's temperature not more than 0ºC, Service call errors 188 Error, 171 Error, 175 Error, 903 Error and 904 Error may occur. After turn off the printer, turn on the printer after the printer warms.

7.5.2 Preparation for troubleshooting

7.5.2.(1) LCD display trouble

Memo For the numbers 1 to 15 each after the connector names, see 7.5.1 (19) Connection diagram.

(1-1) LCD displays nothing

Check item	Check operation	Actions for NG results
(1-1-1) Fuse check		
CU/PU board fuse	Check F5 (C530/C330)	Replace the CU/PU board.
(1-1-2) Connection-line chec		
Connection of low-voltage power unit and CU/PU board	Check the cord from the low-voltage power supply to the CU/PU board POWER connector is properly connected. Check for half connection or skew insertion.	Re-insert the cord properly.
Cord assembly connecting low-voltage power unit and CU/PU board	Check for breakdown. Check for sheathing removal. Check for defectiveness of cord assembly, such as wire removal.	Replace cords with proper ones.
Connection between CU/PU board and operator panel board	Check that 12-pin FFC is properly connected to the CU/PU board OPE connector 17. Check that 12-pin FFC is properly connected to the operator panel board CN1 connector. Check for half connection or skew insertion.	Re-insert the cord properly.
FFC connecting CU/PU board and operator panel board	Check for breakdown with a tester. Visually check for sheathing removal.	Replace the FFC with a proper one.
(1-1-3) Power supply periphery check		
AC power supplied to printer	Check the AC power supply voltage.	Supply AC power.
5V power supplied to CU/PU board	Check the 5V power supply by using the pins 1, 2 and 3 of the CU/PU board POWER connector 10.	Replace the low voltage power supply.
3.3V power supply to operator panel board	Check 3.3V power supply by using the pin 7 of the CU/PU board CN1 connector 19.	Replace the CU/PU board.
(1-1-4) Power supply short-circuit check		
5V and 24V power supplied to CU/PU board	Check short circuiting by using the CU/PU board POWER connector 10. When the following is found, separate short-circuited points as described below. Pins 7, 8 and 9: 24V Pins 1, 2 and 3: 5V Pins 4, 5 and 6: 0VL Pins 10, 11 and 12: 0VP. Locate short circuits by pulling out the cords connected to the CU/PU board one by one	Replace short-circuited parts.
(1-1-5) LSI operation check		
Interface signals from CU/PU board to operator panel board	Check that signals are output to the CU/PU board OPE connector 17. Pin 6: Transmission data (CY/PU board transmission) Pin 8: CLR Signals are always output when the above is proper.	Replace the CU/PU board.
Interface signals from operator board to CU/PU board	Check that signals are output to the CU/PU board OPE connector 17. Pin 5: Reception data (CU/PU board reception) Signals are always output when the above is proper.	Replace the operator panel board.

(1-2) PLEASE WAIT

(The display changes to COMMUNICATION ERROR when printer is left unaccessed)

Check item	Check operation	Actions for NG results
(1-2-1) Operator panel display does not change		
Operator panel display	The display COMMUNICATION ERROR persists.	Replace the CU/PU board.

(1-3) Error message display related to operator panel

Check item	Check operation	Actions for NG results
(1-3-1) Error message		
Error message	Check detail in the error messages list.	Follow instructions.

(1-4) RAM CHECK or INITIALIZING persists

Check item	Check operation	Actions for NG results
(1-4-1) Operator panel display freezes		
Operator panel display	RAM CHECK or INITIALIZING persists.	Remove an option RAM and SD card and perform checking. Replace the CU/PU board to address a NG result.

7.5.2.(2) Problem operation after printer is turned on

(2-1) No operations start

Check item	Check operation	Actions for NG results
(2-1-1) Power supply periphery check		
AC power supplied to printer	Check the AC power supply voltage.	Supply AC power.
5V and 24V power supplied to CU/PU board	Check the power supply by using the CU/PU board POWER connector 10. Pins 7, 8 and 9: 24V Pins 1, 2 and 3: 5V Pins 4, 5 and 6: 0VL Pins 10, 11 and 12: 0VP.	Replace the low voltage power supply.
(2-1-2) Connection-line check		
Operator panel connection	Check the same as (1-1). The printer does not operate unless the operator panel is detected and operated.	Follow (1-1).

(2-2) Abnormal sound is heard

Check item	Check operation	Actions for NG results
(2-2-1) Motor step losing check (driver problem)		
Each motor's operation	By using the self-diagnostic mode, check each motor for proper operation by whether the motor is loaded or not. The motor beeps when improper.	Replace the CU/PU board.
Motor cords	Check the wiring for each motor as follows: Visually check for, or check for with a tester, short circuiting. Remove the motor cord from the board side, and the resistance between each pin on the side of the cord and the frame ground.	Replace the motor cord. Re-assemble parts properly.

Check item	Check operation	Actions for NG results
(2-2-2) Motor step losing check (consumable load problem)		
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.
(2-2-3) Gear tooth disengagement check (consumable load problem)		
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) Cord routing check		
Check the installation conditions of the partition plate under the CU and PU boards.	Remove the CU and PU board, and inspect the installation conditions of the partition plate by visual inspection.	If they are not hooked on the normal specified positions, correct them.

(2-3) Bad odor is generated

Check item	Check operation	Actions for NG results
(2-3-1) Bad odor locating		
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) Fuser unit check		
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.

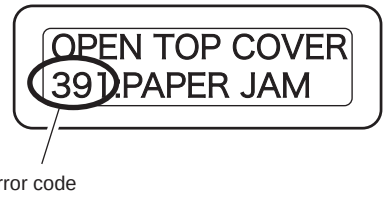
(2-4) Startup time of printer is long

Check item	Check operation	Actions for NG results
(2-4-1) Fuser unit check		
Halogen lamp	Check that 100V is shown on the label on the rear of the fuser unit.	Replace the fuser unit.
(2-4-2) Option part check (note)		
Extension memory	Reinstall the option part (the extension memory) and check operation.	Replace the option part.
SD memory card	Reinstall the option part (the SD memory card) and check operation.	Replace the option part.

Note! When the printer has a problem, for example it does not start properly, remove any CU options (RAM and SD memory card) and check for changes.

(3) Paper jam error numbers and locations

The printer displays an error code and PAPER JAM or FACE-UP STACKER ERROR on the second row of the operator panel when jammed with paper inside of it.

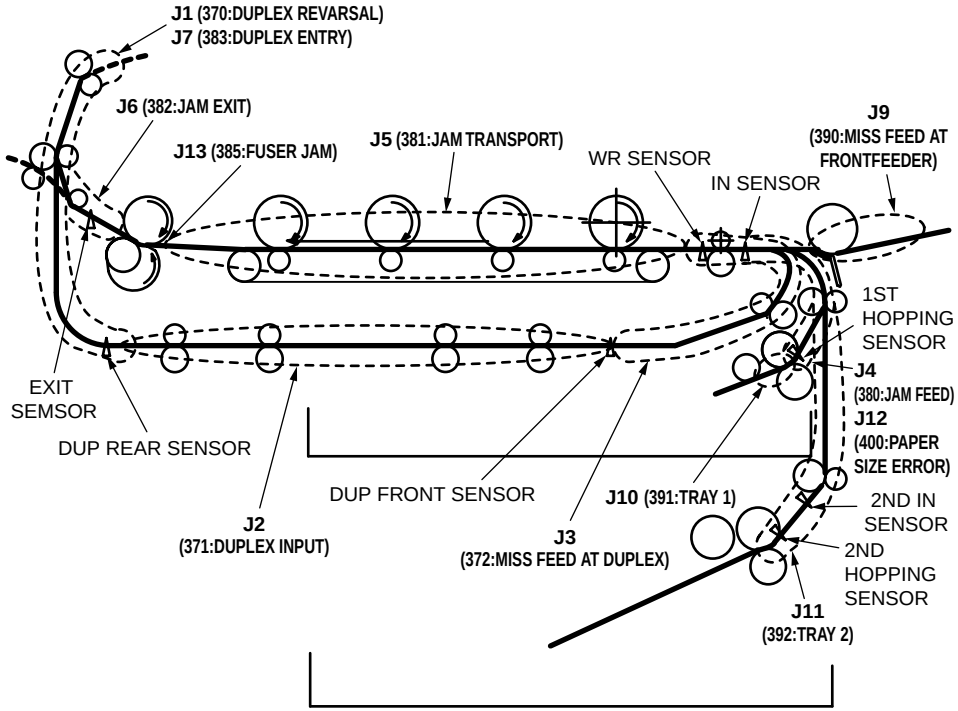


Check messages on the operator panel and, following the procedures on the appropriate pages, remove jammed paper. Clean the feed rollers and the inside of the printer when the printer is frequently jammed with paper.

Refer to the paper removal methods on the reference pages shown in the following table:

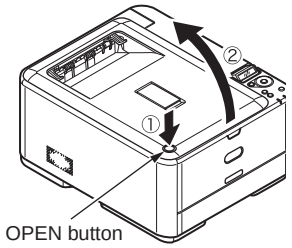
Error code	Operator panel display	Reference page
370	CHECK UNDER BELT 370:PAPER JAM	Page 90
371	CHECK UNDER BELT 371:PAPER JAM	
372		
380	OPEN TOP COVER 380:PAPER JAM	Page 92
381	OPEN TOP COVER 381:PAPER JAM	
382	OPEN TOP COVER 382:PAPER JAM	
385	OPEN TOP COVER 385:PAPER JAM	
389	OPEN TOP COVER 389:PAPER JAM	
390	CHECK MP TRAY 390:PAPER JAM	Page 93
391	OPEN TOP COVER 391:PAPER JAM	Page 94
392	OPEN TOP COVER 392:PAPER JAM	Page 95
409	OPEN TOP COVER 409:FACE UP STACKER ERROR	Page 96

Paper jam locations

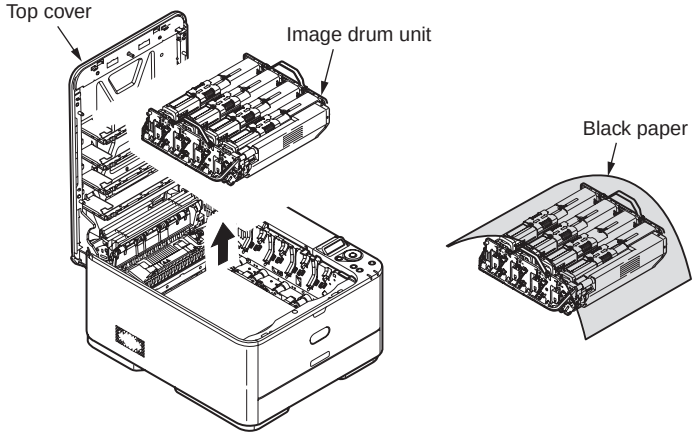


Error code: 370, 371 or 372

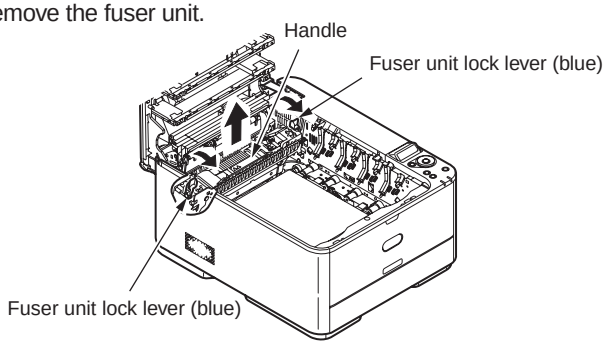
(1) Press the OPEN button and open the top cover.



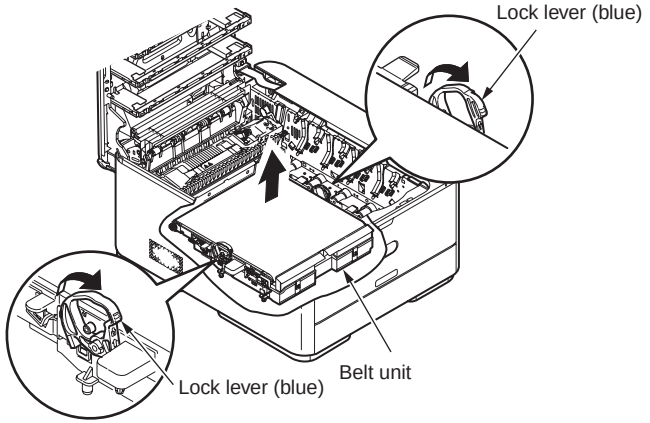
(2) Take out the image drum unit, place it on a flat surface, and cover it with black paper.



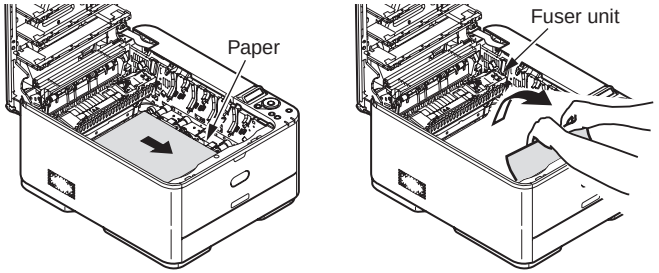
(3) Move the fuser unit lock levers to the direction of the arrow to unlock the fuser unit, and then remove the fuser unit.



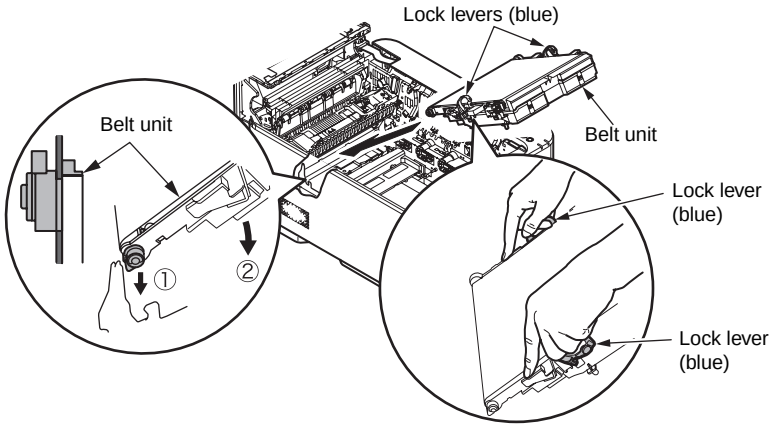
(4) Place a finger behind the belt unit lock levers (blue) and raise and remove it.



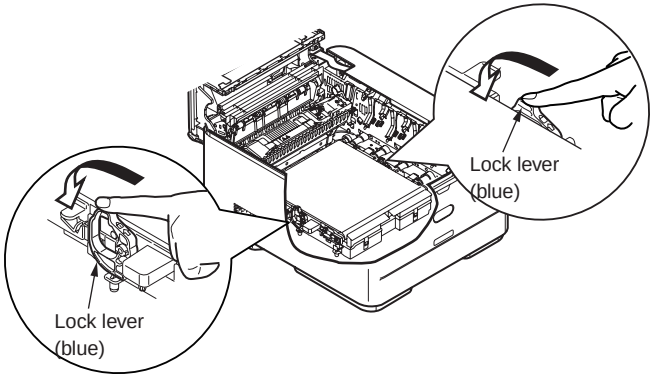
(5) Remove jammed paper in the direction of the arrow.



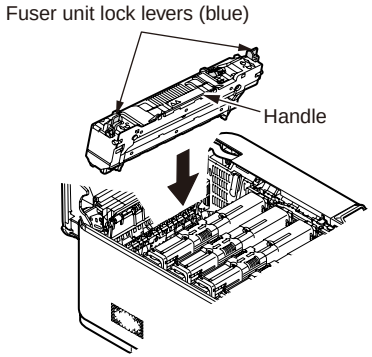
(6) Hold the belt unit by the lock lever (blue) on each side of it, and install the belt unit



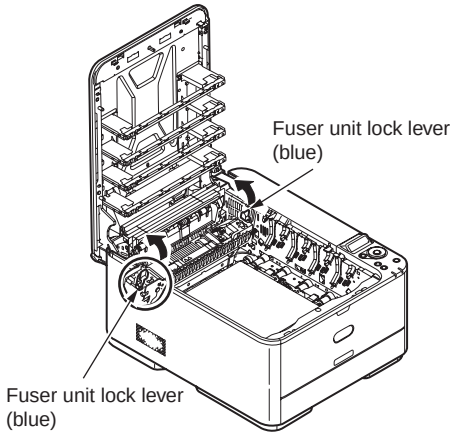
(7) Turn the lock levers inwards to lock the belt unit.



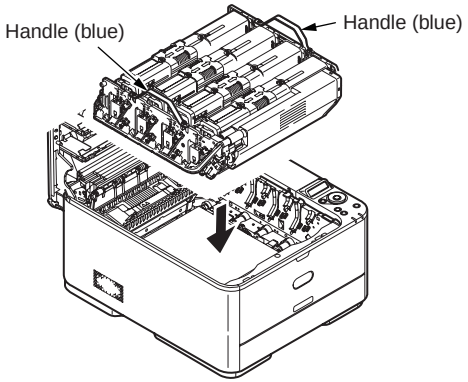
(8) Put the fuser unit back into position.



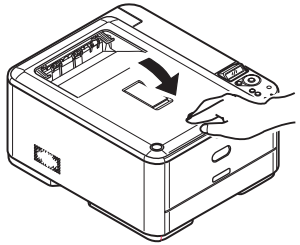
(9) Turn the lock levers inwards to lock the fuser unit.



(10) Install the image drum unit in the printer so as to situate the K toner cartridge toward the front of the printer.

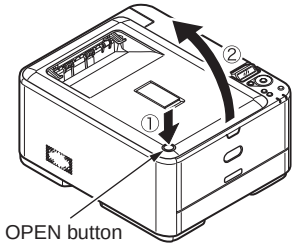


(11) Close the top cover.

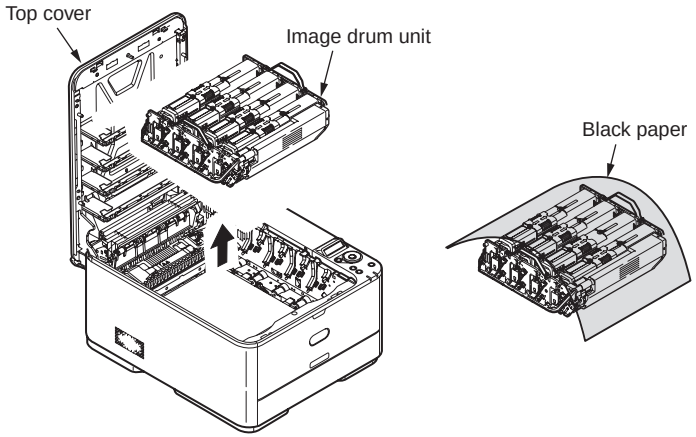


Error code: 380, 381, 382, 385 or 389

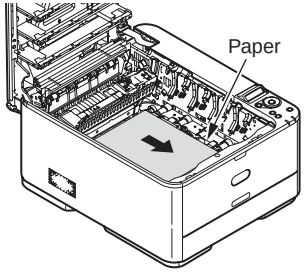
(1) Press the OPEN button and open the top cover.



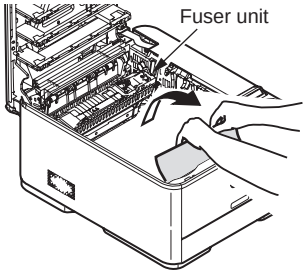
(2) Take out the image drum unit, place it on a flat surface, and cover it with black paper.



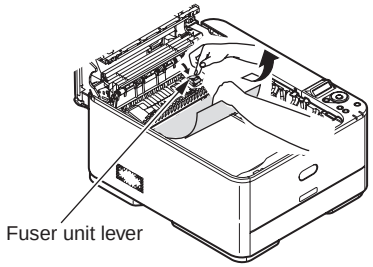
(3) Remove any jammed paper in the direction of the arrow.



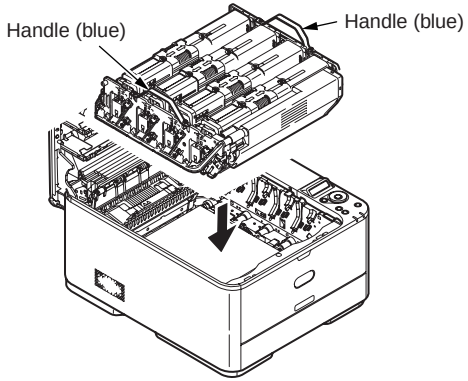
Remove in the direction of the arrow any paper jammed the inside front of the printer.



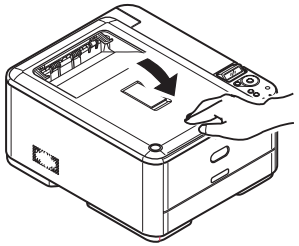
Pull out toward the front of the printer any paper jammed at the fuser unit, with the fuser unit lever (blue) left turned in the direction of the arrow.



(4) Install the image drum unit in the printer so as to situate the K toner cartridge toward the front of the printer.

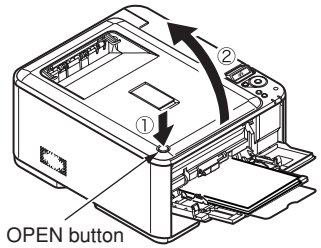


(5) Close the top cover.

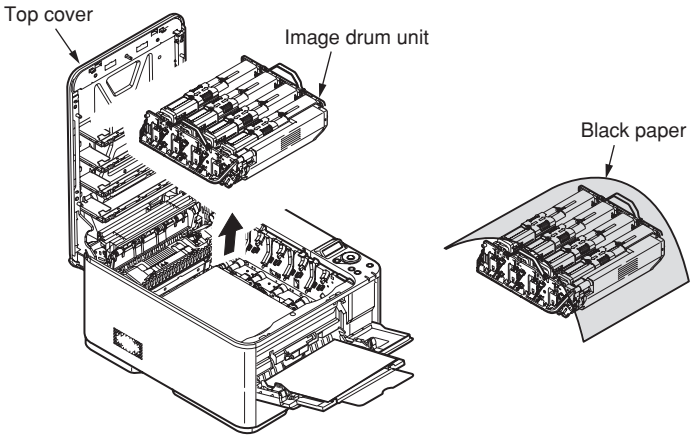


Error code: 390

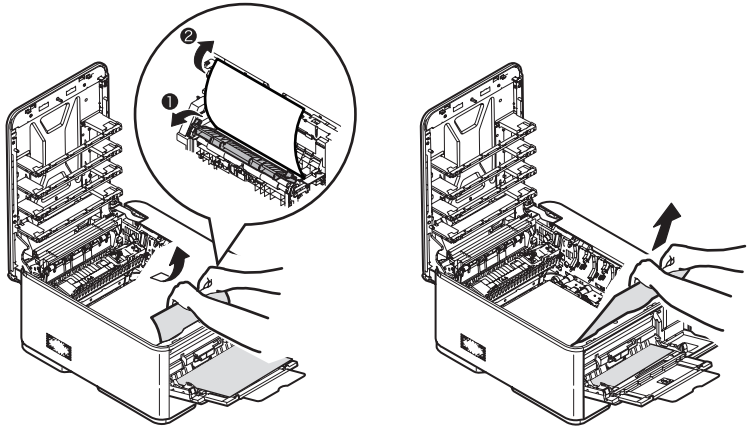
(1) Press the OPEN button and open the top cover.



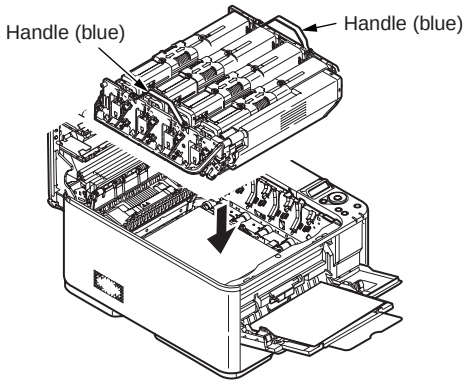
(2) Take out the image drum unit, place it on a flat surface, and cover it with black paper.



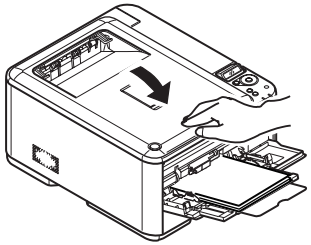
(3) Open the inside transparent cover of the printer and remove jammed paper.



(4) Install the image drum unit in the printer so as to situate the K toner cartridge toward the front of the printer.

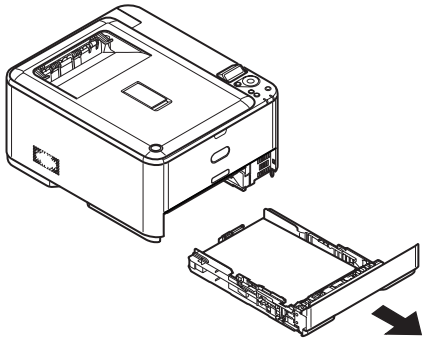


(5) Close the top cover.

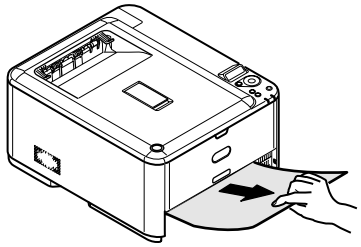


Error code: 391

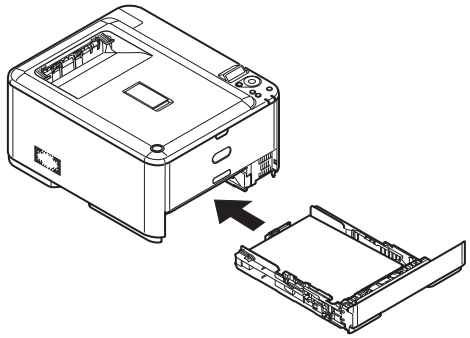
(1) Pull the tray 1 out of the printer.



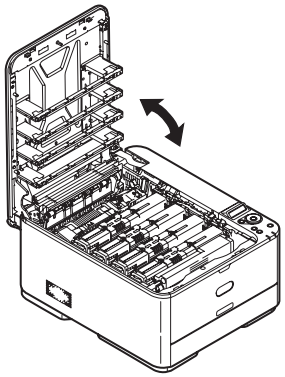
(2) Remove paper.



(3) Insert the tray 1 back into the printer.

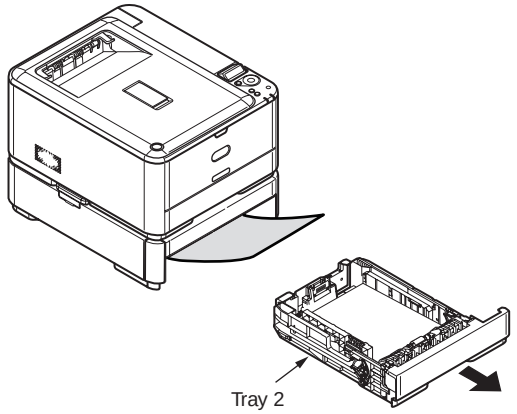


(4) Press the OPEN button and open and close the top cover.

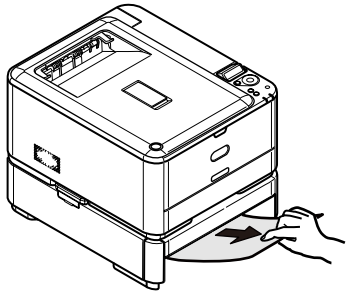


Error code: 392

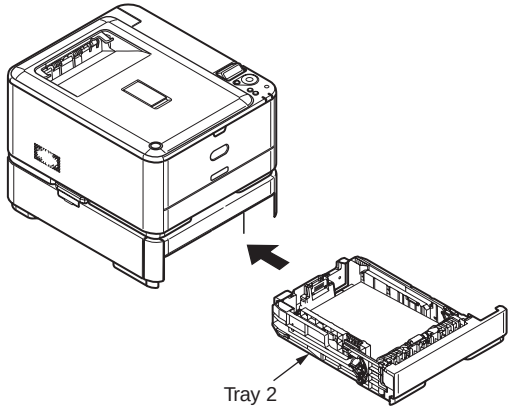
(1) Pull the tray 2 out of the printer.



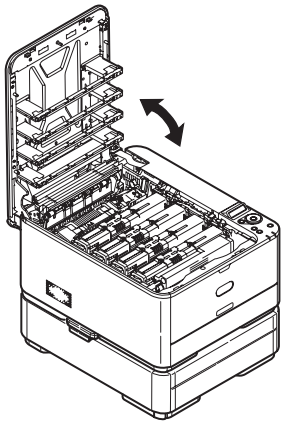
(2) Remove paper.



(3) Insert the tray 2 back into the printer.

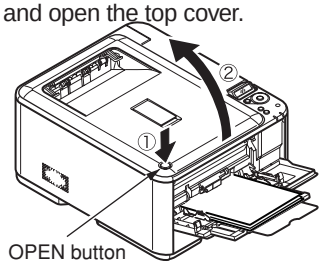


(4) Press the OPEN button and open and close the top cover.

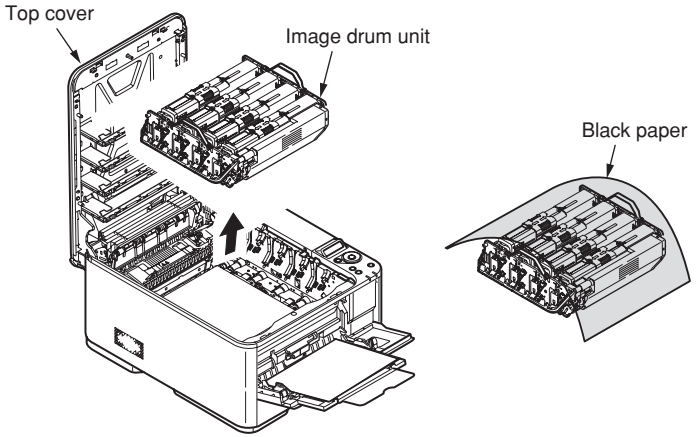


Error code: 409

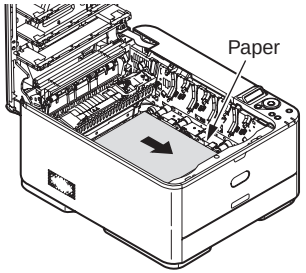
(1) Press the OPEN button and open the top cover.



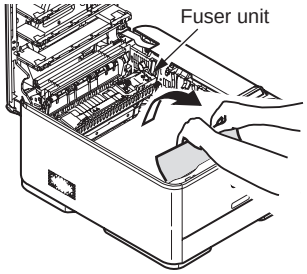
(2) Take out the image drum unit, place it on a flat surface, and cover it with black paper.



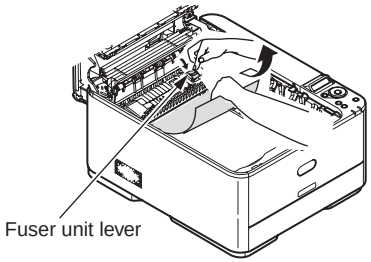
(3) Remove any jammed paper in the direction of the arrow.



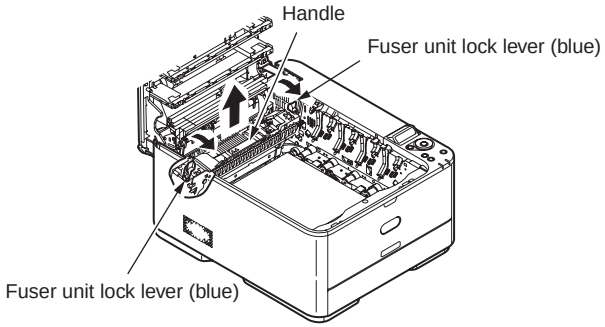
Remove in the direction of the arrow any paper jammed the inside front of the printer.



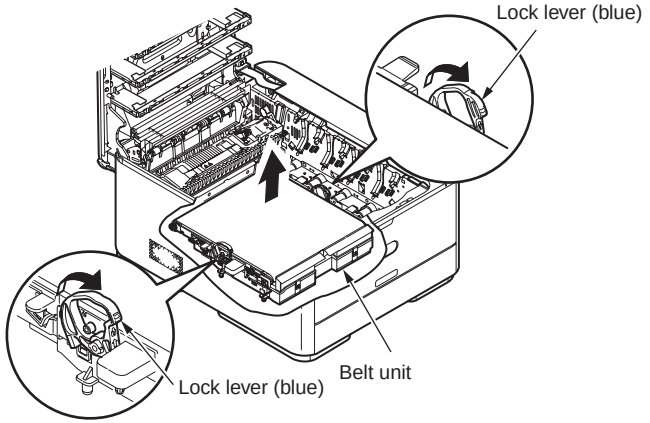
Pull out toward the front of the printer any paper jammed at the fuser unit, with the fuser unit lever (blue) left turned in the direction of the arrow.



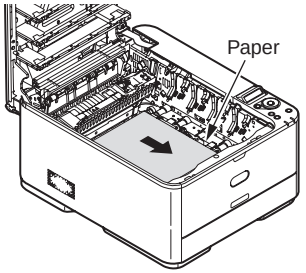
(4) Move the fuser unit lock levers to the direction of the arrow to unlock the fuser unit, and then remove the fuser unit.



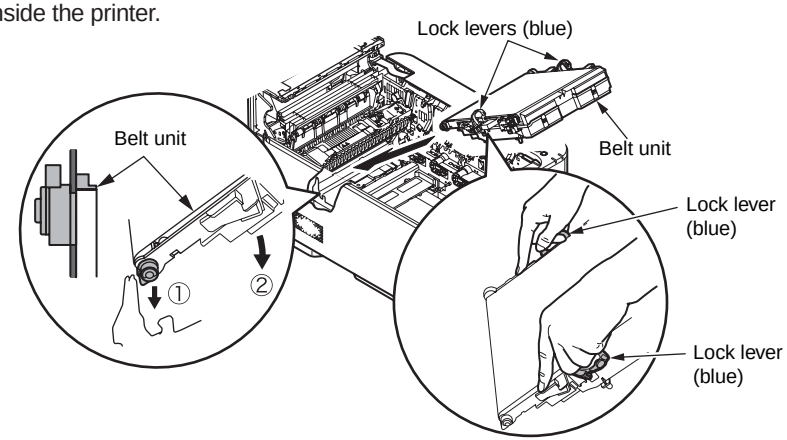
(5) Place a finger behind the belt unit lock levers (blue) and raise and remove it.



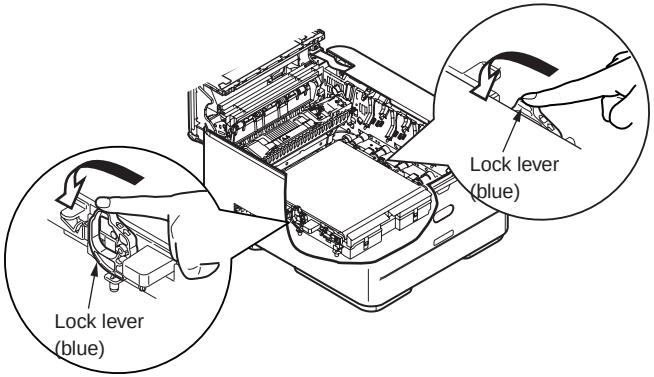
(6) Remove jammed paper in the direction of the arrow.



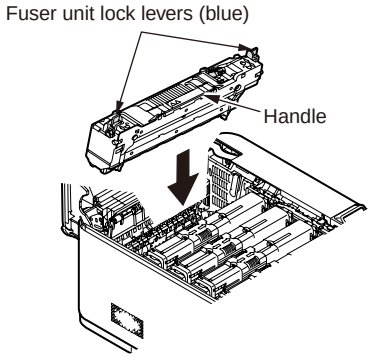
(7) Hold the belt unit by the lock lever (blue) on each side of it, and install the belt unit inside the printer.



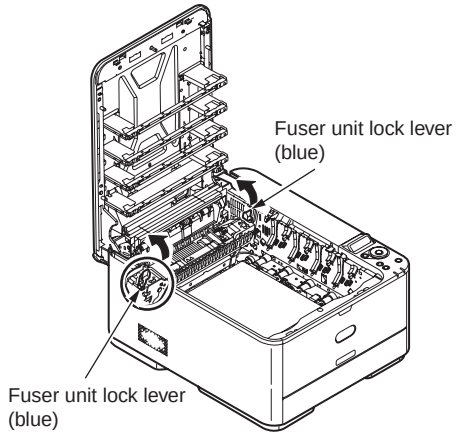
(8) Turn the lock levers inwards to lock the belt unit.



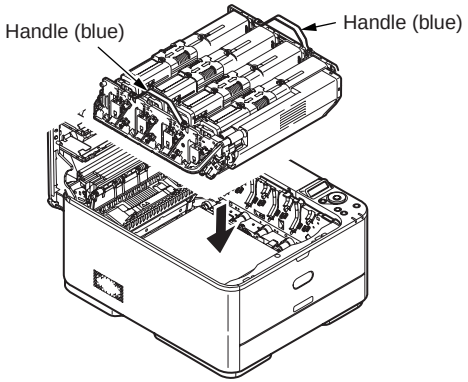
(9) Put the fuser unit back into position.



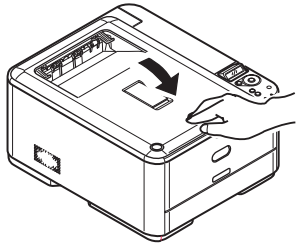
(10) Turn the lock levers inwards to lock the fuser unit.



(11) Install the image drum unit in the printer so as to situate the K toner cartridge toward the front of the printer.



(12) Close the top cover.



7.5.2. (3) Paper feed jam (error code 391: 1st tray)

(3-1) Jam occurs immediately after the power is turned on. (1st tray)

Check item	Check operation	Actions for NG results
(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		
Hopping sensor and IN sensor lever check	Check the sensor lever shapes and operations for any problem.	Replace the sensor lever(s) with proper one(s).
(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 the CU/PU board, or appropriate sensor(s) or connection cord(s)
Hopping sensor and IN sensor output level check	Check the following signals by using the CU/PU board HPSNS and RGSNS connector 16: HPSNS pin 2: Hopping sensor RGSNS pin 5: IN sensor Check that the above signal levels are changed by operating the levers of the sensors.	Replace the CU/PU board.

(3-2) Jam occurs immediately after the paper feed is started. (1st tray)

Check item	Check operation	Actions for NG results
(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		
Hopping sensor and IN sensor lever check	Check the sensor lever shapes and operations for any problem.	Replace the sensor lever(s) with proper one(s).
Check the separator assemblies of the feed roller, the pickup roller and 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 separator assemblies of the feed roller, pickup roller and 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 PU board or the paper feed motor.
Paper feed motor driver	Pull out the CU/PU board HOPSIZE connector 1, and check the following at the side of the connector. Several MΩ between pin-1 – FG. Several MΩ between pin-2 – FG. Several MΩ between pin-3 – FG. Several MΩ between pin-4 – FG.	Replace the CU/PU board.

Check item	Check operation	Actions for NG results
(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. Pull out the CU/PU board HOPSIZE connector 1, and check the following at the side of the connector. Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Remove the HOPSIZE connector ① of the PU board and check that approx. 3.4Ω can be measured between pin-1 -pin-2 at the cable end, and that approx. 5Ω can be measured between pin-3 -pin-4 respectively.	Replace the paper feed motor.
(3-2-5) Solenoid operation check		
Feed clutch	Confirm that the paper feed solenoid works normally by using the Motor & Clutch Test of the self-diagnostic mode. Pull out the cassette for the rollers to be seen, and check operation.	Replace the CU/PU board or the feed solenoid.
(3-2-6) Check the system connection		
Feed clutch cord	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.
Cord for feed clutch	Check that any cable is not pinched during assembling of the printer. Pull out the CU/PU board HOC connector 14, and check the following at the side of the cord.	Replace the clutch and properly assemble appropriate parts.

7.5.2. (4) Feed jam (error code 380)

(4-1) Jam occurs immediately after the power is turned on.

Check item	Check operation	Actions for NG results
(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		
Hopping sensor, IN sensor and WR sensor lever check	Check the sensor lever shapes and operations for any problem.	Replace the sensor lever(s) with proper one(s).
(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 the CU/PU board or appropriate connection cords.
Hopping sensor, IN sensor and WR sensor output level check	Check the following signals by using the CU/PU board HPSNS and RGSNS connector 16: HPSNS pin 2: Hopping sensor RGSNS pin 5: IN sensor RGSNS pin 2: WR sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the appropriate sensor(s).

(4-2) Jam occurs immediately after the paper feed is started.

Check item	Check operation	Actions for NG results
(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		
Hopping sensor, IN sensor and WR sensor lever check	Check the sensor lever shapes and operations for any problem	Replace the sensor lever(s) with proper one(s).
(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 the feed motor.
Paper feed motor driver	Pull out the CU/PU board HOP connector 1, and check the following at the side of the connector: Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – 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. Pull out the CU/PU board HOP connector 1, and check the following at side of the cord: Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Pull out the CU/PU board HOP connector 1, and check whether there is a resistance of approximately 3.4Ω or 5Ω between the pins 1 and 2, and between the pins 3 and 4, at the cord side.	Replace the paper feed motor.

7.5.2. (5) Paper feed jam (error code 390: Multipurpose tray)

(5-1) Jam occurs immediately after the power is turned on. (Multipurpose tray)

Check item	Check operation	Actions for NG results
(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		
IN sensor and WR sensor lever check	Check the sensor lever shapes and operations for any problem	Replace the sensor lever(s) with proper one(s)
(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 the CU/PU board, or appropriate sensor(s) or connection cord(s).
In sensor and WR sensor output level check	Check the following signals by using the CU/PU board RGSNS connector 16: Pin 2: WR sensor Pin 5: IN sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the connection cable.

(5-2) Jam occurs immediately after paper feed is started. (Multipurpose tray)

Check item	Check operation	Actions for NG results
(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		
IN sensor and WR sensor lever check	Check the sensor lever shapes and operations for any problem	Replace the sensor lever(s) with proper one(s).
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 and the pickup 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 the feed motor.
Paper feed motor driver	Pull out the CU/PU board HOP connector 1, and check the following at the side of the connector: Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG	Replace the CU/PU board.
(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. Pull out the CU/PU board HOP connector 1, and check the following at side of the cord: Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG	Replace the cable with the good cable that normalizes the connection condition.
Paper feed motor	Pull out the CU/PU board HOP connector 1, and check whether there is a resistance of approximately 3.4Ω or 5Ω between the pins 1 and 2 and between the pins 3 and 4.	Replace the paper feed motor.

7.5.2. (6) Paper running jam (error code 381:)

(6-1) Jam occurs immediately after the power is turned on.

Check item	Check operation	Actions for NG results
(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 the CU/PU board, or appropriate sensor(s) or connection cord(s).
Check the sensor lever of the WR sensor.	Check the following signal by using the CU/PU board RGSNS connector 16:	Replace the sensor.

(6-2) Jam occurs immediately after a paper is taken into printer.

Check item	Check operation	Actions for NG results
(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.	Feed motor driving cord, image drum motor driving cord, belt motor, fuser driving cord 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	Pull out the CU/PU board BELT connector 1, and check the following at the side of the connector: Several MΩ between Pin 1 and frame ground Several MΩ between Pin 2 and frame ground Several MΩ between Pin 3 and frame ground Several MΩ between Pin 4 and frame ground Pull out the CU/PU board HOP connector 3, and check the following at the side of the connector: Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG	Replace the CU/PU board.

Check item	Check operation	Actions for NG results
(6-2-4) Check the system connection		
Feed motor driving cord, image drum motor driving cord, belt motor, fuser driving cord	Check the connection condition of the cables. CU/PU board HOP connector 12, DC ID connector ②, DCHEAT connector ④, BELT connector 3. 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.	Normalize the connection condition. Replace the cable with the normal cable.
Feed motor driving cord, image drum motor driving cord, belt motor driving cord	Check that any cable is not pinched during assembling of the printer. Pull out the CU/PU board BELT connector 3, and check the following at the sides of the cords: Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG Pull out the CU/PU board HOP connector, and check the following at the side of the cords: Short circuit between pin-1 – FG Short circuit between pin-2 – FG Short circuit between pin-3 – FG Short circuit between pin-4 – FG	Replace the cable with the good cable that normalizes the connection condition.
Feed motor, belt motor	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 HOP connector 1 Between pin-1-pin-2 Approx. 3.4Ω or approx. 5Ω. Between pin-3-pin-4 Approx. 3.4Ω or approx. 5Ω. CU/PU board BELT connector 3 Between pin-1-pin-2 Approx. 6.1Ω or approx. 3.5Ω. Between pin-3-pin-4 Approx. 6.1Ω or approx. 3.5Ω. Between pin-5-pin-6 Approx. 3.4Ω or approx. 5Ω. Between pin-7-pin-8 Approx. 3.4Ω or approx. 5Ω.	Replace paper feed motor, belt motor, ID Up motor.

(6-3) Jam occurs in the middle of paper running path.

Check item	Check operation	Actions for NG results
(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; the feed motor, the belt motor and the image drum motor; or the image drum unit and the 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	Pull out the CU/PU board BELT connector 1, and check the following at the side of the connector: Several MΩ between Pin 1 and frame ground Several MΩ between Pin 2 and frame ground Several MΩ between Pin 3 and frame ground Several MΩ between Pin 4 and frame ground Pull out the CU/PU board HOP connector 3, and check the following at the side of the connector: Several MΩ between pin-1 – FG Several MΩ between pin-2 – FG Several MΩ between pin-3 – FG Several MΩ between pin-4 – FG	Replace the CU/PU board

(6-4) Jam occurs immediately after paper has reached the fuser.

Check item	Check operation	Actions for NG results
(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 of the roller rotation speed		
Heat roller detected temperature	Check the detected temperature of the heat roller using the self-diagnostic mode. Is abnormally high temperature or abnormally temperature detected?	Replace the fuser unit and the PU/CU board. f 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.

7.5.2. (7) Paper unloading jam (error code 382)

(7-1) Paper unloading jam occurs immediately after the power is turned on.

Check item	Check operation	Actions for NG results
(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		
EXIT sensor lever check	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 the EXIT sensor and its cord or connection cord.
Check the output signal level of the EXIT sensor.	Check the following signal by using the CU/PU board EXIT connector 8: Pin-9: EXIT sensor Confirm that the above signal levels change when the sensor lever is operated.	Replace the EXIT sensor.
(7-1-4) Check the system connection		
EXIT sensor cord	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 operation	Actions for NG results
(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.
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, the fuser motor or the fuser unit. fuser unit as a trial is going to be made, be sure to use the System Maintenance Menu FUSE KEEP MODE.

Check item	Check operation	Actions for NG results
(7-2-4) Check the system connection		
Fuser motor drive cable	Check the connection condition of the cables. Visually check whether the CU/PU board DCHEAT connector 4 is connected half or inserted skewed or its cord assembly is improper.	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 operation	Actions for NG results
(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, the fuser motor or 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.

7.5.2. (8) Two-sided printing jam (error code: 370, 371, 372, 373, 383)

(8-1) Two-sided printing jam occurs immediately after the power is turned on.

Check item	Check operation	Actions for NG results
(8-1-1) Check condition of the paper running path		
Paper running path of the Duplex unit	Check if paper is jammed or not in the paper running path. Open the front cover and check if any paper remains in the Duplex feeder or not. Open the rear cover and check if any paper remains in the paper reversing path or not. Remove the Duplex unit. Check if any paper exists in the Duplex insertion slot or not. Open the cover of the Duplex paper running path and check if any paper remains inside of the Duplex unit.	Remove the jammed paper.
(8-1-2) Check condition of the mechanical parts		
Check the sensor levers of the respective sensors of the Duplex unit.	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.
(8-1-3) 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. Check sensor detection with paper in the duplex unit, and with it removed from the duplex unit.	Replace the Duplex board (V7Y 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 operation	Actions for NG results
(8-2-2) Sensor lever operation check		
DUP-R sensor lever	Open the top cover, remove the image drums and the belt unit, and touch the DUP-R sensor lever to check whether it moves smoothly.	Replace the DUP-R sensor lever.
DUP-IN sensor	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 appropriate sensor(s) or connection cord(s).
(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.
(8-2-4) Motor operation check		
Duplex pull-in/ reversing roller and its pinch roller	Check if the pull-in/reversing roller of the Duplex unit contacts or not with the pinch roller of the cover side when the Duplex rear cover is closed. (Does the pinch roller rotate when the roller is rotating?)	Replace the rear cover.

(8-3) Two-sided printing jam occurs in the process of reversing paper.

Check item	Check operation	Actions for NG results
(8-3-1) Sensor lever operation check		
DUP-R sensor lever	Open the rear cover. Touch the Dup-IN sensor lever to check if its movement is unsmooth or not.	Replace the DUP-R sensor lever
DUP-R sensor	Confirm that the sensor signals are normally detected by using the SWITCH SCAN function of the self-diagnostic mode.	Replace the CU/PU board, the sensor or its connection cord.
(8-3-2) Motor operation check		
Fuser motor	Visually check whether paper started being reversed. When no paper reversing operation has performed, check whether the planet gear at the lower right side of the fuser moves smoothly.	Replace the planetary gear.

(8-4) Two-sided printing jam occurs during transporting paper inside the Duplex unit.

Check item	Check operation	Actions for NG results
(8-4-1) Sensor lever operation check		
Dup-R, Dup-F sensor lever	Open the top cover, remove the image drums and the belt unit and check the operation of the DUP-F sensor lever.	Replace the sensor lever.
(8-4-2) Sensor check		
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. Check sensor detection with paper in the duplex unit, and with it removed from the duplex unit.	Replace the CU/PU board, appropriate sensor(s) or connection cord(s).

(8-5) Paper is not supplied from the Duplex unit to the regist roller.

Check item	Check operation	Actions for NG results
(8-5-1) 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 CU/PU board or the clutch.

7.5.2. (9) Paper size error (error code 400)

(9-1) Jam occurs when paper end is located near the IN1 sensor.

Check item	Check operation	Actions for NG results
(9-1-1) Check paper feed condition		
Multifeed of papers	Open the front cover and check if multifeed of papers occurs or not.	If the multifeed occurs again after the jammed paper is removed, replace the flap 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.
Hopping sensor	Check if shape and movement of the sensor levers have any abnormality or not.	Replace the sensor lever with the good sensor lever.

7.5.2. (10) ID unit Up/Down error (Service call 142)

(10-1) Error occurs during the Up movement of the ID unit

Check item	Check operation	Actions for NG results
(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 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.

Check item	Check operation	Actions for NG results
(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 operation	Actions for NG results
(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.

7.5.2. (11) Fuser unit error (error 170 to 177)

(11-1) Error occurs immediately after the power is turned on.

Check item	Check operation	Actions for NG results
(11-1-1) Thermistor is defective Note)		
Upper thermistor, lower thermistor, frame 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 8.1 Resistance check (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 171 error can occur when the printer temperature is below 0℃. 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 operation	Actions for NG results
(11-2-1) Temperature increase of fuser unit		
Thermostat, halogen lamp	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-2, and that in between pin-3 and pin-4 of the two connectors is in the range of several ohms to several ten ohms respectively. (Refer to section 8.1 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.

Check item	Check operation	Actions for NG results
(11-2-2) Temperature increase of fuser unit		
Installation position of the upper thermistor	Check if the upper thermistor 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. Remove the heater cover, and check warpage of sensor by visual inspection.	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.
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.
(11-2-3) AC power input to the halogen lamp		
AC power voltage from the low voltage power supply	Check if the AC voltage for heater is normally supplied or not. Power supply CN2 connector ㉔, 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. CU/PU board POWER connector-10 pins 14 and 15	Replace the CU/PU board.

7.5.2. (12) Motor fan error (error code 122, 128)

(12-1) The low voltage power supply fan does not rotate immediately after the power is turned on.

Check item	Check operation	Actions for NG results
(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.

(12-3) All fans of the printer do not rotate.

Check item	Check operation	Actions for NG results
(12-3-1) 24V power supply		
CU/PU board fuses, F4 and F5	Check if the fuses F4 and F5 are not open-circuit or not.	24V power supplied to the CU/PU board
24V power supplied to the CU/PU board	Check the power supply voltages at the POWER connector ⑩ of the PU/CU board. Pins 7, 8 and 9: 24V Pins 4, 5 and 6: 0VL Pins 10, 11 and 12: 0VP	Replace the low voltage power supply.

7.5.2. (13) Print speed is slow. (Performance is low.)

(13-1) Print speed decreases.

Check item	Check operation	Actions for NG results
(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.

7.5.2. (14) Option unit cannot be recognized.

(14-2) Option try unit cannot be recognized.

Check item	Check operation	Actions for NG results
(14-2-1) Option try board		
Option tray unit	Check if the option tray unit in use is of C330dn or C530dn specification.	Replace it with an appropriate option tray unit.
(14-1-2) Check the system connection		
Connection between the CU/PU board and the option tray board (V7Y PCB)	Check that the cord between the 2ND connector ⑬ of the CU/PU board and the option tray board is properly connected.	Correct the connections.
Square connector connecting the option tray unit with the main unit	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 with the main unit	Is the terminals of the square connector damaged?	Replace the connector.

Check item	Check operation	Actions for NG results
(14-2-3) Check the control signals.		
Control signal that is output from the CU/PU board to the option tray board (GOG-1 PCB)	Check the control signals that are output from the 2ND connector of the CU/PU board. Pin 6: TXD (PU -> 2nd) Pin 5: RXD (2nd -> PU)	Replace the CU/PU board.

7.5.2. (15) LED head cannot be recognized. (error code 131, 132, 133, 134)

(15-1) Service call 131 to 134 (LED HEAD Missing)

Check item	Check operation	Actions for NG results
(15-1-1) Check the system connection		
Connecting condition of the CU/PU board connector and 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 CU/PU board.
Conduction of the fuse on the CU/PU board	Check that measurements taken at both ends of each capacitor CP6 (C530/C330) and CP8 show 5V. (See section 7.6.) Or, instead of the above, check if each fuse F501 (C530/C330) and F6 is open or not.	Replace the CU/PU board.

7.5.2. (16) Toner cartridge cannot be recognized. (error code 540, 541, 542, 543)

(16-1) Error caused by the consumable items.

Check item	Check operation	Actions for NG results
(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 operation	Actions for NG results
(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, CU/PU board, or FFC that is located 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 Operator Panel using the self-diagnostic mode. First, switch the display to the Operator Panel display. For the method of switching the display to the Operator Panel display, refer to section 5.3.2.3 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 Operator 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 Operator Panel.
5. If the Operator 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 state between the CU/PU board and the toner sensor board (ZHJ) that are connected with the FFC cable.
- Check it once again, and if no change has found in the state, replace the CU/PU board or the toner sensor board (ZHJ).

(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 Operator Panel.
2. If the ID unit works normally, the display on the Operator 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 operation	Actions for NG results
(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. Check if a heavy mechanical load is being applied to the ID unit by the waster toner box, or not.	Replace the K toner.
(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.

7.5.2. (17) Fuse cut error (error codes 153 to 155)

(17-1) Fuse cut error

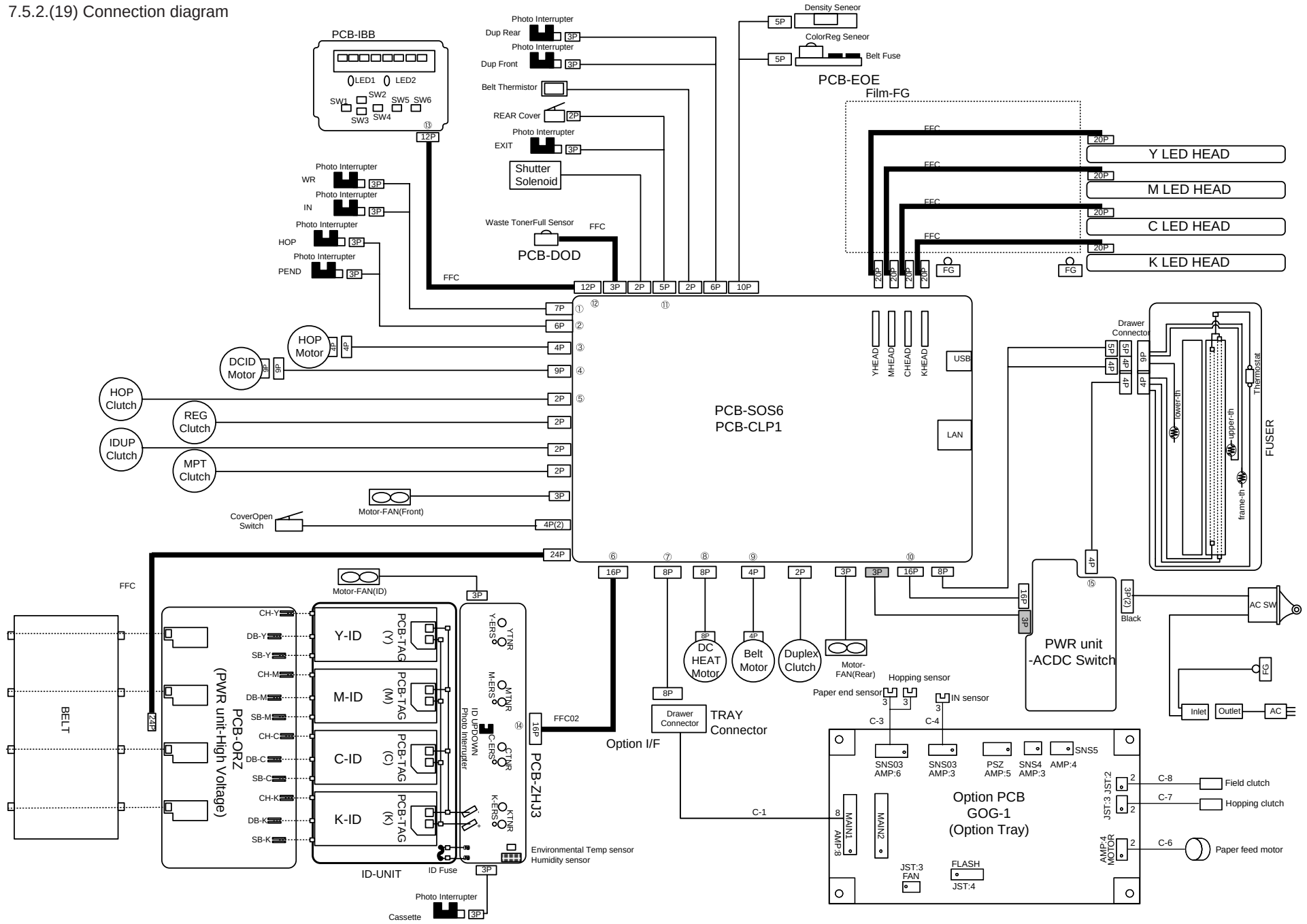
Check item	Check operation	Actions for NG results
(17-1-1) Check the system connection		
FFC connecting the CU/PU board and the toner sensor board (ZHJ PCB)	Check if the SSNS connector ⑱ of the CU/PU board or the SSNS connector ⑳ of the toner sensor board (ZHJ PCB) is connected halfway or inserted in a slanted angle.	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.

7.5.2. (18) Humidity sensor error (error code 123)

(18-1) Humidity sensor error

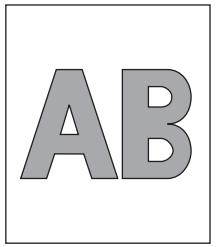
Check item	Check operation	Actions for NG results
(18-1-1) Check the system connection		
Connection to the CU/PU board and to the toner sensor board	Check if the 16-conductor FFC is connected to the SSNS connector ⑰ of the CU/PU board normally. Check if the 16-conductor FFC is connected to the SSNS connector ⑲ of the toner sensor board normally.	Re-connect the cable normally.
FFC connecting the CU/PU board and the toner sensor board	Check for open-circuit with VOM. Check that peeling off of sheath does not occur in any cables by visual inspection.	Replace the FFC with the 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.

7.5.2.(19) Connection diagram

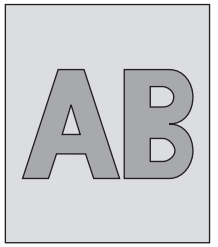


7.5.3 Troubleshooting of image problems

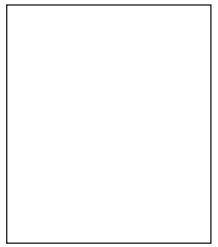
Note! To replace the CU/PU board with a new one, load EEPROM chip data on the old board and copy it to the new board.



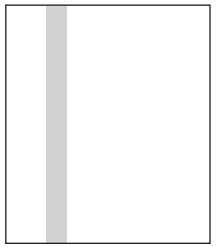
A Faint and faded across the page



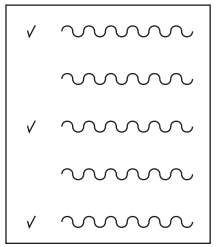
B Dirty white area



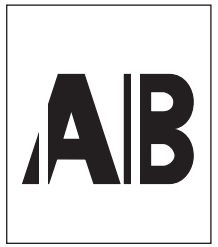
C Entirely blank



D Vertical black stripe/line



E Periodic problems



F Vertical white band/line

Fig.7-2

7.5.3 (1) Color is faint and fades across pages (see Fig. 7-2 A).

(1-1) Color is faint and fades.

Check item	Check operation	Actions for NG results
(1-1-1) Toner		
Remaining toner amount	Check the operator panel if it displays “Prepare to replace the toner cartridge” or “Replace the toner cartridge.”	Replace any applicable toner cartridge with a new toner cartridge.
Tape at the toner cartridge opening	Check to make sure that the tape is removed from each toner cartridge opening.	Move the toner cartridge lever to the closed position and remove any applicable tape from the opening.
(1-1-2) LED head		
LED head lens	Check the LED head lens if its surface is dirty with toner or paper dust.	Clean them with soft tissue paper.
LED head attaching state	Check the LED head if it is properly set into the LED head holder. Check the tension spring on the both sides if they are set properly.	Correct them so that they are properly set.
(1-1-3) Print media		
Media type	Check if the media used for printing is especially thick.	Use standard paper.
(1-1-4) High-voltage terminal		
ID unit terminal	Visually check each ID unit high-voltage terminal if it contacts the contact assembly properly. (See Fig. 7-3.)	Replace any applicable ID unit or correct any applicable high-voltage terminal. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.
(1-1-5) ID unit installation state		
ID unit down position (transfer error)	Take out and insert each ID unit by hand to check that there is no abnormal load and it goes down to normal down position. If the top end of a sheet of paper inserted between the drum and the belt is bent easily, it means improper installation state.	Check the U-groove of the side plate for any abnormality. If it is not repairable, replace the unit.

7.5.3 (2) The white area of printed pages is dirty (see Fig. 7-2 B).

(2-1) The white area of printed pages is dirty (partially).

Check item	Check operation	Actions for NG results
(2-1-1) ID unit		
Exposure of a drum to light	Was any ID unit left in an environment where its drum surface was exposed to light for a long period of time?	Replace any applicable ID unit. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.
Toner leakage	Is toner leaking from any ID unit or toner cartridge?	Replace any applicable ID unit or toner cartridge. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.
(2-1-2) Fuser unit		
Offset toner in the fuser units	Visually check each fuser unit if offset toner in the previous printing adheres to them.	Repeat blind printing using unnecessary media until offset toner is created on print media, or replace any applicable fuser unit. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.

(2-2) The white area of printed pages is dirty (all over).

Check item	Check operation	Actions for NG results
(2-2-1) Print media		
Media type	Is the media used for printing is especially thick?	Use standard paper.
(2-2-2) High-voltage terminal		
ID unit terminal	Visually check each ID unit high-voltage terminal if it contacts the contact assembly properly. (See Fig. 7-3.)	Replace any applicable ID unit or correct any applicable high-voltage terminal. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.

7.5.3 (3) Printed pages are blank (see Fig. 7-2 C).

(3-1) A printed pages are entirely blank.

Check item		Check operation	Actions for NG results
(3-1-1) Toner state			
	Remaining toner amount	Check if the amount of toner remaining in toner cartridges is sufficient.	Replace any toner cartridge with little toner.
(3-1-2) Exposure state			
	LED head	Check each LED head and relevant drum if they face each other at a correct position when the cover is closed. Check each LED head's light-emitting face for anything that blocks emission of light.	Correct the LED head position.
	LED head connection state	Check LED heads if they are connected properly.	Replace any applicable LED head.
	Drum shaft	Are drum shafts installed in a manner that they contact the side plates on both sides correctly?	Replace any applicable ID unit. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.
	CU/PU board fuse F501 (C530/C330), F6	Measure resistance values of F501 (C550/C330) and F6 . 1 Ω or less : Normal 1 Ω or more: NG	Replace the CU/PU board.
(3-1-3) High-voltage terminal			
	ID unit terminal	Visually check each ID unit high-voltage terminal if it contacts the contact assembly properly. (See Fig. 7-3.)	Replace any applicable ID unit or high-voltage board, or correct any applicable high-voltage terminal. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.

7.5.3 (4) Vertical lines are produced in printed pages.

(4-1) Fine lines (colored) (see Fig. 7-2 D)

Check item	Check operation	Actions for NG results
(4-1-1) ID unit state		
ID unit filming	Were pages printed with toner empty?	Replace any applicable toner cartridge with a new one. If it doesn't solve the problem, replace the relevant ID unit. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.

(4-2) Fine lines (white) (see Fig. 7-2 F)

Check item	Check operation	Actions for NG results
(4-2-1) LED head state		
LED head	Do foreign matters adhere to the Selfoc lens' light-emitting face of any LED head?	Remove the foreign matters.
(4-2-2) Paper feed state		
Paper feed path	Check if the paper feed path reaching the fusing area have burrs that scrape unfixed toner.	Remove the burrs.

7.5.3 (5) Print quality problems appear periodically (see Fig. 7-2 E).

(5-1) Print quality problems appear vertically and periodically.

Check item	Check operation	Actions for NG results
(5-1-1) Cycle		
Image drum	Check if the cycle is 94.3 mm.	Replace any applicable ID unit.
Developing roller	Check if the cycle is 30.2 mm.	Replace any applicable ID unit.
Toner supply roller	Check if the cycle is 43.1 mm.	Replace any applicable ID unit.
Charging roller	Check if the cycle is 29.9 mm.	Replace any applicable ID unit..
Roller above the fuser	Check if the cycle is 85.4 mm.	Replace any applicable fuser unit.
Fuser belt	Check if the cycle is 94.2 mm.	Replace any applicable fuser unit.
Transfer roller	Check if the cycle is 37.7 mm.	Replace the belt unit.
		When using any new consumable as a try, select FUSE KEEP MODE of the system maintenance menu.

7.5.3 (6) Color misregistration is significant.

(6-1) The message “Adjusting color” displayed at power on stays for a short time.

Check item	Check operation	Actions for NG results
(6-1-1) Color registration adjustment result		
Time of color registration adjustment (if it is normal, correction takes about 40 seconds)	Execute REG ADJUST TEST in the self-diagnostic mode and check the result. Even if an error has occurred, it is not displayed when ON LINE is displayed.	Replace the sensor if the result shows NG. Clean the sensor. Replace the shutter. Replace the CU/PU board.
(6-1-2) Toner		
Remaining toner amount	Check the operator panel if it displays “Prepare to replace the toner cartridge” or “Replace the toner cartridge.”	Replace an applicable toner cartridge with a new one.
(6-1-3) Color registration sensor		
Dirty sensor	Check the sensor if it is dirty with toner or paper dust.	Wipe them off.
(6-1-4) Color registration sensor shutter		
Malfunction of the shutter	Check shutter operation in the self-diagnostic mode.	Replace the shutter or repair the mechanism.

(6-2) Although the REG ADJUST TEST result of the engine maintenance function is OK, color misregistration occurs.

Check item	Check operation	Actions for NG results
(6-2-1) Feeding system		
Paper feed state in the paper feed path	Check the paper feed path if there is something that blocks the paper in the paper feed path.	Remove the blocking object.

(7) Black filled-in printing

(7-1) Printed pages are filled-in black entirely.

Check item	Check operation	Actions for NG results
(7-1-1) High-voltage terminal contacting state		
CH terminal	From above the printer, visually check if the terminal jutting out the printer contacts the high-voltage terminal, which is located on the left side of the ID unit, normally.	Replace the terminal on the printer side.
CH terminal	Check if the high-voltage terminal on the high-voltage board is in a normal contact state. Open the left-side cover, detach the high-voltage board, and check if the terminal is installed improperly.	Remove and install the terminal properly.
ID unit terminal	Visually check each ID unit high-voltage terminal if it contacts the contact assembly properly. (See Fig. 7-3.)	Replace any applicable ID unit or high-voltage board, or correct any applicable high-voltage terminal. When using a new ID unit as a try, select FUSE KEEP MODE of the system maintenance menu.
(7-1-2) High-voltage output state		
CH output	If a high-voltage probe is available as a maintenance tool, open the left-side cover and check CH output on the soldering side of the high-voltage board using the high-voltage probe during printing. (High-voltage probes are not a general maintenance tool.)	Replace the high-voltage board.

7.5.3 (8) Color jobs are printed in monochrome, not in color.

(8-1) False setting of the limited-color printing menu

Check item	Check operation	Actions for NG results
(8-1-1) Limited-color printing menu state		
Boot Menu item	Select “Process Setup” of the Boot Menu items and check that the setting of “Custom Process” is “Full Color.” (See section 5.6 for information on Boot Menu.)	Change the setting to “Full Color.”

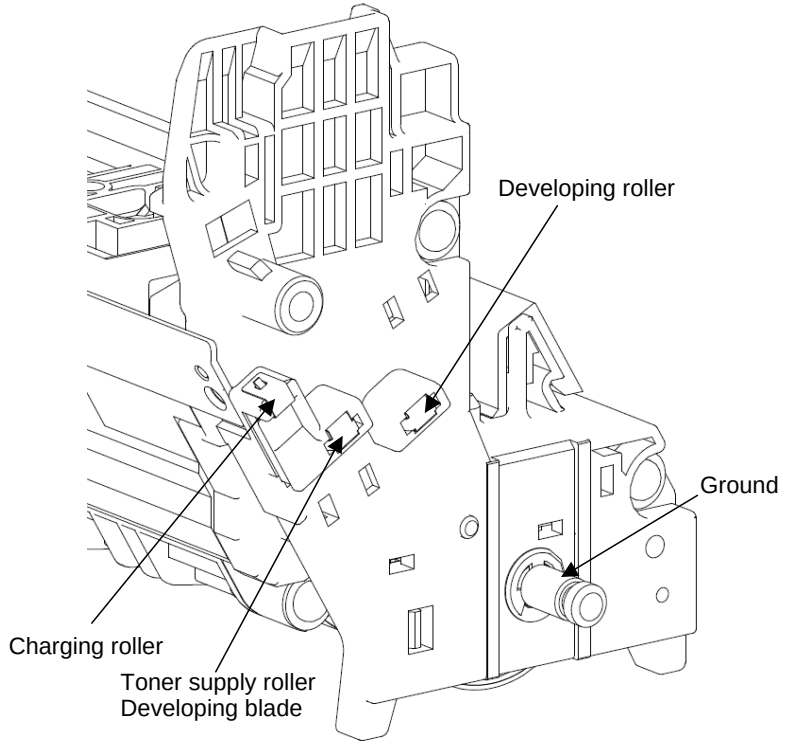


Fig.7-3

7.5.4 Network troubleshooting

(1) Printing cannot be performed from the utility

Check item	Check operation	Actions for NG results
(1) Check the LINK light.		
Check if the LINK light (green) is on.	Check if the HUB and the printer is connected properly. (Check that the network cable is connected properly.)	Reconnect the network cable properly.
	Check that a straight cable is being used.	Replace it with a straight cable.
	Connect the network cable to another port of the HUB.	Use another HUB.
(2) Check the network information		
Check if the network information cane be printed correctly.	Select Information Menu - Network/Execute on the panel and print the network information.	Rewrite the NIC firmware using the utility.
(3) Check the contents of the network information.		
Check the IP address, SUB net mask and gateway address.	Check the IP address, SUB net mask and gateway address in a printed network information page.	Set the IP address, SUB net mask and gateway address correctly.
(4) Check if communication is possible via a network.		
Check if a ping command is sent from the PC to the printer.	Send a ping command from the PC to the printer and check if the printer responds it correctly.	Set the IP address, SUB net mask and gateway address correctly.
(5) Check the utility.		
Check OKILPR utility settings.	Check setting items of the OKILPR utility.	Set OKILPR utility settings correctly.
(6) Perform a check using an OS standard port.		
Make a check using a Windows (NT, 2000, or XP) standard LPR port.	Set up a Windows (NT, 2000, or XP) standard LPR port and check if printing can be performed.	Set up a Windows (NT, 2000, or XP) standard LPR port correctly.

7.5.4.1 Connection errors occur by use of a Web browser (C330dn/C530dn only)

If the printer setting page cannot be displayed at “https://<printer IP address>” by a Web browser, 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 sections.

* A certificate is not created yet (or creation of a certificate failed).
  -> Refer to section “7.5.4.1.1 Has a certificate been created?”
* A certificate has been created but the SSL/TLS setting is set to OFF.
  -> Refer to section “7.5.4.1.2 Is the SSL/TLS setting set to ON?”

2) If the printer setting page is not displayed, the followings are probable.

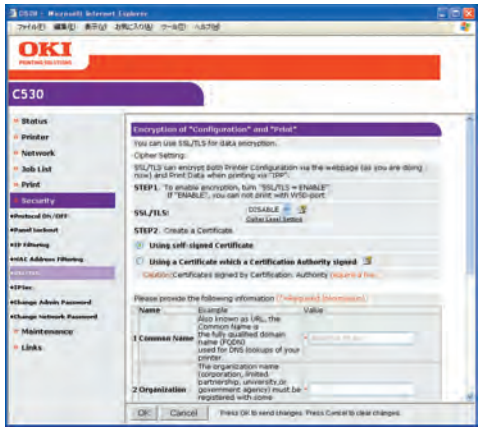
* The version number of the browser is old.
  -> Refer to section “7.5.4.1.3 Check the version number of the Web browser.”
* Encryption strength is set to Strong.
  -> Refer to section “7.5.4.1.4 Check the encryption strength of the printer.”

7.5.4.1.1 Has a certificate been created?

Log in as an administrator and select Security and Encryption (SSL/TLS).

If the following screen is displayed, no certificate of the printer is created yet. (The same screen is displayed when creation of a certificate has failed.)

Solution: Create a certificate by referring to the User's Manual (Advanced).



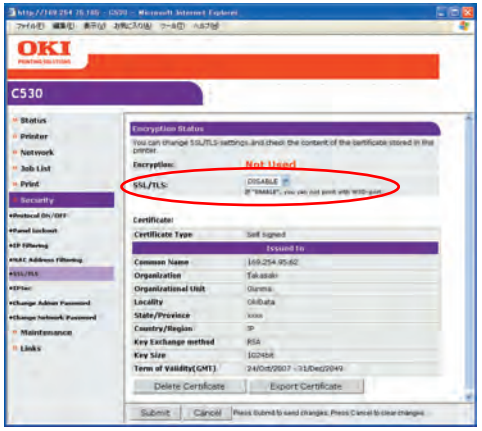
Screen before creation of a certificate (default)

7.5.4.1.2 Is the SSL/TLS setting set to ON?

Log in as an administrator and select Security and Encryption (SSL/TLS).

If the following screen is displayed, a certificate has already been created, but the SSL/TLS setting is set to OFF.

Solution: Change the SSL/TLS setting to ON.



7.5.4.1.3 Check the version number of the Web browser.

Check the version number of the Web browser being used.

How to check the version number:

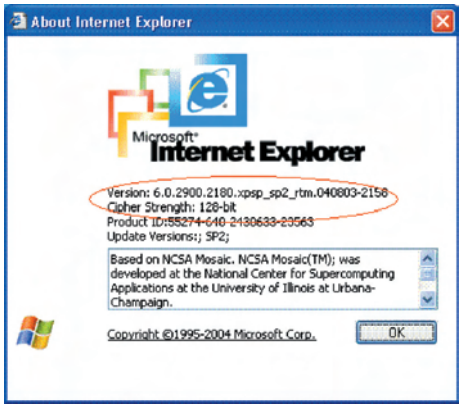
For Internet Explorer

Start the browser and select HELP and Version information.

A recommended version is Internet Explorer 5.5 or higher.

Solution: Install the latest Web browser or install a high encryption pack.

If the version of the browser in use is older than the recommended version, communication may become possible in some cases by setting the encryption strength to Weak. Setting the encryption strength to Weak lowers the security level. To change the encryption strength, refer to section “7.5.4.1.4 Confirm the encryption strength of the printer.”



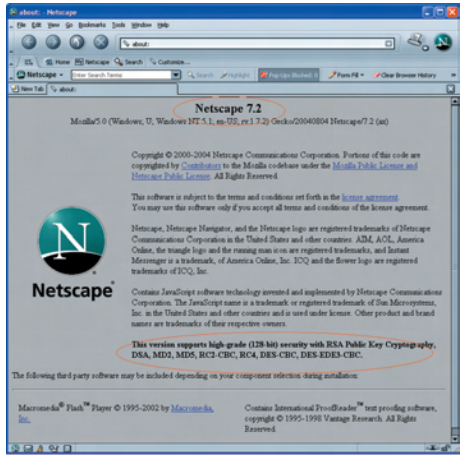
For Netscape

Start the web browser and select HELP and Netscape.

A recommended version is Netscape 6 or higher.

Solution: Install the latest Web browser.

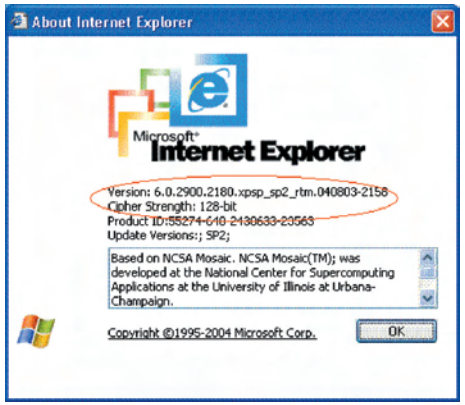
If the version of the browser in use is older than the recommended version, communication may become possible in some cases by setting the encryption strength to Weak. Setting the encryption strength to Weak lowers the security level. To change the encryption strength, refer to section “7.5.4.1.4 Confirm the encryption strength of the printer.”

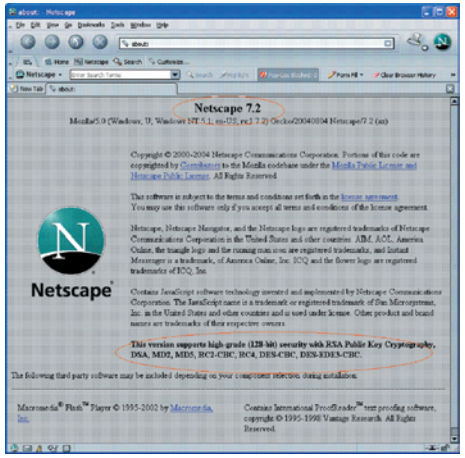


7.5.4.1.4 Check the encryption strength of the printer.

The description about the browser version checked in section “7.5.4.1.3 Check the version number of the Web browser.” contains the cipher strength of the browser. If the cipher strength described there is not 128 bits, the browser cannot communicate with the printer whose encryption strength is Standard.

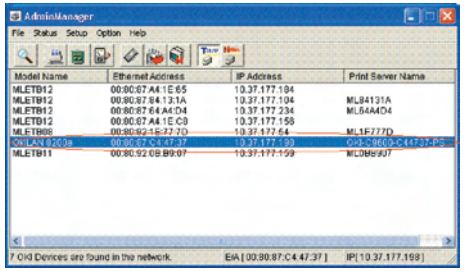
Upgrade the browser to support 128 bits (high encryption) or set the printer encryption strength to Weak.



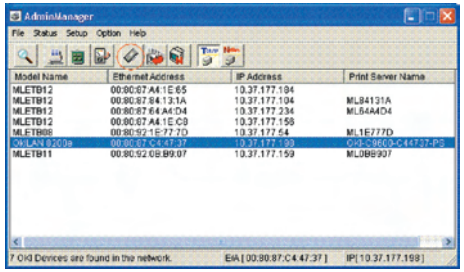


Changing the encryption strength using AdminManager

1. Start AdminManager and select (by highlighting) a desired printer from the printer list.

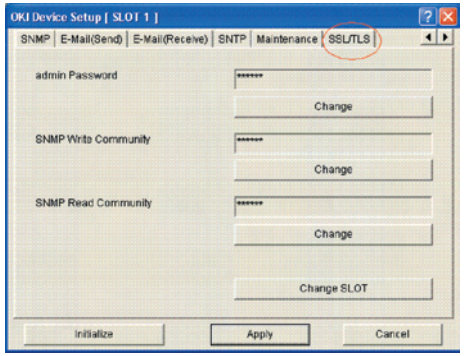


2. Press the Oki Device Setup button, or select Setup and Oki Device Setup to open the setup window.

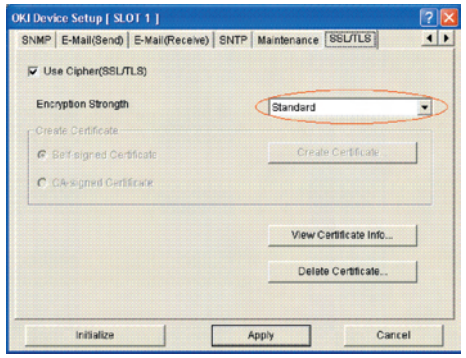


3. Input an administrator password to open the setup window as an administrator.

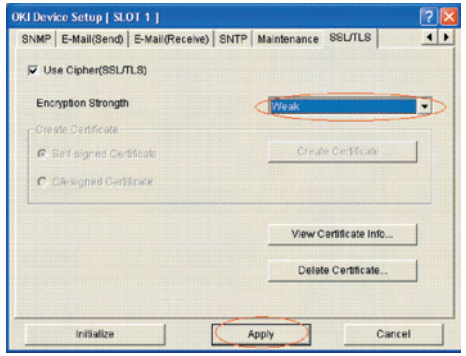
4. Select the SSL/TLS tab.



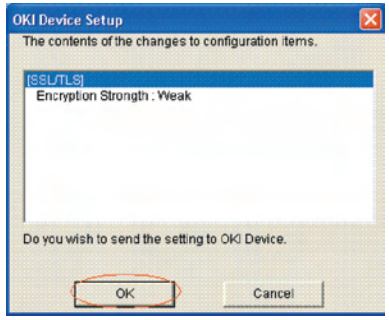
5. Check the setting of Encryption Strength.



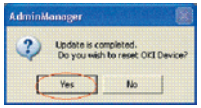
6. Set Encryption Strength to Weak and press the Apply button.



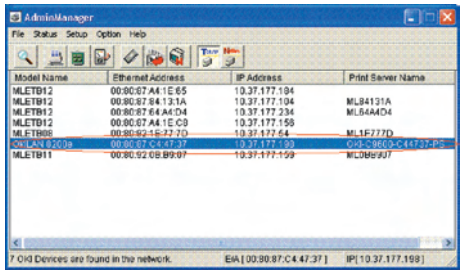
7. Check that the setting is correct and press OK.



8. After a confirmation message appears, click Yes. (NIC reboots for the setting to take effect.)



9. If the printer has been added to the printer list, it means that the setting has been completed.



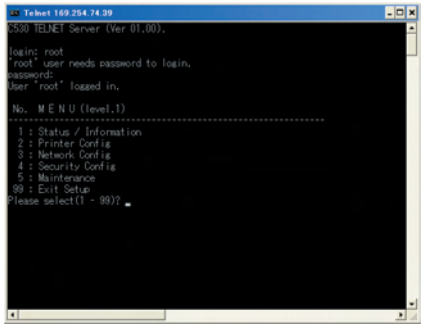
Solution: Set the encryption strength to Weak.

Changing the encryption strength using Telnet

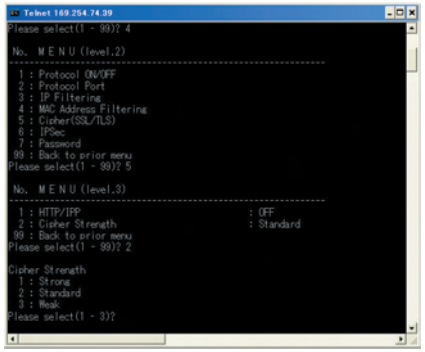
Note! Telnet cannot be used by default. To change the encryption strength, Enable must be specified for Telnet.

Enter “Telnet <printer IP address>” at the command prompt (DOS prompt) and press the return key.

Establish connection using an administrator user name and a password.



Select [4: Security Config], [5: Cipher (SSL/TLS)] and [2: Cipher Strength], and change the cipher strength as desired (1: Strong, 2: Standard, 3: Weak).



7.5.4.2 Print operation is not possible (C330dn/C530dn only)

If print operation is not possible by using an 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 sections.

   * A certificate is not created yet (or creation of a certificate failed).
     -> Refer to section “7.5.4.1.1 Has a certificate been created?”
   * A certificate has been created but the SSL/TLS setting is set to OFF.
     -> Refer to section “7.5.4.1.2 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 sections.

   * The version number of the browser is old.
     -> Refer to section “7.5.4.1.3 Check the version number of the Web browser.”
   * Encryption strength is set to Strong.
     -> Refer to section “7.5.4.1.4 Check the encryption strength of the printer.”
   * The browser doesn’t support the key exchange method of the printer. (Compatibility problem)
   * The OS does not support IPP (encrypted) printing.
     -> Refer to section “7.5.4.2.1 Check the OS (Operating System).”
   * An IPP (encrypted) printer has not been created yet.
     -> Refer to section “7.5.4.2.2 Has a printer been created?”
   * IPP setup of the Printer is not Enabled.
     -> Refer to section “7.5.4.2.3 Is the IPP setting set to Enable?”

7.5.4.2.1 Check the OS (Operating System).

The IPP print (encryption) function is available on Windows 2000, Windows XP, Windows 2003 Server and Windows Vista only.

It is not available on other operating systems.

7.5.4.2.2 Has a printer been created?

The printer may not have been created properly.

To use the IPP print (encryption) function, a printer must have been created by setting the port as URL https://<printer IP address>/ipp.

For details of printer creation methods, refer to the User’s Manual (Advanced).

7.5.4.2.3 Is the IPP setting set to Enable?

The IPP setting may not be set to Enable.

As the default setting of the printer, IPP has been set to Disable.

To use the IPP print function, the IPP setting must be set to Enable.

For how to change the IPP setting, refer to the User’s Manual (Advanced).

7.5.4.3 A certificate cannot be created. (C330dn/C530dn only)

When a certificate cannot be created, the following causes are probable.
Take an appropriate measure by referring to the following sections.

* Not all the required entry fields are filled in.
  -> Refer to section “7.5.4.3.1 Not all the required entry fields are filled in.”
* The printer is printing.
  -> Refer to section “7.5.4.3.2 The printer is printing.”

7.5.4.3.1 Not all the required entry fields are filled in.

If every required entry field is filled in, a certificate cannot be created.

To create a certificate, the followings must be filled in: CommonName, Organization, Locality, State/Province, Country/Region. (Entry into Organizational Unit may be skipped.)

Solution: Enter appropriate values into all of the required entry fields, and execute creation of a certificate. For details of the required entry fields and how to create certificates, refer to the User’s Manual (Advanced).

7.5.4.3.2 The printer is printing.

No certificate can be created during printing. (Print operation has priority.)

Solution: It is required to keep the printer not to perform any operation (such as printing) until the whole operation from creating a certificate, a self-signed certification and a CSR of a certificate of a certifying authority, to installing a certificate is completed (completion of creation of a self-signed certification and a CSR, and completion of installation of a certificate).

7.5.4.4 A certificate cannot be installed. (C330dn/C530dn only)

When installation of a certificate fails, the following causes are probable.

Take an appropriate measure by referring to the following sections.

* The user has changed the IP address of the printer to an IP address that is different from the IP address used during creation of a CSR.
  -> Refer to section “7.5.4.4.1 The printer IP address has been changed.”
* The network card is initialized while the user is applying for issuance of a certificate to a certifying authority (i.e., while waiting for installation of a certificate).
  -> Refer to section “7.5.4.4.2 The network card has been initialized.”
* “Deletion of CSR” was executed while the user is applying for issuance of a certificate to a certifying authority (i.e., while waiting for installation of a certificate).
  -> Refer to section “7.5.4.4.3 A CSR has been deleted.”
* An intermediate certificate is installed.
  -> Refer to section “7.5.4.4.4 Install an intermediate certificate.

7.5.4.4.1 The printer IP address has been changed.

If the printer IP address is different from the IP address used during creation of a CSR in trying to install a certificate, an error occurs and installation of a certificate is not performed. If a change was made to the setting of printer IP address only, no error will occur after the IP address is changed to the original one.

Solution: Reset the IP address of the printer to the IP address used during creation of a CSR, and then install a certificate.

Note! Do not change any printer setting while a creation process of a certificate of a certifying authority is in progress (during a period from creation of a CSR to installation of a certificate). If any printer setting is changed, the issued certificate becomes invalid necessitating resetting from the beginning. If printer setting is changed after a certificate is obtained, Security warning is displayed on the Web browser.
If the IP address of the printer is changed, the certificate becomes invalid. (Pay certificates of certifying authorities may require some charge for reissuance. For details, contact certifying authorities.)

7.5.4.4.2 The network card has been initialized.

If the network card is initialized (the factory default) while a creation process of a certificate of a certifying authority is in progress (during a period from creation of a CSR to installation of a certificate), the setting information of the certificate is deleted. The deleted 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 beginning. (A certificate of which issuance has been applied is already invalid.)

7.5.4.4.3 A CSR has been deleted.

If a CSR is deleted (if a certificate is deleted) while a creation process of a certificate of a certifying authority is in progress (during a period from creation of a CSR to installation of a certificate), the setting information of the certificate is deleted. The deleted 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 beginning. (A certificate of which issuance has been applied is already invalid.)

7.5.4.4.4 Install an intermediate Certificate.

Some certifying authorities perform installation of an SSL server certificate (a printer certificate) and an intermediate certificate in printers.

However, since a printer of this model supports installation of only one certificate, an intermediate certificate cannot be installed in the printer. Be sure to install an SSL server certificate in the printer.

To install an intermediate certificate, install the intermediate certificate not in the printer, but in a client PC (browser).

For the steps of installing an intermediate certificate in a client PC (browser), see the followings.

Installing an intermediate certificate (or CA certificate) in a client PC (browser)

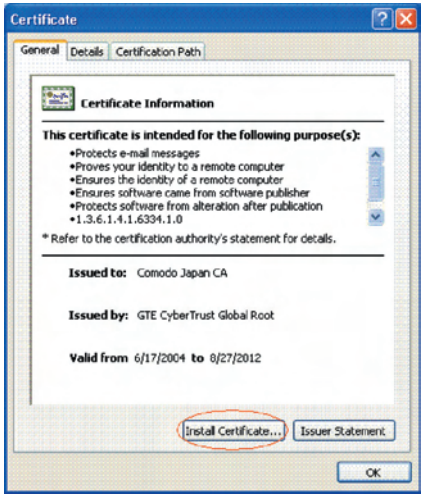
[Steps]

1. Double-click an intermediate certificate (or CA certificate) issued by a certifying authority, on a client PC to view them.

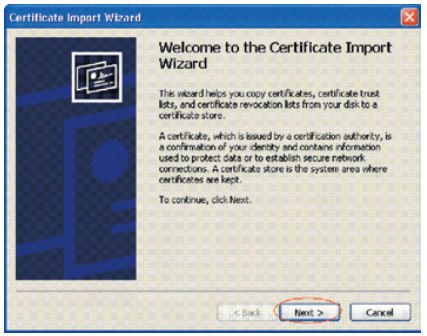
   E.g.:A Comodo intermediate certificate is in the text (PEM) format: ComodoJapanCA.Crt or binary format: ComodoJapanCA.cer, and either format is acceptable to open. (The same result can be obtained.)

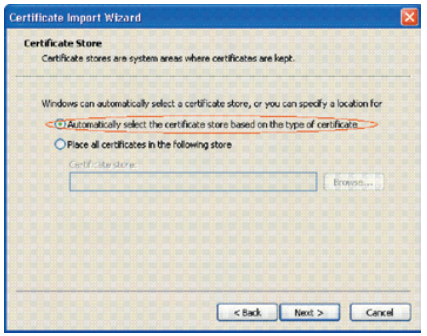
   Open either ComodoJapanCA.crt or ComodoJapanCA.cer.

2. On the General tab of the displayed Certificate information window, press the Install Certificate… button.



3. After the Certificate Import Wizard appears, install a certificate by following the on-screen procedure. Select “Automatically select the certificate store based on the types of certificate,” so that the certificate will be installed automatically.





7.5.4.5 Other questions (C330dn/C530dn only)

Other possible questions are described below.

7.5.4.5.1 Time required for creation of a certificate

It takes several tens of seconds to create a certificate.

7.5.4.5.2 Communication time when the encryption function is enabled

When the encryption function is being used, communication time takes longer than usual.

7.5.4.5.3 Can encrypted printing be performed without IPP?

Answer: Encrypted printing is not available without IPP.

Encryption can be performed only in IPP printing.

7.5.4.5.4 What will happen if SSL/TLS is set to OFF after a certificate is created (or installed)?

Answer: A certificate will be remained saved as it is.

If SSL/TLS is set to ON again, the certificate becomes available.

7.5.4.5.5 How to change the port number

nswer: The port number for SSL/TLS communication is fixed to 443.

It cannot be changed.

7.5.4.5.6 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.

When this error message appears, it means that the certificate installed in the printer is self-signed certificate. Other possibilities are that the certificated installed in the printer is a certificated of a certifying authority, and also either a CA certificate of the certifying authority or an intermediate certificate has not been installed in the client PC.

If the certificate is a self-signed certificate, the error message (security warning) doesn’t appear after the self-signed certificate of the printer is installed in the client PC.

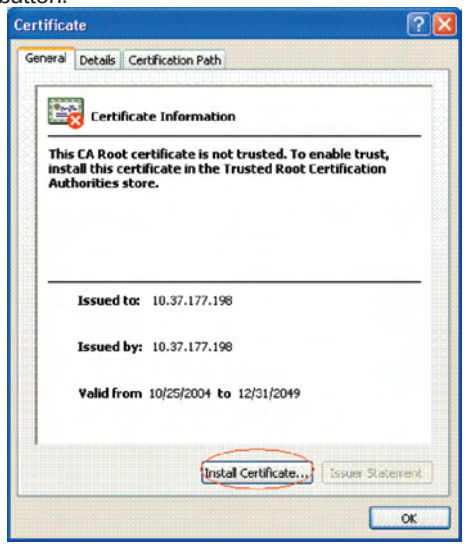
If the installed in the printer is a certificate of a certifying authority, the error message (security warning) doesn’t appear after the CA certificate or the intermediate certificate of the certifying authority is installed in the client PC.

Solution: Install such certificates in the client PC (browser).

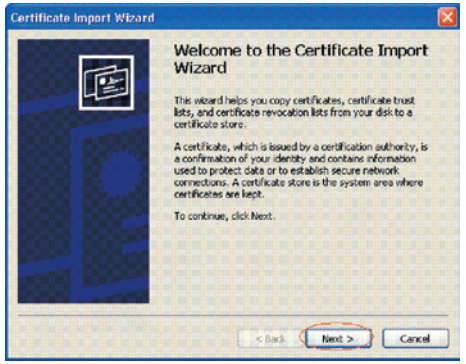
[Steps]

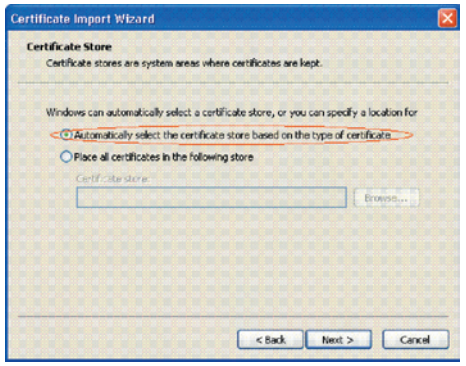
1. Click the View Certificate button on the error (security warning) screen.

2. On the General tab of the displayed Certificate information window, press the Install Certificate… button.



3. After the Certificate Import Wizard appears, install a certificate by following the on-screen procedure. Select “Automatically select the certificate store based on the types of certificate,” so that the certificate will be installed automatically.





7.5.4.5.7 The error message “Name of security certificate is invalid or does not match the site name” is displayed.

It means that the printer IP address is different from the IP address that is described on a certificate or from the IP address used when the certificate was created.

Solution: Change the printer IP address back to the IP address used when a self-signed certificate was created or to the IP address used when a CSR was created.

7.5.4.6 Restrictions when using Internet Explore 7 (C330dn/ C530dn only)

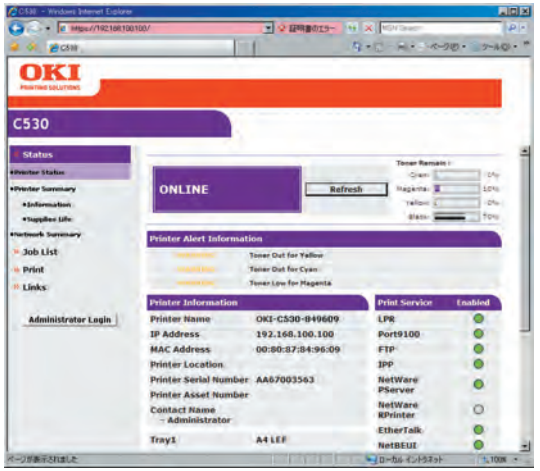
Several restrictions are imposed when Internet Explore 7 is used. This is because security restrictions of IE7 have become more severe then ever.

7.5.4.6.1 Warning indication when SSL is enabled for self-signed certificates

If SSL is enabled for self-signed certificates, the window shown below appears in an attempt to access the Web page, and the Web page will not be displayed.

Web display when SSL is enabled for self-signed certificates

Solution: The Web page is displayed by clicking “Continue browsing this site (not recommended)” on the warning screen.
It doesn’t affect the Web page functions, and the Web page can be used for browsing or changing printer settings with no problems.



Web page displayed after “Continue browsing this site (not recommended)” is clicked

7.6 Fuse check

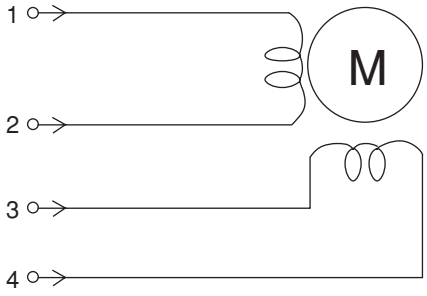
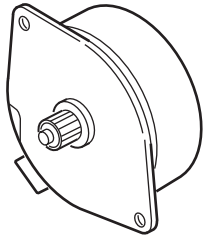
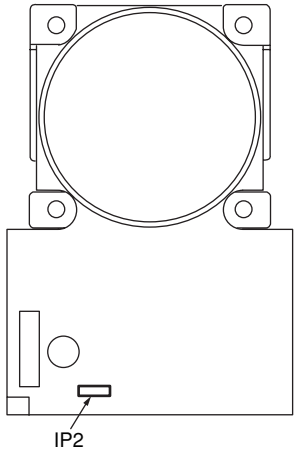
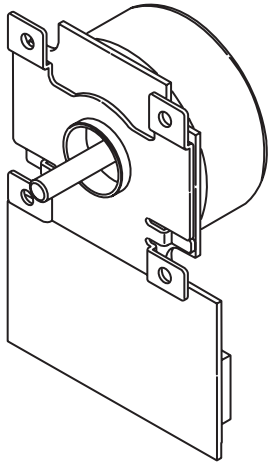
If any of the following errors occurs, check relevant fuses on the CU control board, the PU control board and the high-voltage power supply board.

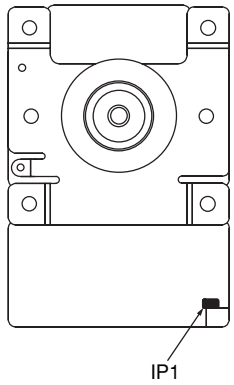
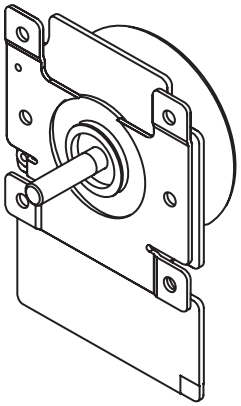
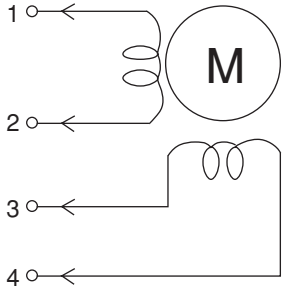
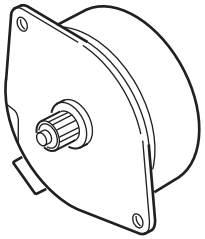
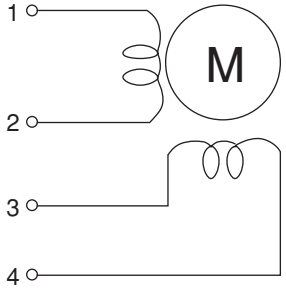
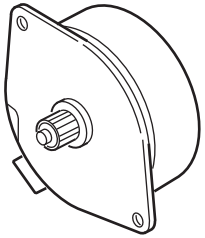
C530/C330 Fuse Errors

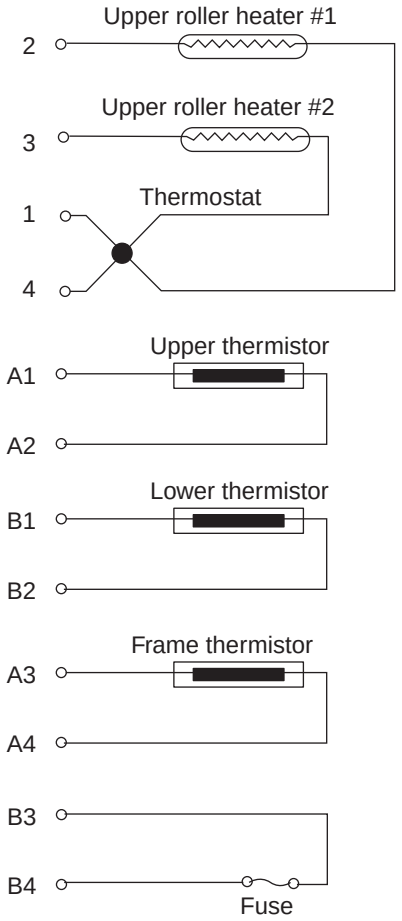
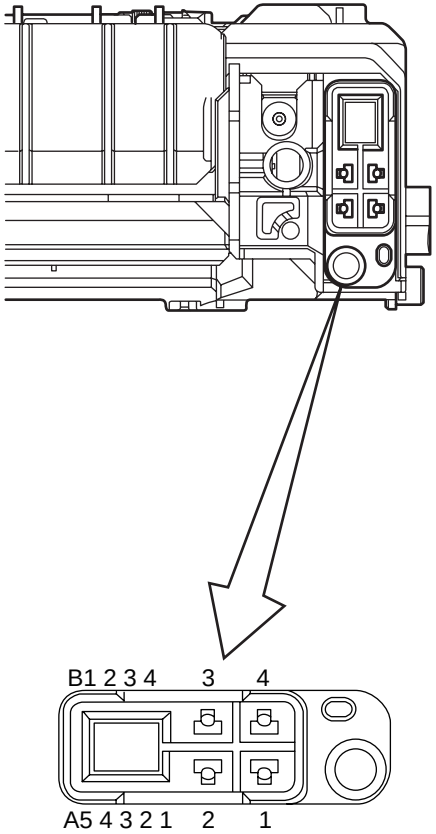
Fuse Name		Error Description	Insert Point	Resistance
CU/PU board (CLP-2/-1 board)	F2	Service call 128 Error 08	Front fan, hopping motor, registration clutch, hopping clutch, MPT clutch, Duplex clutch	1Ω or less
	F4	Service call 122	Rear fan, hopping motor, registration clutch, hipping clutch, MPT clutch, Duplex clutch	
	F6	Cover open	High-voltage board, ID fan, belt motor	
	F3	• Service call 121 • The operator panel backlight blackout	PU 5V	
	F5	No display on the operator panel	CU/PU 3.3V	
	F501	• Service call 131 to 134 • Blank page printing	LED head 5V	
High-voltage board (ORZ board)	F501	Service call 121	High-voltage board 24V	

8. CONNECTION DIAGRAMS

8.1 Resistance value checking

Unit	Circuit diagram and composition	Part drawing	Resistance value
Transport belt motor			Between pins 1 and 2: 3.4 Ω Between pins 3 and 4: 3.4 Ω
ID motor			Both ends of IP2: 1 Ω or less

Unit	Circuit diagram and composition	Part drawing	Resistance value
Fuser motor			Both ends of IP1: 1 Ω or less
Feed motor			Between pins 1 and 2: 3.4 Ω Between pins 3 and 4: 3.4 Ω
2nd feed motor			Between pins 1 and 2: 3.4 Ω Between pins 3 and 4: 3.4 Ω

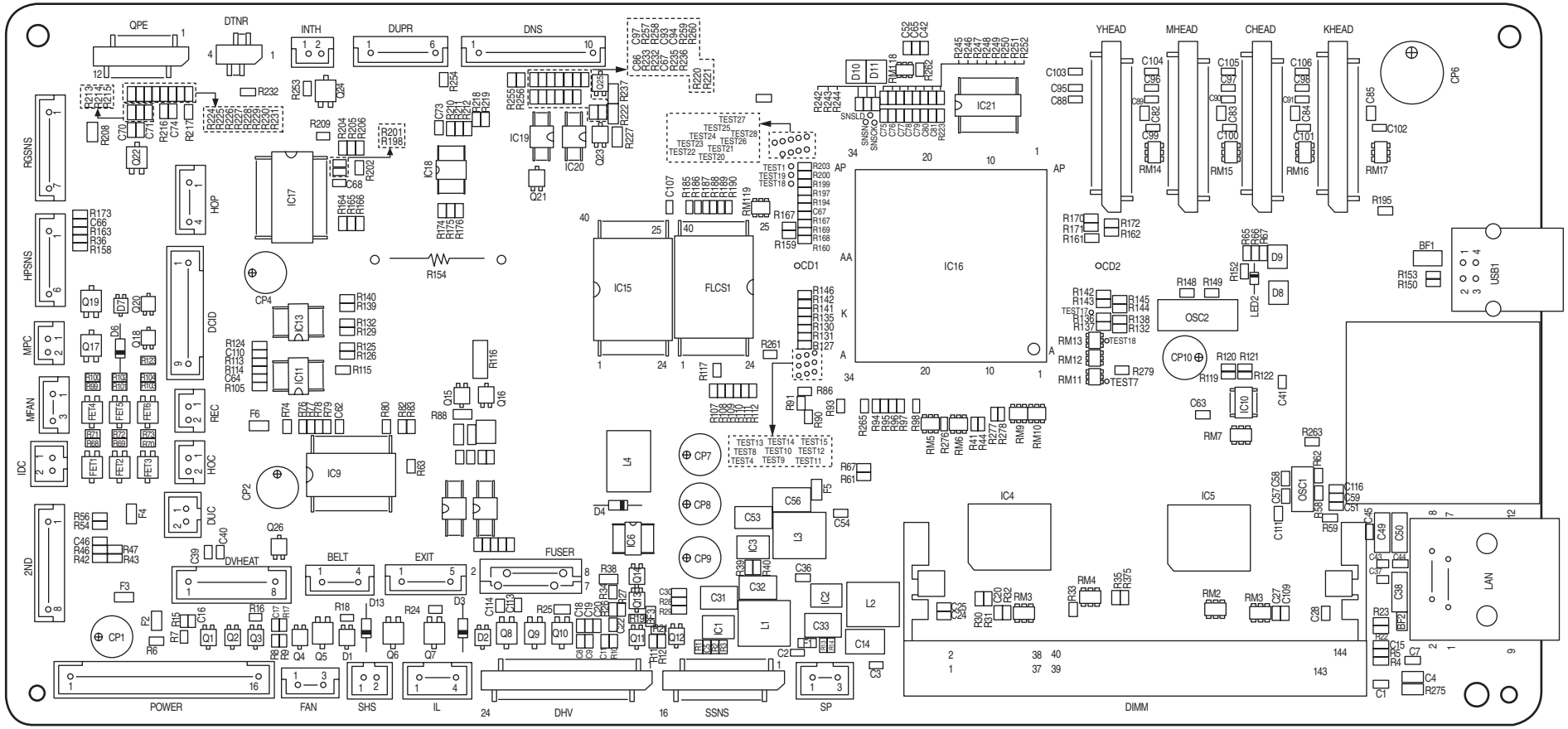
Unit	Circuit diagram and composition	Part drawing	Resistance value
Fuser unit			Between pins 1 and 2: Several ohms to several tens of ohms Between pins 3 and 4: Several ohms to several tens of ohms Between pins A1 and A2: Approx. 590 kΩ to 5338 kΩ (0 to 93°C) Between pins B1 and B2: Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C) Between pins A3 and A4: Approx. 104.5 kΩ to 806.5 kΩ (0 to 43°C) Between pins B3 and B4: Open A5 blank NC

8.2 Layout of parts

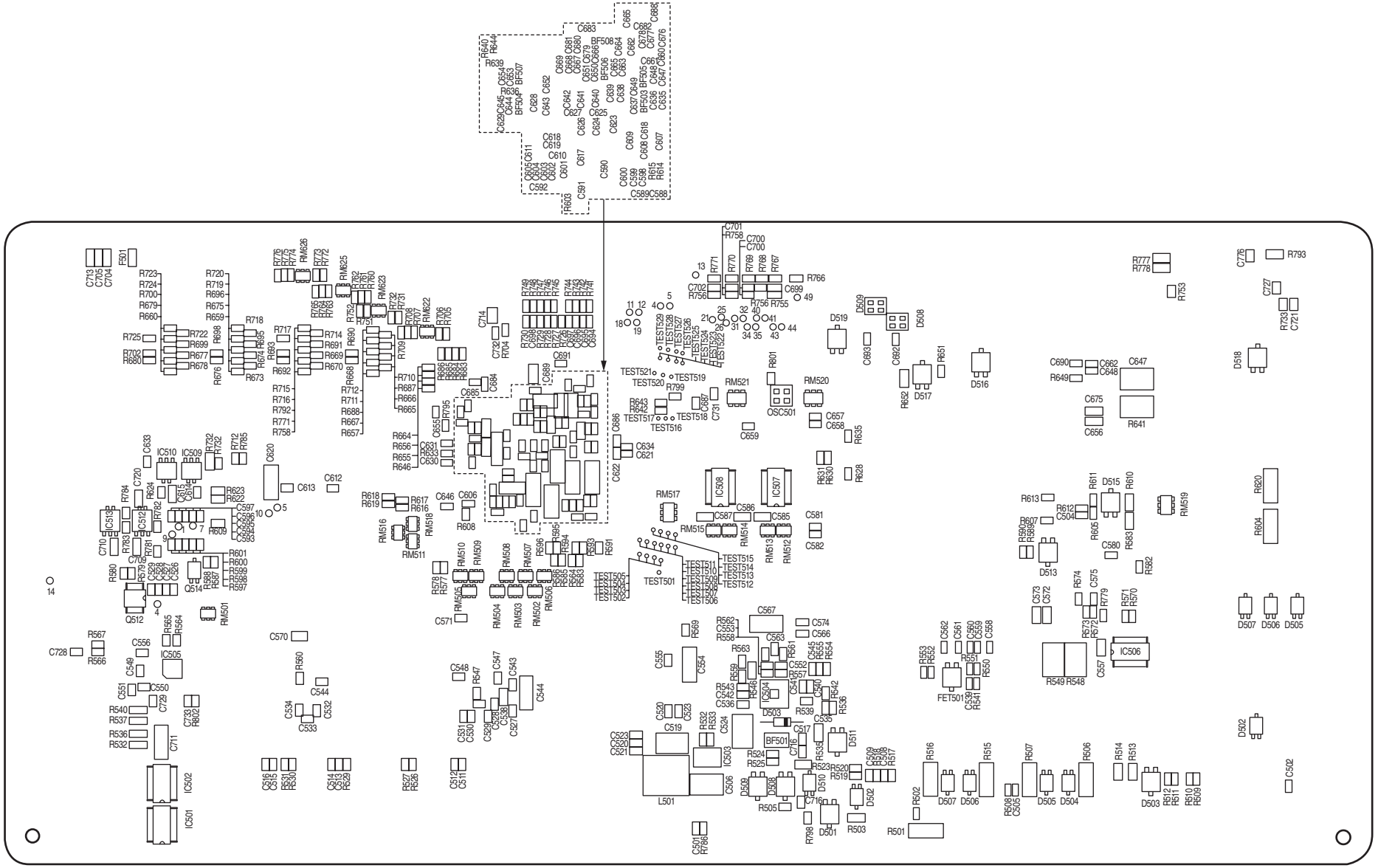
(1) Print engine controller PCB (PU PCB)

C530

Component side



Soldering side



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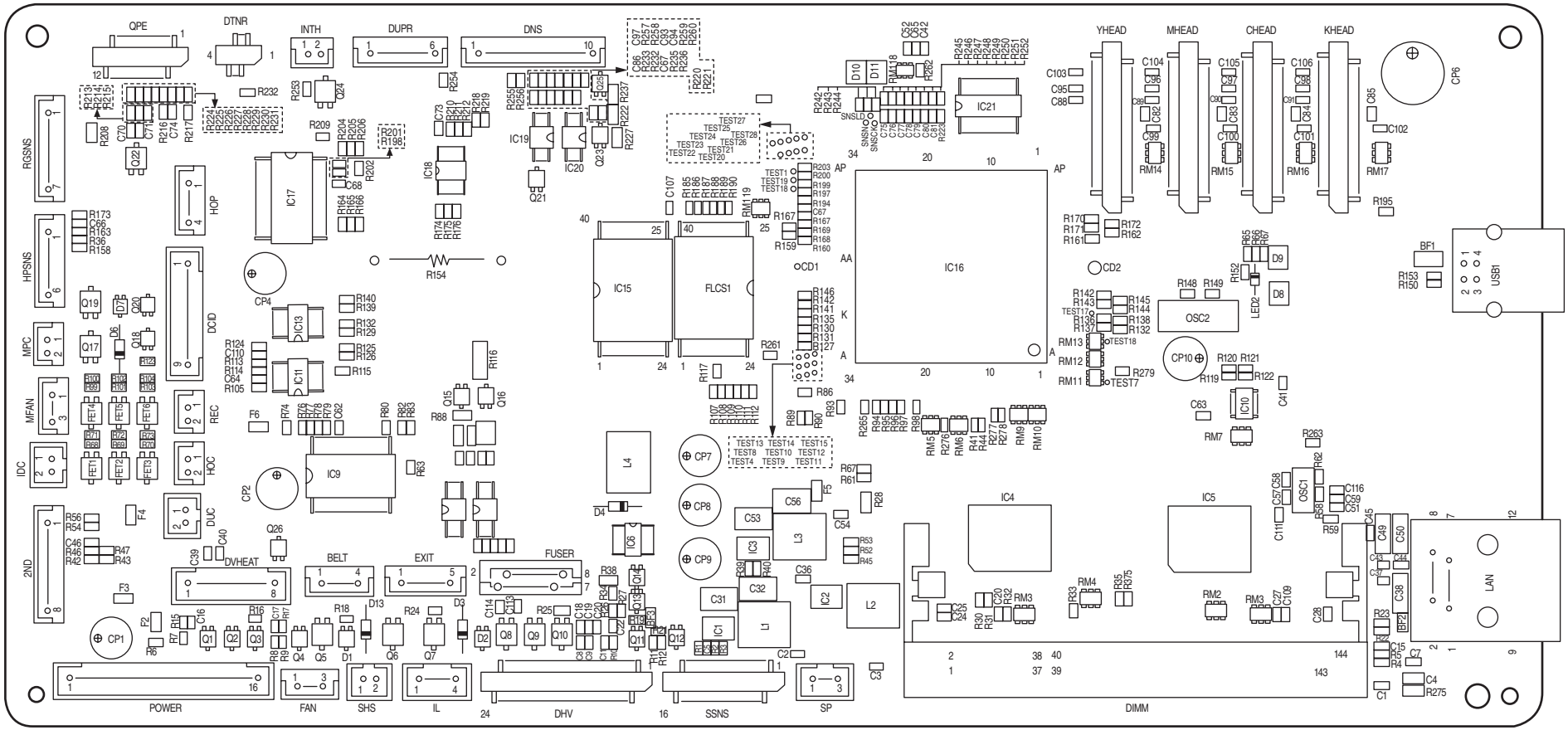
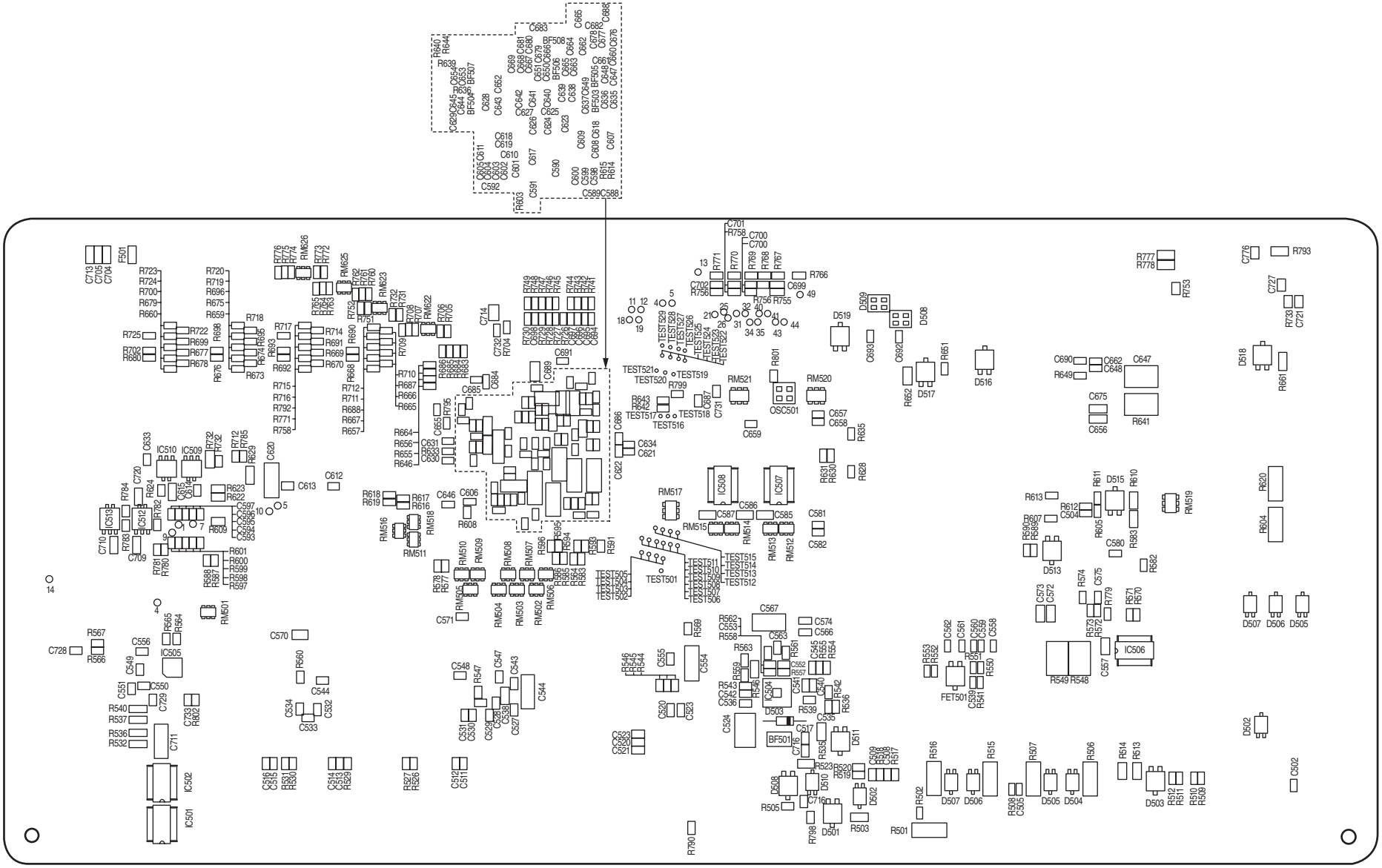
Component side

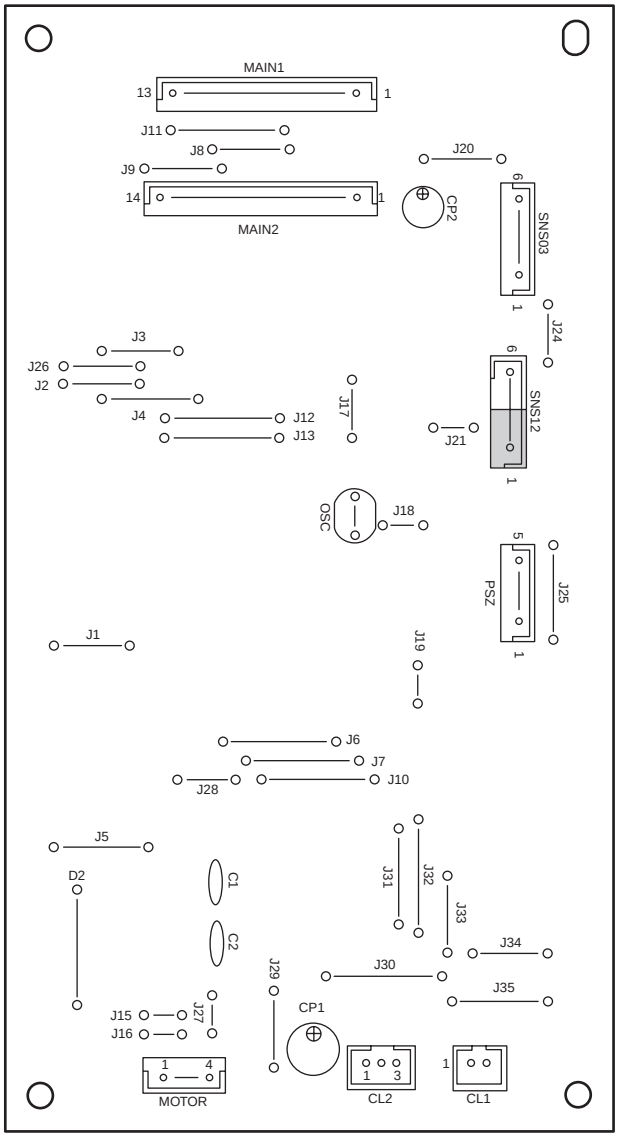


Soldering side

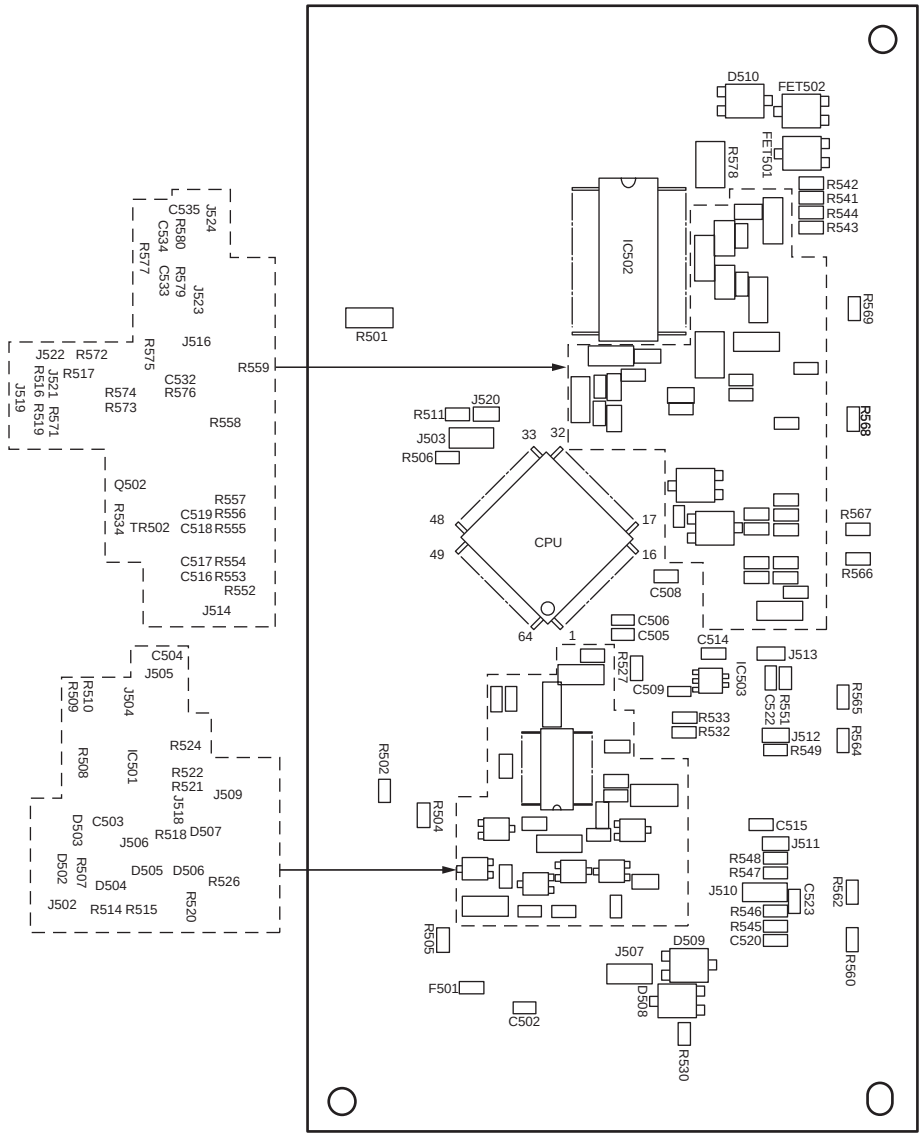


(2) Second tray control PCB

Component side

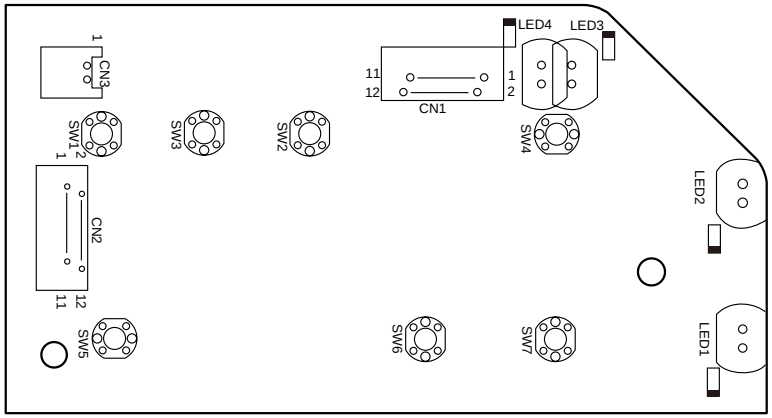


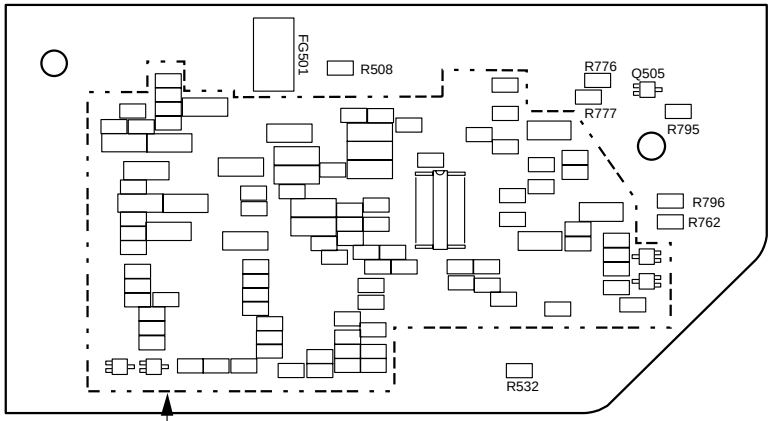
Soldering side

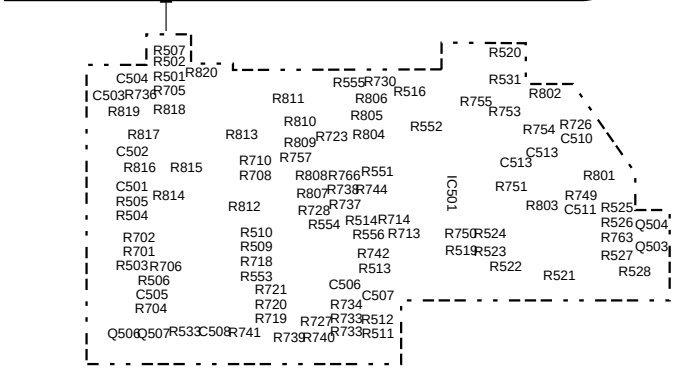


(3) Control panel PCB

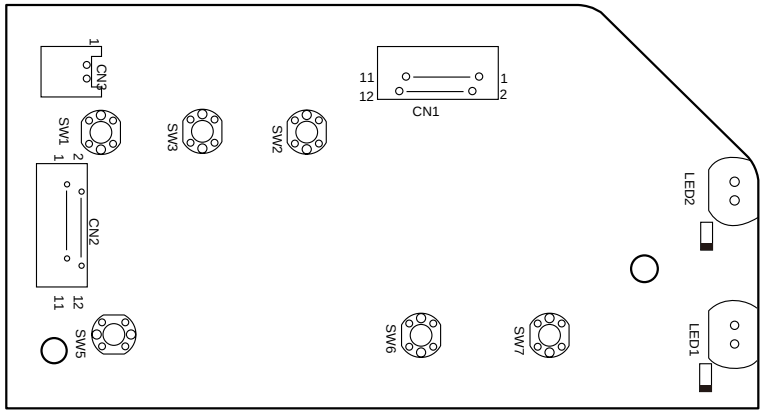
C530

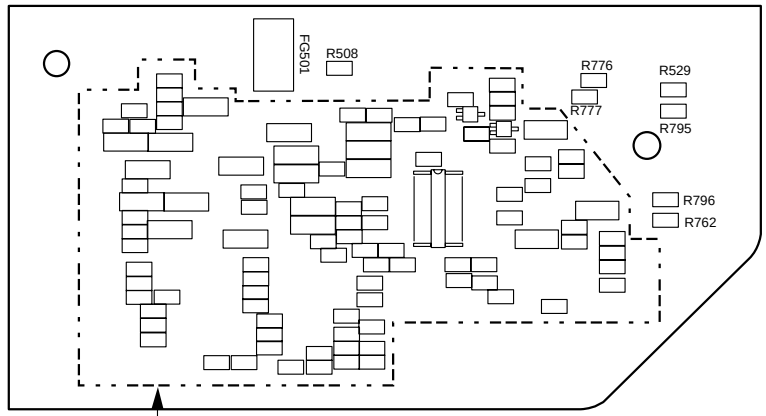


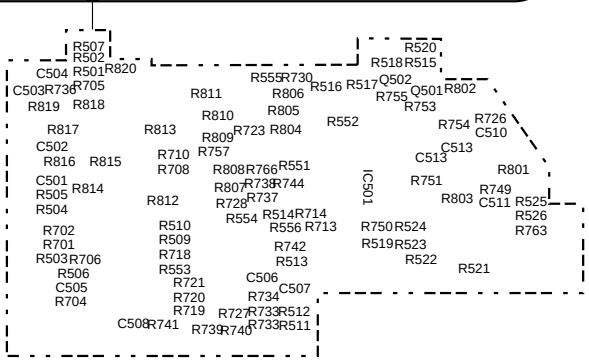




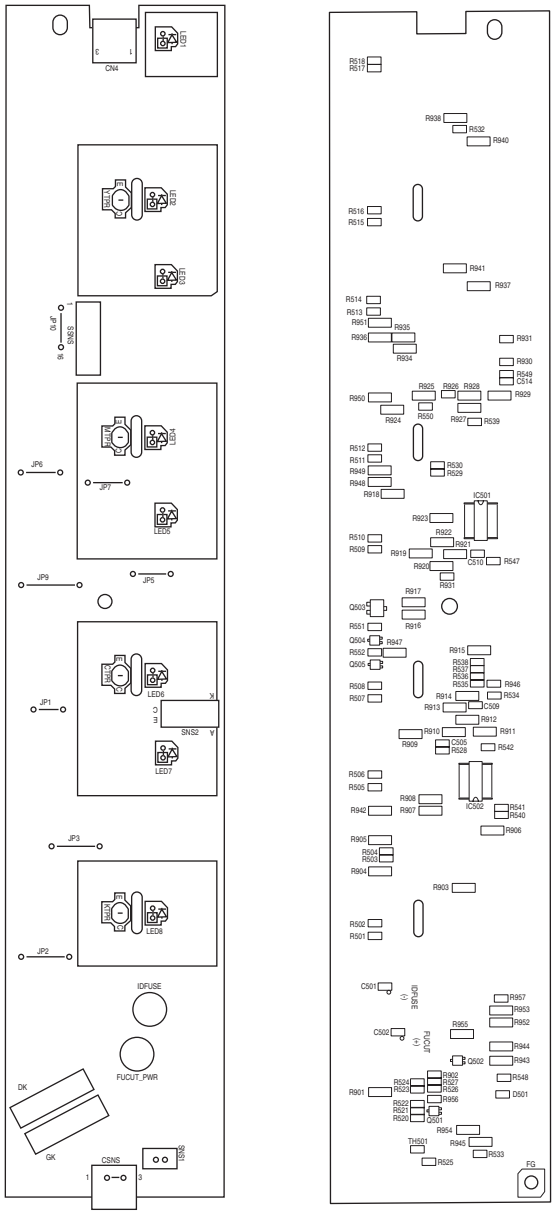
C330



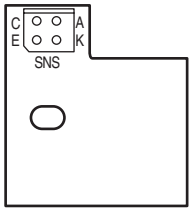




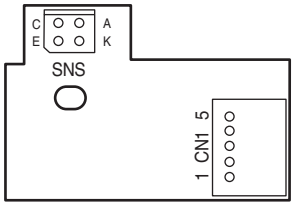
(4) Toner sensor PCB



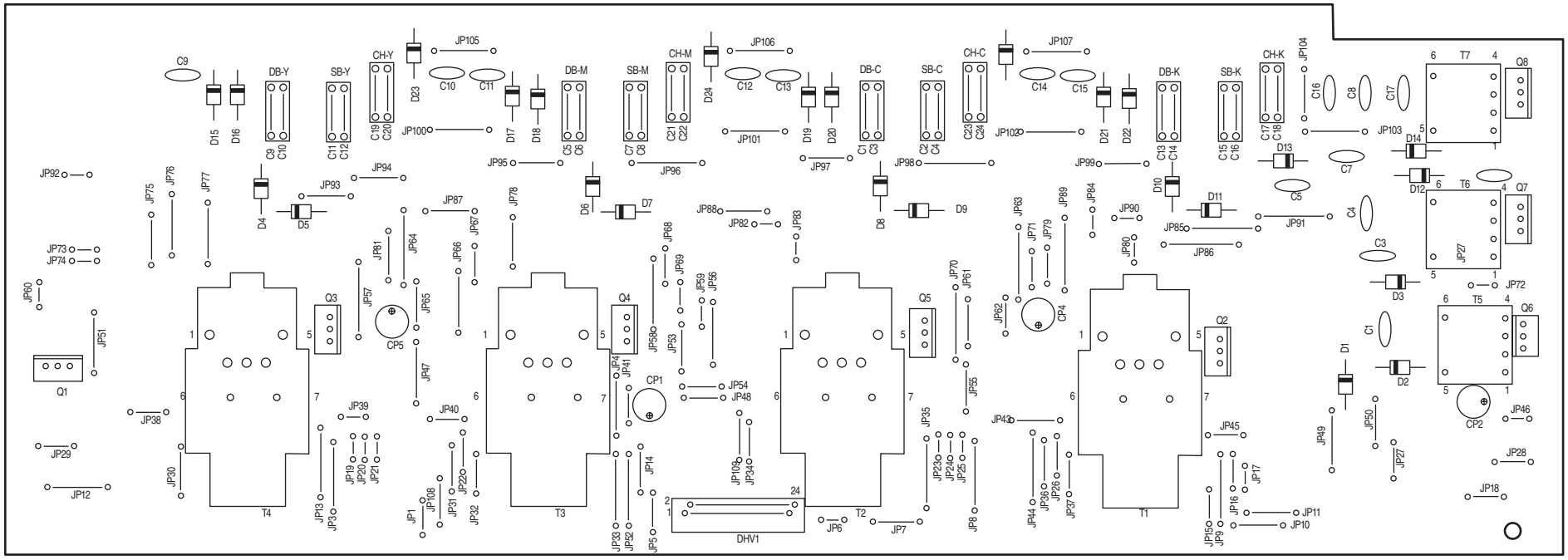
(5) Waste toner sensor PCB



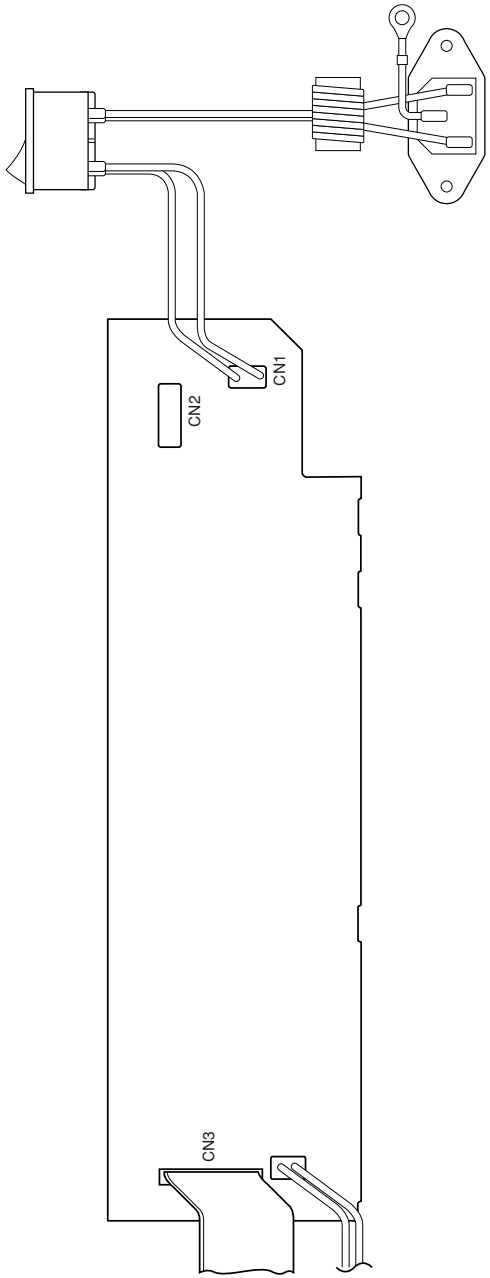
(6) Color adjustment sensor PCB



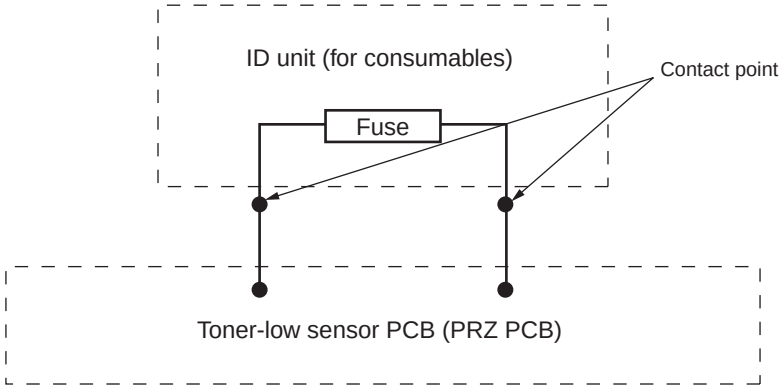
(7) High-voltage power supply PCB

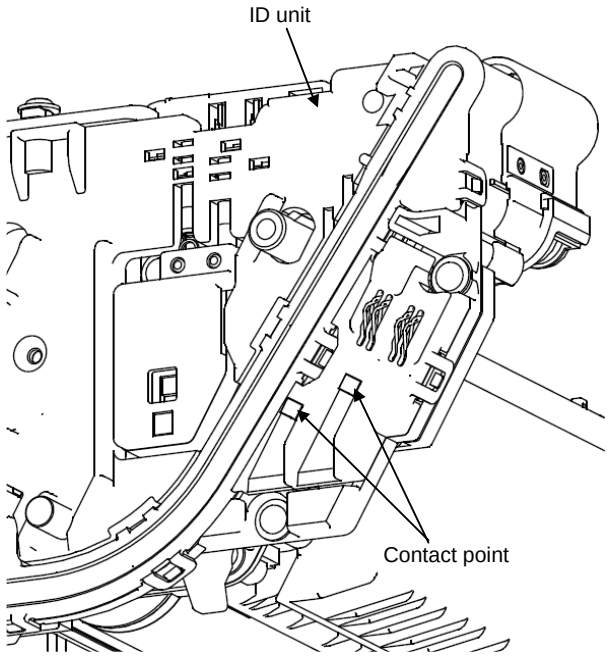


(8) Low-voltage power supply PCB

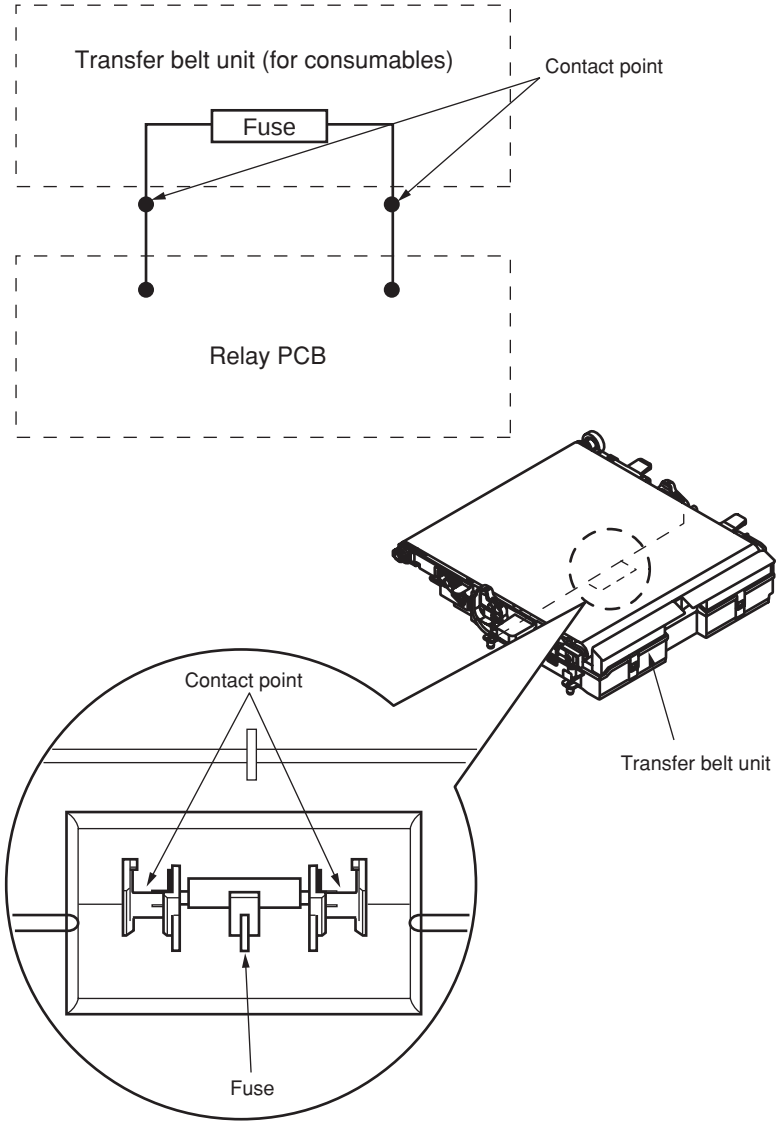


(9) ID unit





(10) Transfer belt unit



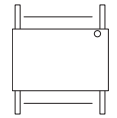
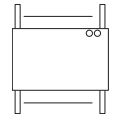
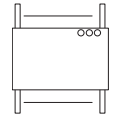
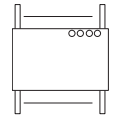
8.3 Firmware revision numbers

8.3.1 ROM control numbers

C530/C330

ROM-FD revision no.	ROM-FD drawing no.	Firmware revision no.	Date of issue	Notes
01	44552901FY01	CU FW:A0.50 NICFW:00.06(00.11) PU FW:00.03.30	2010-02-01	CheckSum: 9AA3C562
02	44552901FY01	CU FW:A1.01 NICFW:01.02(01.00) PU FW:00.03.32	2010-03-04	CheckSum: 9A8AE5B8
03	44552901FY01	CU FW:A1.02 NICFW:01.02(01.00) PU FW:00.03.34	2010-03-16	CheckSum: E42B3DEB
04	44552901FY01	CU FW:A1.01 NICFW:01.02(01.00) PU FW:00.03.35	2010-03-25	CheckSum: F249698E

C510/C310

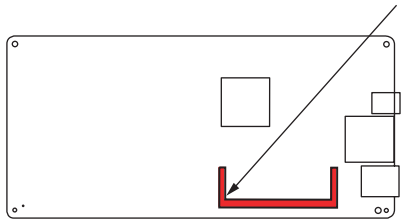
ROM-FD revision no.	CU F/W revision no.	PU F/W revision no.	NIC F/W revision no.	Web Page Version	Number of white dots marked on FLASH MEMORY ID	Date of issue	Notes
01	B0.40	00.00.30	00.06	00.09	 01	2010-01-25	CheckSum: 4EC688C8
02	B1.01	00.00.32	01.00	01.00	 02	2010-03-04	CheckSum: 4E9E1A9B
03	B1.02	00.00.34	01.00	01.00	 03	2010-03-16	CheckSum: 4E99C739
04	B1.02	00.00.35	01.00	01.00	 04	2010-03-25	CheckSum: 4E99FABB

8.3.2 Checking and indication of the revision number

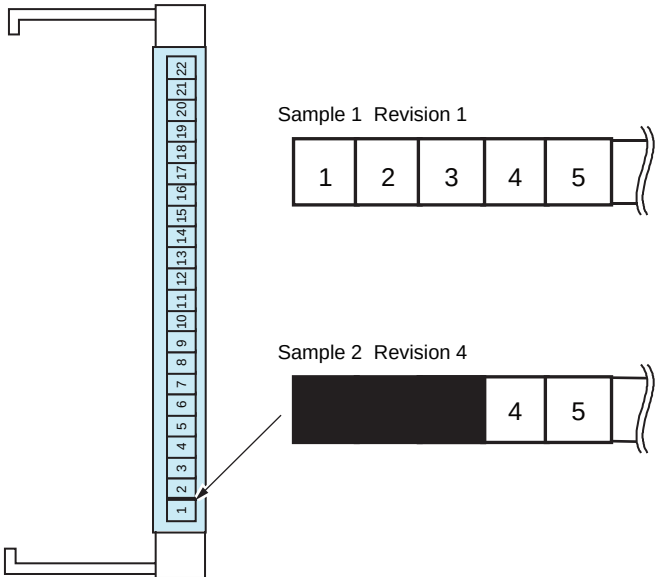
(1) Print out MenuMap and check to make sure that the firmware revision number has been updated.

(2) According to the revision number of the downloaded firmware, fill in the box(s) of an ROM label attached to the position shown in the picture below.

Position of the revision number label



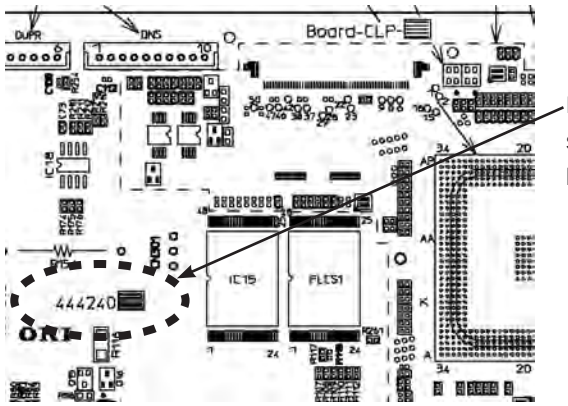
Details of the revision number label



8.3.3 Stamp of maintenance board indication

A designated article number is stamped in the area for maintenance board indication on the CU board in accordance with the table below.

C530/C330



PCB number	seal number	Board CLP(YU)	Use
44424001	01	CLP-2(44601502)	C530 for ODA
44424002	02	CLP-2(44601502)	C530 for OEL
44424003	03	CLP-2(44601502)	C530 for AOS
44424004	04	CLP-2(44601502)	C530 for JPN
44424005	05	CLP-2(44601502)	ES5430(OEL)
44424011	11	CLP-1(44601501)	C330 for ODA
44424012	12	CLP-1(44601501)	C330 for OEL
44424013	13	CLP-1(44601501)	C330 for AOS